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# FH(A)Series Fume Hood

User Manual

# BIOBASE

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## Preface

Welcome to choose FH-Series Fume Hood. And we sincerely hope that our product can bring you best help.

In order to make you understand more clearly about our Fume Hood, please read this manual carefully before you start to use it. It is very important for you to use our instrument correctly and safely.

And please put the manual in appropriate position in order to use it at random.

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### Application Range

It is the new technical instrument in air condition workshop and clean workshop. And it is widely applicable in electron, chemicals, mechanism, medicine, university and lab. Fume hood can be used in operation of potential risk or unknown infected factors, and the experiment of flammability, explosive volatilization and narcotics. It can protect operator and samples.

#### **Working environment:**

1. Only used in door;
2. Environment temperature:  $15^{\circ}\text{C} \sim 35^{\circ}\text{C}$ ;
3. Relative humidity:  $\leq 75\%$ ;
4. Pressure Range:  $70\text{kPa} \sim 106\text{kPa}$ ;
5. Power supply: AC  $220\text{V} \pm 10\%$ , 50/60Hz; AC  $110\text{V} \pm 10\%$  60Hz.

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## Product Features

### Features of FH Series Fume Hood

**Shell:** 1.0mm thickness of Cold rolling stainless steel is used, electro-static coating.

**Working zone:** The working zone adopting high grade melamine board, it has better acid and alkali resistance function. The table board is made up of chemical-resistant laminate, it could removable for cleaning.

**Window:** More than 5mm thickness of toughened glass

**Control panel:** It adopt touched-model switch, this type could make more convenient operation and pretty appearance.

**Electrical control system:** it has the function of preventing over-load and getting an electric shock. It has stable performance to extend life time.

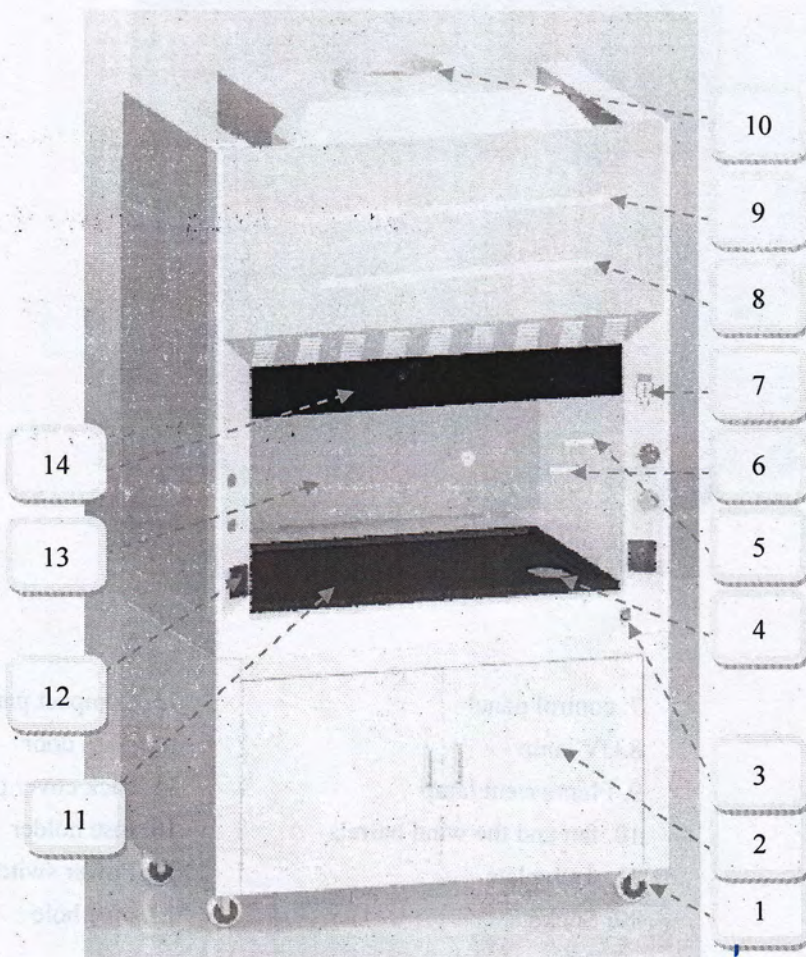
**Sockets:** adopted specialized safety product of laboratory, it has the performance of dirt proof, water proof and acid-alkali proof. The material is PC Flame-retardant fire.

