MAC

CLEAN AIR SYSTEMS
BIOLOGICAL SAFETY CABINET
Class III Type C3
MSW-164(C3-LCD)

 # Images for reference purpose only, may change according to model & size

Typical applications include
Working with emerging diseases or diseases marked for near eradication. Weighing and diluting chemical carcinogens. Working with high concentrations of low to moderated risk agents. Working with large amounts of low to moderate risk agents. Use of equipment or instrumentation generating high aerosol volumes. Maximum containment of highly infectious or hazardous experimental materials. An extra level of safety not available in Class I or II cabinets.

BIOSAFETY CABINET CLASS-III 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 contaminants contained within the biosafety cabinet.
- Typically used for biosafety level 4 for high risk biological agents.

The Class-III Biological Safety Cabinet are designed for work with biosafety level 4 high risk microbiological agents, and provides maximum protection to the environment and the worker. It is a gas tight enclosure with a non-opening, completely sealed, viewing window. Access to the interior of the cabinet is through a double door pass through "interchange" box. Reversing that process allows for safe removal of materials from Class III biosafety cabinet.

Classification	Biosafety Level	Application
Class III	4	High risk biological agents

Both supply and exhaust air are HEPA filtered. Exhaust air must pass through HEPA filter. Class III cabinets usually exhaust air back to the laboratory, however the exhaust air can also be exhausted to the external environment via a dedicated ductwork system. The air exhauted to the environment can also pass through an optional additional level of SAFETY, though not essential, by incineration process (commonly known as Virus burn-out systems). Air Flow is maintained by a dedicated independent (optional) exhaust system exterior to the cabinet, which keeps the cabinet and all associated ducting under negative pressure.

- Long, gloves and glove parts are attached in a gas - tight manner to ports of the cabinet. Although these gloves restrict movement for the manipulation of the materials isolated inside the cabinet, they prevent the user's direct contact with the hazardous materials. THE TRADE-OFF IS CLEARLY ON THE SIDE OF MAXIMIZING PERSONAL SAFETY.
- Aerodynamic airflow grills maintain safety and prevents blockage.
- U.V and fluorescent interlock available
- Ergonomic and comfortable sloped front window for comfortable head and elbow rest position, thus reducing fatigue
- Sash is sealed and fixed with glove and ports for access to work zone and enhanced user safety.

BIOLOGICAL SAFETY CABINET

Class III Type C3 MSW-164(C3-LCD)

100% AIR EXHAUST

No air recirculation, and air is exhausted by HEPA filters and to the room directly. If the air needs to be exhausted to outdoors, another out connected duct need to be ordered, and an extra duct and motor blower(option)are required.

COMPLETE NEGATIVE PRESSURE

The special design makes interior of cabinet is completely under negative pressure, and sure the HEPA filters, ensures operators security, neither substance nor polluted air will leak out.

PASS THROUGH INTERCHANGE BOX

Since it is a gas tight enclosure with a non-opening, completely sealed, viewing window. Access to the interior of the cabinet is through a double door pass through "interchange" box. Reversing that process allows for safe removal of materials from Class-III biosafety cabinet.

CLASS-III TOTAL CONTAINMENT CABINETS

Class-III biological safety cabinets are gas-light, designed for use with high risk biological agents. Class-III cabinets provide the highest level of personnel, product and environmental protection.

Exhaust System with Blower

With an exhaust system (Option) consisting of a heavy duty and powerful motor blower system, Class III Type biological safety cabinet is able to exhaust 100% potentially contaminated air outside the cabinet & air.

Drain Trough with Valve

The trough at base is easy to clean and for offloading liquid spillage if any.

Decontamination by UV Lamp

UV Lamp to produce UV rays of 253.7 nanometers and fluorescent lamp are interlocked and motor blower are turned off/on as and when front sash is closed/opened. UV lamps functions through a timer (Option) to control the decontamination cycle and maximize UV lamp life. The UV lamp shuts off once the desired set time of decontamination is over and switches the fluorescent lamp to ON position.

Front Airflow Intake Grid

Aerodynamically designed front airflow intake grid eliminates potential turbulence and contamination.

Floor Stand and Castor Wheels

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

Controller

Microprocessor controller with LCD display with air velocity sensor

TECHNICAL SPECIFICATIONS & ORDERING INFORMATIONS

MODEL	MOC: CRC-PC	#STERIMAX-3 (C3-CRC-LCD)	#STERIMAX-4 (C3-CRC-LCD)
	MOC: SS-304	#STERIMAX-3 (C3-SS-LCD)	#STERIMAX-4 (C3-SS-LCD)
Internal Dimensions (WxDxH) mm		900x610x675	1200x610x675
MOC		Work Table : Stainless steel (SS-304) Main Cabinet: CRC Sheet Duly Powder Coated OR Stainless Steel (SS-304) (as required or ordered)	
Pre - Filter		Mounted on aluminium frame, Prefilter are made from Non-Woven Synthetic with HDPE mesh and Al expanded mesh on air leaving side; conforms to EU-4/G-4 Grade, with efficiency of 90% down to 10 micron. These filters can be cleaned by compressed air & also washable.	
Exhaust Filter		Air drawn through pre-filter is made to pass through highly effective HEPA (High Efficiency Particular Air) filters. The prefilter fitted extends the life of HEPA filter drastically. Fitted with HEPA Filter made from water resistant, fire retardant, imported micro fine glass fibre media; conforms to EU - 14 Grade, with an efficiency rating better than 99.999% for 0.3 µ. These filters are designed to accommodate higher airflow volume.	
Supply/Main Filter		Air drawn through pre-filter is made to pass through highly effective HEPA (High Efficiency Particular Air) filters. The prefilter fitted extends the life of HEPA filter drastically. Fitted with HEPA Filter made from water resistant, fire retardant, imported micro fine glass fibre media; conforms to EU - 14 Grade, with an efficiency rating better than 99.999% for 0.3 µ. These filters are designed to accommodate higher airflow volume.	
Controller		Microprocessor controller with LCD display with air velocity sensor	
Electrical Socket		Electrical Socket is provided for using small electrical devices	
Power Supply		220/230 Volts AC supply	
Sash Lift		Made of toughned glass or plexi-glass with totally sealed window	

OPTIONS

a) Magnehelic Gauge (To track filter pressure) to cost extra.
b) Electronic Filter choke alarm. (Differential pressure monitor)
c) TFT Touch Screen Display Controller with air velocity sensor.
d) Gas Burner.
e) Exhaust ducting per running feet.
f) Gloves for use with above cabinet.
g) Motarized Sash Lift in lieu of manual sash lift to cost extra.

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