

Biological Safety Cabinet

(Bio-Safety Cabinet Class II)

TOPLAB INDIA'S Class II **Bio-safety Cabinets** are designed to provide protection to operator, environment and materials inside the workspace. These Bio-safety Cabinets are utilized for containing low-to-moderate risk bio-hazardous materials. These Bio-safety Cabinets have downward airflow and HEPA filters that re-circulate air providing required level of protection from microorganisms and aerosols. As these Bio-safety Cabinets are extensively used in drug preparation, chemotherapy preparation, clinical research, medical and pharmaceutical sectors, life science and industrial laboratories etc. it must follow relevant application specific standards..



Different Names Same Purpose

A Bio-Safety Cabinet is called by several names in research industry; microbiological safety cabinet, Biological Safety Cabinet (Acronym: BSC) and Bi-Safety hood are such common names which are referred by microbiologists.

Types of Class 2 Bio-Safety Cabinet:

In order to meet varying research and clinical needs, Bio-Safety Cabinets are designed mostly in 3 types i.e. Type A2, Type B1, and Type B2. Regardless of type, each cabinet provides the same level of protection. According to international sanitation standards, there are exactly same pass and fail criteria for all of them.

Now how do we differentiate each Class 2 Bio-Safety Cabinet? Each Bio-Safety Cabinet is differentiated by a number of factors some of them are amount of air re-circulation, air ventilation and negative and positive pressure. Before buying a cabinet a user must know the basic differences between these 3 types of Bio-Safety cabinets which are explains below:

Bio-Safety Cabinet Class II Type A2:

In this type of Class II BSC, approximately 70% of the HEPA filtered air is circulated through the cabinet, while 30% passes through an exhaust HEPA filter and is discharged.

Bio-Safety Cabinet Class II Type B1:

This Class II BSC, exhausts 60% - 70% of the HEPA filtered air, while 30% - 40% air is re-circulated inside workspace through HEPA filter.

Bio-Safety Cabinet Class II Type B2:

It is total exhaust type BSC, no re-circulation inside workspace; blower exhausts 100% of the filtered air.

Bio-Safety Cabinet

Bio-Safety Cabinet Class II

Technical Parameters:

Model	TL-BSC2	TL-BSC3	TL-BSC4	TL-BSC5	TL-BSC6
Working Size (ft.)	2' x 2' x 2'	3' x 2' x 2'	4' x 2' x 2'	5' x 2' x 2'	6' x 2' x 2'
External size (ft.)	2' x 3' x 7'	3' x 3' x 7'	4' x 3' x 7'	5' x 3' x 7'	6' x 3' x 7'
Inflow Velocity	105 fpm (0.53 m/s)				
Down flow Velocity	60 fpm (0.30 m/s)				
Noise Level	<65dBA				
Filter	HEPA filter 99.999% efficient (ULPA - Optional)				
Particle retention	≤ 0.3 microns				
Light	Fluorescent light				
Light Intensity (LX)	≥650 Lux				
Controller	Microprocessor controller w/ LCD digital display				
Body Construction	Powder Coated MS / SS304 / SS316				
Table Construction	Stainless Steel 304				
Front Door	Frameless auto sliding glass door				
Pressure Gauge	Magnehelic gauge				
Pressure difference range (Pa)	0~500 Pa				
Alarm	Audio / visual sash alarm				
Blower assembly	1/3 HP, Single Phase, 1440 RPM motor, Capacity 1000 CFM, Pressure 30 mm WG				
Exhaust assembly	300 CFM, ducting by PVC pipe with rain guard - Dia. 150mm				
Clean Rating	International standard ISO14644.1 CLASS 5 (US209E, CLASS 100)				
Certifications	NSF/ANSI 49 (Optional)				
Operate environment	Environment temp.10-30°C,Relative Humidity under 70% no obvious vibration and dust				
Power Supply	Single-phase voltage source AC220±10V, 50/60Hz				
Optional Accessories	<ul style="list-style-type: none"> ○ ULPA Filter ○ Caster wheels ○ Temperature indicator ○ Face Velocity Meter ○ Airflow Indicator ○ Audio / Visual alarm ○ Thermal Anemometer ○ Raised airflow grill ○ Spare UV lamp ○ Vacuum Tap ○ Exhaust (LH / RH / Top) 				



Stainless Steel Casters



Telescoping Base Stand



Magnehelic Gauge



Thermal Anemometer



UV Lamp

Bio-Safety Cabinet Class II

Product Features:

TOPLAB Plenum Leak-proof Technology :

- Around the work zone at the top and side wall plenum design, so that the discharge of polluting gases completely in a plenum environment, work with indoor backplane to a moulding design, effective way to avoid the possibility of leakage.
- Equipped with the accurate pressure sensor to monitor the pressure of the working area, where there is abnormal situation such as breakage of the filter zone of negative pressure seal failure, the system will automatically stop the fan running, and through sound and light alarm prompts the operator, thus avoiding due to leakage caused damage.

Micro-computer Controller System :

- The integrated LCD screens. Display inflow/down flow speed, pressure, filter life, failure alarm and other parameter status.
- The user-friendly design, with sterilization, lighting, interlock function, frond window over high alarm and front window closed then the fan shut down.
- Fan speed is adjustable according to need to adjust the appropriate amount of fan.

Stable Fan Speed System :

- High air flow fan, the system will automatically track and adjust the air volume and pressure, to balance the role of compensation, with the design of micro-shaped mesh layer outflow wind deflector, so that more air flow stability and uniformity.

Excellent Imported Sensor : *Air Velocity Sensor and Pressure Plenum Sensor*

- Imported air velocity sensors collect data of high precision, the performance of corrosion-resistant, anti-interference ability.
- Real-time monitoring and control cabinet status.
- Imported pressure plenum sensor responsive, effective monitoring the pressure of the work zone and plenum.

Ergonomically Design :

- Ergonomically angled front. Increase operating comfort, reduce work fatigue.
- Equipped with splash electrical outlet. The Weight-Balance front window can move up and down freely.
- INSIDE lighting system to provide the best illumination angle and brightness, reducing visual fatigue.
- Front windows with explosion-proof, anti-ultraviolet tempered glass, to better protect the safety of the operator.

Modern Manufacturing Processes :

- Sheet metal parts use laser cutting and CNC bending technology. Cold-rolled sheets use three line of acidification anti-rust technology. Incubator surface use workmanship of spraying plastics.

Easy to Clean :

- Working surface with anti-corrosion wear of SS304 stainless steel plate forming a seamless, leak-proof, easy cleaning use.
- Under the working surface with the drain valve, easy to clean and emissions.

Convenient Maintenance :

- Removable combination tripod, easy to transport and move, Stand height adjustable.
- E-version design of the front control panel to facilitate the electrical components, maintenance and replacement.
- In order to make the BSC able to achieve long-term safety requirements, it is recommended that the user to clean or replace the HEAP of the BSC in use for some time.