## Function and Structure

### 1. Air Filter System (refer to the airflow mode chart)

Air system is the main part to ensure the performance of the fume hood. It is made up of blower and air duct. As the negative pressure, the room air is absorbed into the work area, then exhaust from the top, finally through the special duct to the outside room.

### Structure and Components



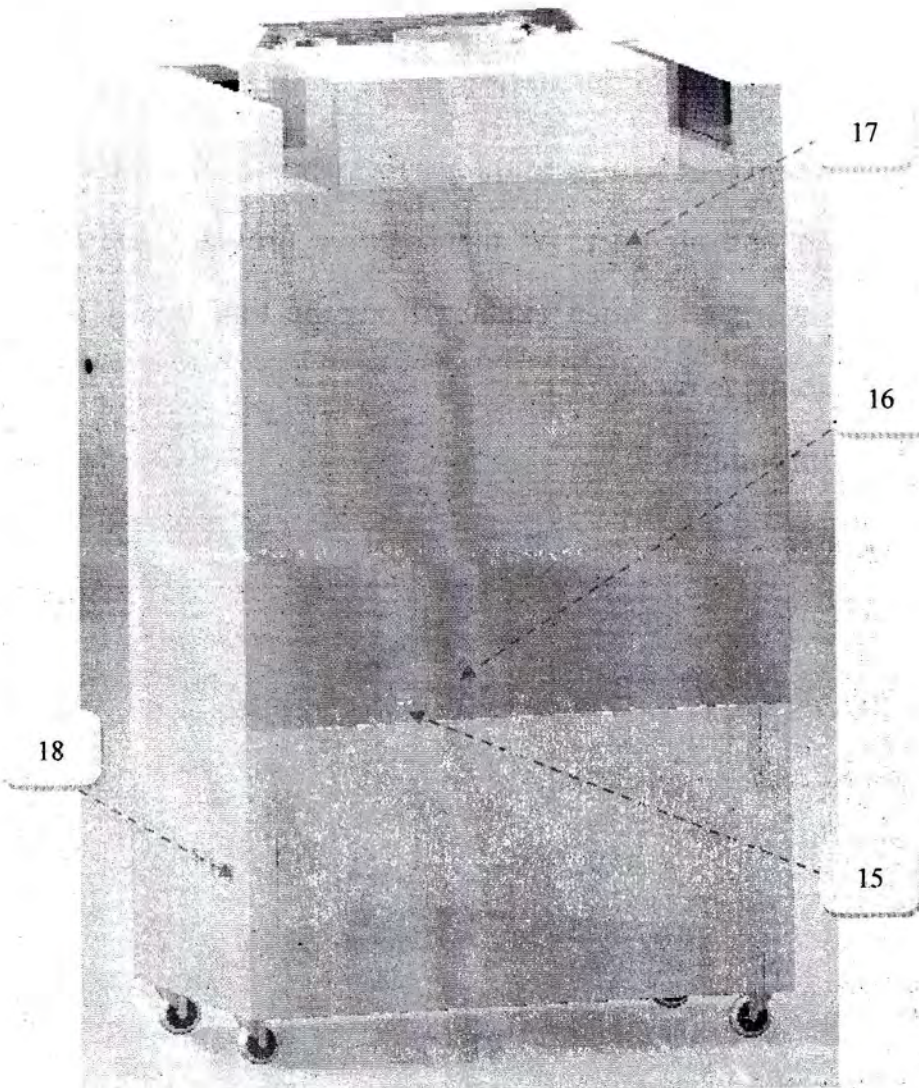


Figure 1 Structure

- |                      |                              |                      |
|----------------------|------------------------------|----------------------|
| 1. castor            | 7. control panel             | 13. Compact panel    |
| 2. Base cabinet door | 8. UV lamp                   | 14. glass door       |
| 3. rocky Switch      | 9. Fluorescent lamp          | 15. back cover plate |
| 4. water slide       | 10. fan and the wind barrels | 16. fuse holder      |
| 5. fuller faucet.    | 11. deck plate               | 17. Power switch     |
| 6. Gas bibcock       | 12. Socket                   | 18. pipe hole        |

**★ Front Glass Door**

Front glass door is made up of motor, front glass door and draw gear.

**★ UV Lamp**

**UV Lamp** located at the back inner side of the working area. This position could ensure the ultraviolet ray could reach all space of the working area..

**★ Fluorescent Lamp**

The fluorescent lamp could ensure the working area have enough light. It made up of fluorescent tube.

