

# User Manual



Please read operating manual before installation and operation.

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# **BIOLOGICAL SAFETY CABINET**

## **BSC-1300IIA2**



## 1. Brief introduction

Class II biological safety cabinet is necessary in animalcule lab, especially in the condition needing protection measure, such as medicine, pharmacy, scientific research and so on.

### Main Characteristics

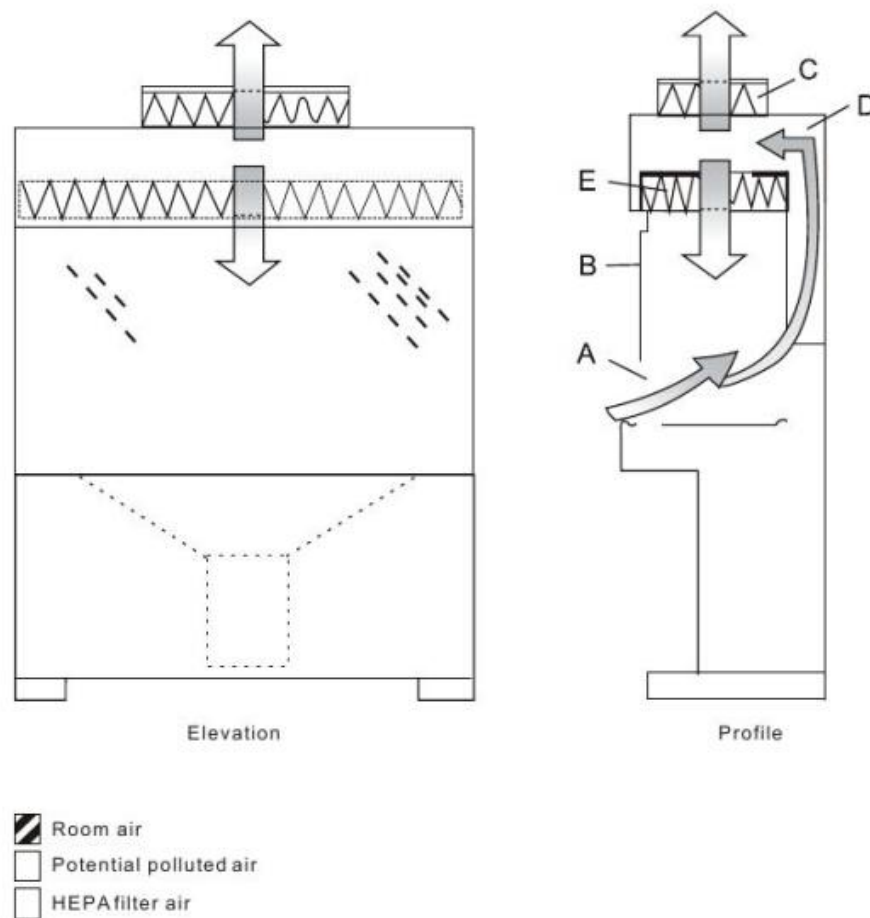
1. It accords with physical engineering principle, 10° inclination design, so the operating feeling is more excellent.
2. Air insulation design to avoid cross pollution inside and outside air circulation. 70% Air Recirculation, 30% Air Exhaust, vertical negative pressure air supply.
3. Equipped with spring up/down movable door in the front of the work bench, flexible and convenient to locate.
4. Equipped with HEPA filter on ventilation to keep vented air conforming to national standard.
5. Adjustable air speed to keep wind speed in working area in ideal state all the time.
6. Operate with LED panel.
7. The material of the work area is 304 stainless steel.

Model	BSC-1300IIA2
Cleaning level	100 Level(USA Federal Standard 209E) $\geq 0.5\mu\text{m}$ Granulate $\leq 3.5$ per liter
Descending air speed	$\geq 0.35\text{m/s}$
Flow-in air speed	$\geq 0.55\text{m/s}$
Noise	$\leq 58\text{dB(A)}$
Half ventilation peak value	$\leq 3\mu\text{m}$
Power supply/Max. power consumption	AC220V/50HZ/1KW
Biological safety security level	Personnel protection: impact type sampler: CFU $\leq 10$ ,
	Product protection: all sampling vessels: CFU $\leq 5$
	Cross contamination protection: all double dishes: CFU $\leq 2$
working area dimension	1300*650*620mm
Overall dimension	1495*720*1950mm
Specifications of LED lamp and UV lamp	20W*2 / 20W*1
Illumination	$\geq 650\text{LX}$

## 2. Structural Characteristics

Biological safety cabinet consists several major components, including centrifugal fan, high efficiency filters, control panel etc. The main body of it is made of cold rolled steel plate with surface spray treatment, and the working area is made of stainless steel. The biological safety cabinet adopts adjustable fan system, which can adjust the air speed so as to keep the product in a good

working condition. The average wind speed maintains a clean work area within the rated range, and effectively extend the life of the HEPA filter.



### 3.Working Principle

First, the air in the working area is drawn into the static pressure box by the fan through the air return port on the rear side of the platform. Then, some of them are filtered by the exhaust filter and discharged through the top exhaust valve. The other part is filtered by the air supply high-efficiency filter and then blown out from the air outlet. Form a clean air stream. The clean airflow flows through the work area at a certain section wind speed, thus forming a high clean working environment.

### 4.Installation

The biological clean safety cabinet should be located in a clean environment (preferably in the primary clean room of 100,000 or 300,000 grade), plug in the power, and turn on the function shown on the control panel. Before the start-up, the working area and the outer casing of the biological

clean safety cabinet should be carefully cleaned to remove the surface dust, and the normal operation can be carried out ten minutes after the start-up.

## 5.Maintenance

1.Based on actual usage, periodically remove the primary filter cleaning, the cleaning cycle is generally 3-6 months. (if not long-term cleaning, the dust will affect the amount of wind insufficient to reduce the cleaning effect.)

2.When the early effect of the normal exchange or clean the filter air filter, still can not achieve the desired cross-section wind speed, then adjust the fan voltage, and thus achieve the desired uniform wind speed.

3.Generally speaking, when the fan operating voltage adjustment to the highest point in the use of eighteen, still can not achieve the desired wind speed, description of the filter on the high efficiency filter dust too much (filter kong has basically stuck to timely update) general efficiency air filters use a period of eighteen months.

4.Replacement of high efficiency air filters, should pay attention to the correctness of the model dimensions (original manufacturer configuration), arrow wind devices, and pay attention to the peripheral sealing of the filter is absolutely no leakage occurs.

## 6.Common Fault, Causes, and Solutions

Fault	Reason	Solutions
Total power switch is not close automatically trip	1.Fan stuck lead to motor stall, or short-circuit lines	1.Adjust the fan air shaft position, or replace the impeller and bearings, check the line is intact. 2.The control circuit diagram, point by point inspection line components of the shell insulation resistance, and repair insulation failure.
Low air speed	1.Primary filter has too much dust. 2.HEPA filter beakdown	1.Clean the pre-filter. 2.Replace the HEPA filter.
Fan doesn't work	1.The contactor does not work. 2.The fuse of fan power has been fused	1.Check the contactor whether it can work normally or not 2.Replace the fuse.
The LED light doesn't work	1.The lamp broke. 2.The fuse of the lamp has been fused	1.Replace the broken lamp. 2.Replace the fuse.

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