

TSL

Scientific Instrument Private Limited

BIOLOGICAL SAFETY CABINETS

A biosafety cabinet (BSC)-also called a biological safety cabinet or microbiological safety cabinet-is an enclosed, ventilated laboratory workspace for safely working with materials contaminated with or potentially contaminated with pathogens requiring a defined biosafety level. The primary objective of a BSC is to serve as a means to protect the laboratory worker and the surrounding environment from pathogens. All exhaust air is Hepa-filtered as it exits the biosafety cabinet, removing harmful bacteria and viruses Through Suitable mechanism Class II cabinets provide both kinds of protection (of the samples and of the environment) since makeup air is also HEPA-filtered.



• APPLICATION

- 30% air exhaust
- 70% air recirculation
- HEPA-filtered exhaust air in Type A2 cabinet may be recirculated into the room or exhausted to the outdoors through a canopy exhaust connection.
- HEPA-filtered downflow air is a portion of mixed downflow and inflow air from a common plenum
- Negative Pressure air surrounding all biological contaminated ducts and plenums.
- Negative pressure surrounds the work area with double wall plenums for protection.
- Air drawn through pre-filter is made to pass through highly effective HEPA (High Efficiency Particular Air) filters having efficiency rating as high as 99.99% with cold DOP and 99.97% with hot DOP, thus retaining all air-borne particles of size 0.3 micron and large. The highly efficient HEPA filter maintains the optimum cleanliness and purity. Being equipped with the prefilter, it can extend the life of HEPA filter.
- Aerodynamic airflow grills maintain safety and prevents blockage.
- U.V and fluorescent interlock available
- Ergonomic and comfortable 10 degrees sloped front window for comfortable head and elbow rest position, thus reducing fatigue
- Sash is counterbalanced for smooth and light weight operation with standard opening of 200mm $\pm$ 10 mm for easier access to work zone and enhanced user safety.

• CLASS-II BIOSAFETY CABINET PROTECTION:

- Personnel protection from harmful agents used inside the biosafety cabinet.
- Product protection to avoid contamination of the works, experiment or process from outside contaminants.
- Environmental protection from contamination of the works, experiment or process from outside contaminants.

• CLASS-II BIOSAFETY CABINET KEY FEATURES:

- A front access opening with careful maintained inward air flow.
- HEPA-filtered, vertical, unidirectional airflow within the work area.
- HEPA-filtered exhaust air to the room or exhaust to a facility exhaust system.

• CLASS-II BIOSAFETY CABINET APPLICATIONS:

- Type A2 cabinets are typically used for biosafety levels 1 through 3 and are suitable for work with chemicals, as long as vapors are not hazardous and will not interfere with the work when recirculated, it is acceptable to use an A2 cabinet with a small amount of chemicals when the cabinet is exhausted to the outdoor (Option) for removal of gases.

Class - II	Protection From Particulates	From Vapors and Gases			
Type A2 (has a minimum inflow velocity of 100 ft/min).	Personnel, Work Area (Product) and Environment	If exhausted to room : not for use with vapors and gases If exhausted to facility exhaust system, protects personnel If exhausted to a treated facility (VIRUS BRUN OUT) exhaust System protects personnel, the work area and the environment.			
FLOOR STAND AND CASTOR WHEELS					
Class II Type A2 BIOLOGICAL SAFETY CABINET					
MODEL	TSL-BSC-01	TSL-BSC-01	TSL-BSC-01	TSL-BSC-01	TSL-BSC-01
Internal Dimensions (WxDxH)mm	600x600x600	900x600x600	1200x600x600	1500x600x600	1780x600x600
MOC	Internal Working Chamber : Stainless steel (SS-304) Exterior Cabinet : Cold Rolled Steel Duly Powder Coated or Stainless Steel (SS-304)				
Pre - Filter	Mounted on aluminium frame, of rating 20 microns				
Supply / Main Filter	HEPA(Efficiency 99.97% @0.3 microns to meet air quality ISO Class 4 equivalent to US FED STD 209 E, class 10)				
Exhaust Filter	HEPA(Efficiency 99.97% @0.3 microns to meet air quality ISO Class 4 equivalent to US FED STD 209 E, class 10)				
Power Supply	220 V/50 Hz (Standard)				
Exhaust Connector (Option)	To exhaust potentially contaminated air outside the room				
Exhaust Tunnel / Duct (?=200 mm) (Option)	Available on per running feet basis				
Sash Lift	Can be lifted and adjusted manually				

- Floor Stand is made up of heavy duty tubular pipe duly powder coated and fitted with durable castor wheels for rotation and total brake system on front wheels.

OPTIONS Available

Sr. No.	OPTION
a)	ULPA Filter in lieu of HEPA filter .
b)	Front door made of Toughened Glass (Tempered) in lieu of plexi glass
c)	Magnehelic Pressure Differential Gauge (To track filter pressure in lieu of static pressure manometer)
d)	Electronic filter choke alarm (Differential Pressure Monitor)
e)	Microprocessor Controller with door position alarm with Auto Switch off mode for motor blower when door is closed. Digital buzzer timer sounds an audio alarm on completion of sterilizing time of the chamber and the switches off U.V. germicidal tune and automatically switches ON the fluorescent light, alerting the user that the bench is ready for use.
f)	Gas Burner
g)	Virus Burn Out
h)	Heavy Duty exhaust system
i)	Glove ports with gloves
j)	Exhaust ducting per running feet
k)	Digital downflow velocity indicator



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ISO 9001:2015

IEC 61010-1/ IEC 61326-1 Electrical Equipment Package & 2006/95/EC Low

Customize able as per customer requirement