Bio Safety Cabinet

ACMAS Technologies Inc.

CE An ISO 9001:2000 Company

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BIOSAFETY CABINETS

Class I: The Class I biological safety cabinet is an open-front negative pressure cabinet The exhaust air from the cabinet is filtered by a high-efficiency particulate air (HEPA) filter. The Class I biosafety cabinet will provide personnel and environmental protection.

Class II: The Class II vertical laminar-flow biological cabinet is an open-front, ventilated cabinet. This cabinet provides a HEPA-filtered, recirculated mass airflow within the work space. The exhaust air from the cabinet is also filtered by HEPA filters. Thus, the Class II biosafety cabinet will provide personnel, environment and product protection. While HEPA filters are effective for trapping particulates and infectious agents, these filters will not capture volatile chemicals or gases.

Class III: The Class III cabinet is a totally enclosed ventilated cabinet of gas-tight construction. Operations within the Class III cabinet are conducted through attached rubber gloves. When in use, the Class III cabinet is maintained through negative air pressure of at least 0.5 inches water gauge. Supply air is drawn into the cabinet through HEPA filters. The cabinet exhaust air is filtered by two HEPA filters, installed in series, before discharge outside of the facility. The exhaust fan for the Class III cabinet is generally separate from the exhaust fans of the facility's ventilation system.

The use of a Class II cabinet in the microbiological laboratory offers the additional capability and advantage of protecting materials contained within it from extraneous airborne contaminants. This capability is provided by the HEPA-filtered, recirculated mass airflow within the workspace.

Personnel protection provided by Class I and Class II cabinets is dependent on the inward airflow. Since the face velocities are similar, they generally provide an equivalent level of personnel protection. The use of these cabinets alone, however, is not appropriate for containment of highest-risk infectious agents because aerosols may accidentally escape through the open front. When Class III cabinets are required, all procedures involving infectious agents (usually Classes 3, 4 or 5) are performed within them.

The Class II cabinet is the most versatile and economical. It is suitable for the containment of biohazardous materials and unlike the Class I biosafety cabinet, it is also suitable as a sterile environment for cell cultures.

Some laboratories have purchased laminar flow clean benches for work which may have to be performed in a Class II biosafety cabinet. A laminar flow clean bench will not provide personnel protection since the air is not HEPA-filtered prior to exhaust across the work area. A laminar flow clean bench MUST NOT BE USED for any work with Class 2 or 3 agents.

THERE ARE FOUR TYPES OF CLASS II CABINETS:

Class II, type A: this does not have to be vented, which makes it suitable for use in laboratory rooms which cannot be dusted. This cabinet is acceptable for use of low to moderate risk agents in the absence of volatile toxic chemicals and volatile radionuclides.

Class II, type B1: this cabinet must be vented, with 30% of the air exhausted from the cabinet while 70% is recirculated back into the room. This cabinet may be used with etiologic agents treated with minute quantities of toxic chemicals and trace amounts of radionuclides required as an adjunct to microbiological studies if work is done in the directly exhausted portion of the cabinet, or if the chemicals or radionuclides will not interfere with the work when recirculated in the downflow air.

Class II, type B2: this cabinet must be totally exhausted, with100% of the air exhausted through a dedicated duct. This cabinet may be used with etiologic agents treated with toxic chemicals and radionuclides required as an adjunct to microbiological studies.

Class II, type B3: this must be vented. 70% of the air is exhausted from the cabinet while 30% is recirculated. This cabinet may be used with etiologic agents treated with minute quantities of toxic chemicals and trace quantities of radionuclides that will not interfere with work if recirculated in the downflow air.

industry we cater to:

- Biotechnology
- Tissue Culture
- Bio Chemistry
- Botany
- Zoology
- Chemistry
- Biology
- Hospitals
- Diagnostics Labs
- Pharma Industry
- Healthcare Industry
- Vaccine Manufacturers
- Food Processing Industry
- Life Science
- Chemical Industry
- Bio Medical

Available Sizes:

Sizes	Dimension (mm) WxHxD	Dimension (mm) WxHxD
3Ft	1057 x 1600 x 835	873 x 724 x 597
4Ft	1362 x 1600 x 835	1178 x 724 x 597
5Ft	1667 x 1600 x 835	1483 x 724 x 597
6Ft	1972 x 1600 x 835	1788 x 724 x 597

Specifications

Outer Body	Mild Steel
Inner Body	Stainless Steel
Side Walls	Acrylic Sheets
Exhaust	30 %
Air Flow	70 %
Exhaust Filter	Filter with Efficiency 99.99% at 0.3 micron
Down Flow Filter	Filter with Efficiency 99.99% at 0.3 micron
Ultra Violet Tube Light	Germicidal
UV light Programming	Up to 999 minutes
Sash Door	Hydraulic
Fluorescent Light & UV Light Working	On and Off Synchronized with front sash door
Rotary Switch	For constantly self-regulating air flow velocity
Design	10°C Slope / Tilt
Working area	Class 100
Blower Motor Assembly	Dynamically Balanced ISI Marked
Noise and Vibration	Low
Static Pressure Measurement	Magnetic Gauge
Power	220 Volts

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