



**Microflow Devices India Pvt. Ltd.®**  
for Technology and Reliability

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# PRODUCT Catalogue

## PROFILE

Microflow Devices was founded by Young and Dynamic Engineers. Today due to our dedicated and sustained investments in technology we have been recognized as one of the renowned Manufacturers and Exporters of extensive range of Contamination Control Devices.

## MICROFLOW RANGE OF PRODUCTS

Laminar Airflow	●	Inoculation Chambers
Biological Safety Cabinets	●	Air Handling Unit
Dispensing and Sampling Booth	●	Fan Filter Unit
Static and Dynamic Pass Boxes	●	Garment Cubicle
Air Showers	●	Air Curtain
Positive & Negative Pressure Modules	●	HEPA/ULPA/Pre Filters
Fume Exhaust Systems	●	Negative pressure modules
Modular Clean Room Panels	●	Modular Sterile Operation Theatre
Modular Clean room Door	●	BSL 2 & BSL 3 Clean rooms

## CLEAN ROOM

We develop and provide industry specific clean room solutions which maintain particulate free air through our HEPA or ULPA filters. We have been successful in implementing the clean room strategies and serve extensively to various industries such as pharma, semi conductor manufacturing, biotech, medical device, life science, aerospace, optics, defence and Department of Energy, etc. Our Clean Room has a controlled level of contamination and ensuring to maintain the same standard.



## LAMINAR AIRFLOW WORK STATIONS

- ▶ Horizontal | Vertical | Ceiling Suspended | Mobile Laminar Air Flow
- ▶ Microflow Laminar flow bench provides a HEPA / ULPA filtered airflow across the work area, and a particulate free work surface.
- ▶ Material of Construction : CRCA Power Coated Stainless Steel 304 | 316
- ▶ Cleanliness Level : ISO Class 3/4/5 as per ISO 14644-1 equivalent to Class 10/100
- ▶ Advantages of vertical Laminar Airflow : It is an ideal choice since it occupies less space for even laboratory with limited space. Sterile air wipes all the areas so there is no dead space





## FUME EXHAUST SYSTEMS ➡

We offer a wider range of Fume Exhaust Hood to suit every specific application of the user.

These are designed to exhaust toxic and other harmful vapours to protect laboratory personnel. We use following materials such as

- ▶ MS powder Coated with FRP.
- ▶ Stainless Steel 304 / 316
- ▶ Polypropylene sheets for fabricating our units



## IVF LAB / OT ➡

We provide class 1000 & 10000 Sterile environment with permissible VOC limits as per international standards. We are using activated carbon filter, KMNO<sub>4</sub> filter and ULPA / HEPA for achieving VOC less than 10ppm and Class 1000 / 10000 respectively. We also provide positive pressure more than 30 Pascal's to avoid cross contamination from outside to inside the IVF lab.



## BIOLOGICAL SAFETY CABINET ➡

The Biological Safety Cabinet (BSC) is the primary containment device used to minimize exposure of laboratory personnel to aerosols or droplets when working with biological materials or pharmaceutical products.

Secondary containment measured includes facility design features such as negative pressure airflow within the laboratory. Biological Safety Cabinets are divided into three classifications (Class I, II, III). The Classifications are based on what type of biological agents that may be used in the laboratory and the degree of risk exposure to personnel working directly with the biological agents or visitors who may only be in the laboratory for a short time.

## MODULAR OT

The Laminar Airflow System with HEPA Filter creates an extremely homogeneous laminar Airflow with very little turbulence. Any bacteria, Viruses or dust particles are extracted directly before the air enters the area. This means that the operating area is completely isolated from the surrounding rooms, effectively preventing any contamination by bacteria or virus-laden air. The low degree of turbulence also provides a pleasant working environment for medical personal. Our range of OT Laminar airflow unit are made of Stainless Steel 304, CRCA Powder Coated and are designed as per NABH guidelines. We design the interiors of modular OT with various options like stainless steel 304 panels / PCGI / Seamless / Vinyl / Epoxy .