**★ Control Panel**

There are eight soft keys on the control panel, the key as follows: “sterilize” , ”LIGHT”,“Fan control”, “ blower speed control”, “▲”, “▼”, “socket” and “Power”, (refer to Figure 2)

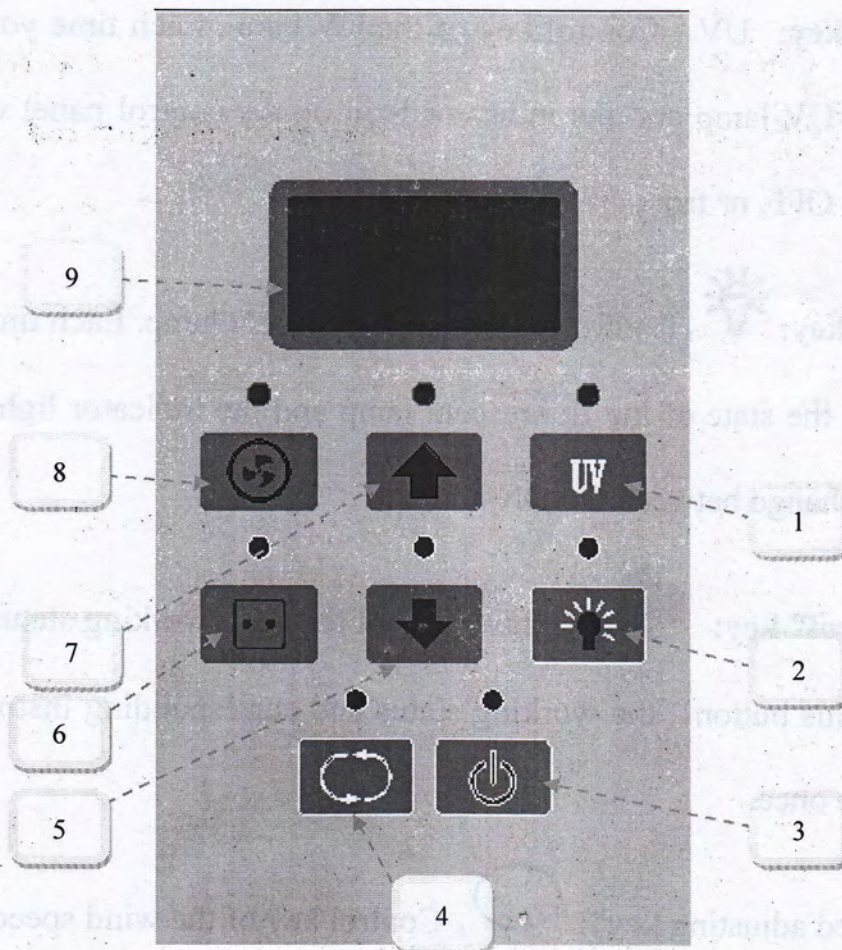


Figure 2 Control Panel





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- |                             |                          |
|-----------------------------|--------------------------|
| 1、sterilizing -UV           | 6、 socket                |
| 2、 LIGHT                    | 7、 glass door up         |
| 3、 Power                    | 8、 Fan control           |
| 4、 Wind speed adjusting key | 9、 The wind gear display |
| 5、 glass door down          |                          |


### **Touching buttons softly**

Key point of Man-computer exchange is that the main operation of the device can be done by touching buttons softly. With the function of buttons, the basic function of this device can absolutely be realized;

**Sterilizing key:** UV, Control key of the UV lamp. Each time you press, the state of the UV lamp and the indicator light on the control panel will change, from ON to OFF, or from OFF to ON.


**"LIGHT" key:**  , Control key of the fluorescent lamp. Each time you press this button, the state of the fluorescent lamp and the indicator light on control panel will change between the ON and OFF.;


**"Fan control" key:**  , Control key of the fan's working status. Each time you press this button, the working status and corresponding instructions state will change once.

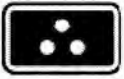
**"Wind speed adjusting key":**  , Control key of the wind speed. Each time you press this button, the working status and corresponding instructions state


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on the display unit will change once.

“glass door up” key:  , Press the UP key continuously, the glass door will raise continuously till the highest point. Loosen the button, the glass door will stop moving immediately.

“glass door down” key:  , Press the DOWN key continuously, the glass door will fall continuously till the lowest point. Loosen the button, the glass door will stop moving immediately.

“Socket”:  : Control key of the General power socket working condition. Each time you press this button, the on off status and corresponding instructions state will change once.

“Power”key:  , main switch that controls other function keys.

### ★ Socket

A socket is set on the right front side of the table-board, it can supply power to the devices in the operating space.



**The power of the device using in the working area should less than**

**500W.**

### ★ Fuse Tube

Fuse tubes are installed at the back of the product, as shown in the structure figure.

Fuse tubes are set in the corresponding fuse tube seat and power socket, Fuse tube

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specifications complies with the label right under the tube, when change the fuse tube , please refer to the label.

### Notes

1. Fume Hood is one of the important lab safety devices. In order to correct usage to ensure safety, please read this instructions and notes carefully. If necessary, please join lab safety and operation skills training;
2. Read this manual before you use the fume hood.
3. Please retain this instruction to vide.
- 4.All the damage caused by the misuse or change the constructions unauthorized, BIOBASE will not take any responsibility.
- 5.The fume hood should avoid laying nearby the personnel frequency gate/window or the corridor.
6. The power should have good earthing.
- 7.Before changing the UV lamp and fluorescent lamp, the power should be put off.
8. After packing, the package should be store at the following circumstances: the temperature should be less than 40°C; The relative humidity should below 85%; no aggressive gas exists and it has good ventilation.
9. The front perspective window of the fume hood is made of explosion-proof toughened glass, to keep clean, it should the wiped by wet soft close and kept away from HF and other acid;
10. The assembly should be cleaned regularly according to the usage, such as flow guiding plate etc;

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11. The flow tunnel and flower etc. should be clean, maintain by specially-assigned person

12. Not any device should be placed within 150mm away from the front window, and it's better to adjust the front window to the low height, as the fume hood needs enough space to ensure the airflow.

13. In the course of usage, please try not to put the soft things (such as the paper towel) on the table top, to avoid it been absorbed in the wind hole or blower;

14. For our company product modeling and color pictures, please see the real product for detailed information. Models are subject to change without prior notice.

**Declaration: Any danger caused by abuse, Biobase will not take any responsibility!**

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## Installation and Operation Instruction

### I. Installation

#### 1. Install position

The fume hood is better not be positioned at the place where people pass by frequently, where may block the window or light, where may obstruct the door opening.

#### 2. Preparation before installation

- 1) Check the surface of package and damage situation;
- 2) If the equipment was delivered in cold weather, put in a warm place for 24 hours before use.
- 3) Before breaking the package, move the entire equipment to the place where as close as possible.

#### 3. Installation

- 1) Clear the package material and **packing fragments** inside the case.



**Any packing fragments may lead to the damage of filter and air blower.**

- 3) Confirm the complement of accessories according to the list.
- 4) Check the condition of fume hood, find if there is any damage on the surface and the component inside the working zone is tight;



**Do not put hand in the exhaust fan in any case**

#### 4. Checking and Debugging

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Run fume hood and test its function for trial, to make sure all functions are normal, there should be no noise inside the cabinet, exhaust pipe unimpeded, air blower works like normal.

## 5. Training

After the installation, train the operators basic use steps and cautions.



**Untrained or unqualified persons should not use this equipment.**

## II Usage




### 1. Prepare before work

Put the plug in socket, put the other end to net socket, the required power supply is  $220V \pm 10\%$  50/60 Hz;  $110V \pm 10\%$  60Hz.


### 2. Function switch/buttons


See P8 introduction

### 3. Operation

a. When power is ready, press the button “”, the fume hood control panel is powered on. Press button “”, blower starts to work. After blower working for 5 minutes, the operator can use the fume hood normally. During fume hood working progress, LED display will show blower airflow volume. The airflow volume can be adjusted by button “”. If the experiment needs assistant tools, they should be put into the work area before fume hood working. Please don't open the front window frequently during operation. Close the front window and open the UV lamp 30 minutes for sterilization when the experiment finished. Then please turn off the power.

b. Press the power button on the control panel, Screen will display fan work time (this is filters work time, the actual is the display number multiply by 10, unit is hour), press

 up key ,it can rise the glass door bottom edge to the appropriate height, then press

 fan key, the screen will show the fan gear at last work, fan indicator light will turn to light, it can be operated experiment after running five minutes.

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## Maintenance

### I. Maintaining period

Each year or every 1000 working hours and before each restart, proper maintaining should be applied.



1. Cut the power off before daily maintain;
2. The working hours counting directly effect the maintaining decision, we recommend make a particular schedule and record as reference
3. Exhaust pipe and outside pipe must be maintained often.