### SALIENT FEATURES:

- ▶ Class 100/ISO 5 at grill level as per NABH guidelines
- ▶ Temperature 21 ± 3 °C as Per NABH guidelines
- ▶ Following NABH guidelines for testing, calibration and traceability as per NABH standards
- ▶ Compact & Sleek design
- ▶ Positive pressure minimum 15 pascal
- ▶ Velocity 90 ± 20% FPM
- ▶ Humidity 40 - 60%





## CLASS I BIOLOGICAL SAFETY CABINET ➡

The class I Biological Safety Cabinet provides personal and environmental protection, but does not protect the material within the cabinet (product) from contamination. Unfiltered room air is drawn through the front opening and across the work surface. The exhaust air is passed through a HEPA filter before being vented to the outside. The Class I Biological Safety Cabinet is designed for general microbiological research with low and moderate risk agents. However, since product protection is not provided it is mainly used to enclose equipment. It may also be used for radioisotopes and some volatile toxic chemicals if the exhaust is ducted to the outside exhaust.



## CLASS II BIOLOGICAL SAFETY CABINET ➡

The Class II Cabinets are designed for personal, environmental and product protection. They are divided into three types are

Type A2-70 % Recirculation 30 % Exhaust

Type B1-30% Recirculation 70% Exhaust

Type B2-100 % Exhaust



## CLASS III BIOLOGICAL SAFETY CABINET ➡

The class III Biological Safety Cabinets - are totally enclosed, gas tight, ventilated work space. Exhaust air must pass through HEPA filters or a HEPA filter and an air incinerator before being discharged to the outside. The airflow is maintained by a dedicated independent exhaust system that maintains a negative pressure within the cabinet of at least 0.5 inches of water. The Class III Biological Safety Cabinet was designed for work with Biological Safety Cabinet - 4 agents and provides the highest degree of protection for the worker, the environment and the product. Arm-length gloves that allow for manipulation of materials inside are attached to ports in the cabinet.



## BSL 2/BSL 3

Biological Safety Levels (BSL) are a series of protections relegated to autoclave-related activities that take place in particular biological labs. They are individual safeguards designed to protect laboratory personnel, as well as the surrounding environment and community. These levels, which are ranked from one to four, are selected based on the agents or organisms that are being researched or worked on in any given laboratory setting.



## DISPENSING & SAMPLING BOOTH

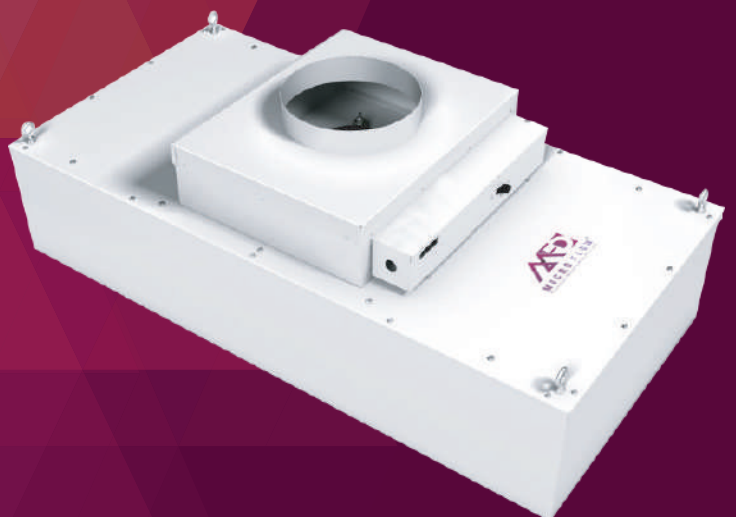
Microflow Powder Dispensing Booth are designed as Open Front Containment Systems with built-in scavenging arrangement that draw powder aerosols away from the operator and the operating environment, protecting products and personnel.

Microflow Dispensing and Sampling booth are ideal for weighing and dispensing of critical Pharmaceutical and other powders. It provides down flow of HEPA filtered clean air, creates clean environment in the area where powder is being dispensed as well as protects the worker who is working inside from inhaling the powder fumes as the air bound powder gets trapped in the suction filter at the bottom.



## FAN FILTER

Fan Filter Unit is designed to provide filtered Laminar Air Flow over a specified area. The Unit consists of a high-efficiency fan together with pre and HEPA filter. The contaminated air from the room is drawn through the pre and HEPA filter placed inside the fan filter unit and exhausts filtered clean air in a laminar air stream at its base.