### II. Recommended maintaining and repairing metho

#### a) Surface Clean

To keep the cabinet clean, clean the cabinet periodically (suggest at least every week), wipe the surface by soft rag dipped soap water. Do not spread any chemical liquid on the screen, in order to avoid color fade or dim letters. Window and cabinet surface should be cleaned by special chemicals.

#### b) Fuse plug replacement

There is a around tube fuse plug base at the right plate of the cabinet, the models are marked in labels that are F5A  $\phi 5 \times 20$  mm for power socket, and F10A  $\phi 5 \times 20$  mm for zero line, When the plug need to be changed, pluck off power cable plug, press and twist fuse base anticlockwise by straight screwdriver, change the fuse, twist fuse base clockwise. To change the fuse in socket, pry out the fuse base by straight screwdriver to change the fuse, and then push it back.

### III. Light change



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When the light need to be changed, power off the cabinet, open the front plate, remove the screws at both sides of the cabinet, open the front cover plate, twist off the light tube, replace by a new one, fix the font plate.

#### **5) UV lamp change**

The UV lamp equipped on cabinet is designed to work 1000 hours, we suggest to test the UV light strength periodically, it can be done by special test card. To change the UV lamp, power off the light, twist light tube to take out from base, put a new one on.

#### **IV. Filter change**

If the product is equipped with activated carbon filters or other types of filters, the filters should be replaced in time based on the fume hood's using time and environment. Remove the holding bolt of the back cover plate from the back of the cabinet with a screwdriver, and then remove the bolt on the filter fixed layering with spanner. Take down the old filter, and put a new filter of the same model into the right position of the cabinet according the original installation, then tighten bolts and layering, and install the back cover plate.

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## Repairing

### 1. Before Maintenance

1. To check whether the equipment implement grounding measure to ensure use security following instructions. Inspect electrical wiring devices to see if there is falling, short break, and if those occur a s, should be canceled at once;

2. Judgment and maintenance for regular fault

1) The screen is not bright

Check whether the power is on and the conditions for the importation, whether or not the insurance control tube is broken;

2) UV LAMP is not bright. Replace UV lamp

3) Fluorescent lamp is not bright. Replace fluorescent lamp



**The above-mentioned electrical components must be operated by qualified electrician in the security conditions (cut off power supply). Other parts are not allowed to disassemble, or consequences responsible by users themselves;**

**1. When the equipment breakdown caused by other fault, and the operators can not handle immediately, please notify our company's maintenance department immediately, in order to your safety, do not maintain equipment on your own;**

**2. Maintenance of the equipment is only recognized by the BIOBASE training of technical personnel;**

**3. If you need to order parts, please contact our technology services sector, please specifying the Fume Hood type and number.**

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## Maintenance Guarantee

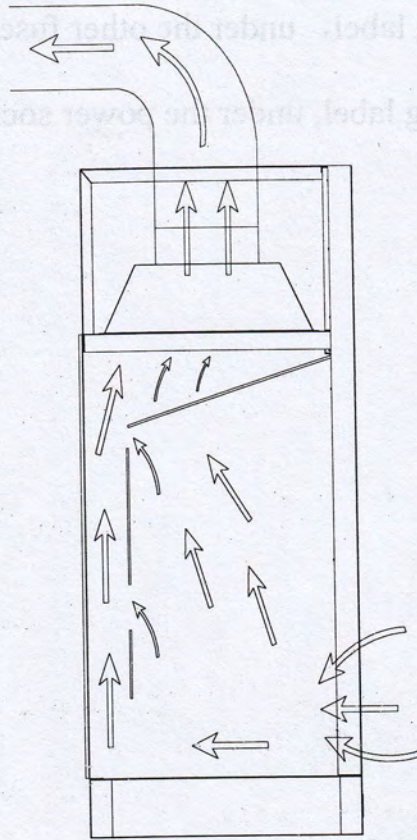
- The guarantee period is 12 months which begins from the day you buy it.
- Our company assumes no obligation to warranty the equipment failure or damage due to the improper use within the warranty period.
- Our company responsible for maintenance after warranty period, the maintenance fee charged.
- Provide the necessary drawings and technical data to the person or institution which is trained and recognized by our company.

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### Spare part list

250V, 10A Fuse tube	2 ( replacement is allowed by user following instructions )
250V, 5A Fuse tube	1 ( replacement is allowed by user following instructions )
Power line	1 piece
UV lamp tube	1 piece

# Airflow diagram



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## Label illustration

Fuse tube label:

5A fuse tube indicating label, under the other fuse tube,

10A fuse tube indicating label, under the power socket;

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