## **GARMENT CUBICLE**

Microflow Sterile Garment Storage Cabinet is a specifically designed cabinet which provides a wash of sterile filtered / UV radiation Clean air through HEPA filters.

The special cabinet protects dust and other impurities on clean room garments and other materials.

## **HEPA/ULPA FILTER**

HEPA Filter are designed to meet requirement of very fine filtration up to 0.3 micron at high efficiency of 99.99%. Whereas ULPA Fine filter filtrates at high efficiency of 99.999% of dust , pollen , mold , bacteria and any airborne particles with a minimum particle penetration size of 0.1 micron.



## **AIR SHOWER**

Air showers are specialised antechambers which personnel must pass through before entering clean rooms in order to decontaminate. Decontamination is done by clearing off dust and dirt particles from bodies of clean room personnel to minimize contamination of equipment or products. Microflow is a leader in air showers for demanding applications in the micro - electronics, semiconductors, pharmaceuticals, Automobile industries, Research labs etc.,

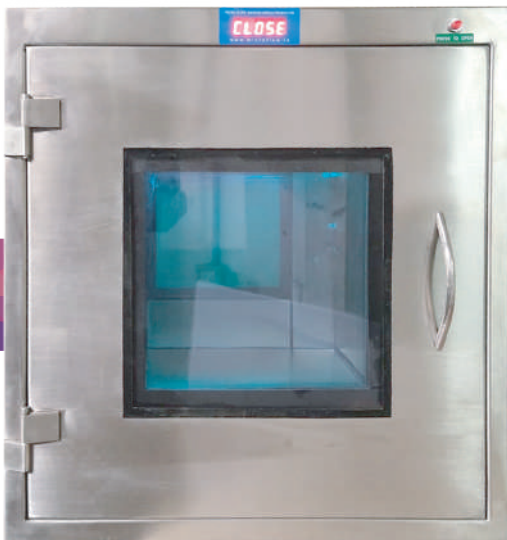


## DYNAMIC PASS BOX ➡



Clean room sterile dynamic pass through box is self contained units with class 100 laminar air flow unit installed at the entrance to the cleanrooms, The minimize the amount of particulate contamination entering the cleanroom by reducing the operator traffic. The laminar flow in the pass box starts running, when the doors are opened for material transfer in order to maintain air cleanliness required for the product.

- ◀ This system provides class 100 as per US FED 209E (equal to class 5 as per ISO 14644-1) air cleanliness with in the chamber.
- ◀ Available in different sizes to suit customer requirement.
- ◀ Material of Construction available in Stainless Steel or CRCA with Powder Coated Construction Polyurethane PU coated construction



## STATIC PASS BOX ➡

Pass box is one of the clean room systems, which is used to transfer materials from lower Cleanliness area to higher Cleanliness area through controlled environment in order to avoid airborne cross contamination. Interlocking door mechanism is the prime feature of a pass box, when door at one side is open the door at other side remains closed. Ultra-Violet light is installed to remove Contamination that may enter during the transfer of materials.

## AIR HANDLING UNIT ➡

- ▶ Available in 1000 CFM – 25000 CFM
- ▶ Double skin AHU complete with mixing box, Cooling coil, fan, volume control dampers for Supply, fresh air, fresh air filter.
- ▶ Construction – 28 mm Puf Moulded Double Skin Detachable Panels
- ▶ Fan Make & Type - Nicotra/Kruger make DIDW Backward Curve Centrifugal Fan
- ▶ Type of Balancing/Test Procedure - Statically & Dynamically/AMCA Tested
- ▶ Cooling Coil



## MOBILE CLEAN ROOM

The Mobile Clean Room (MCR) is a self-contained manufacturing space fully constructed in our facility. The Mobile Clean Room can include ISO 7 or ISO 8 Air Quality in the cGMP clean manufacturing space for Aseptic products. It can also be designed for BSL1, BSL2 and BSL2+ , BSL 3 and BSL 4 clean manufacturing space for Biological Safety Products

### DESIGN ADVANTAGE

- ▶ Standard and extended widths available
- ▶ Pre-engineered, self-contained, single piece construction ready to use
- ▶ Rapid construction period
- ▶ Clean room doors with windows, door closers, interlocks, adjustable sweeps
- ▶ Entry and Exit personnel airlocks
- ▶ Cascading pressure operation between rooms
- ▶ cGMP compliant designs



## CLIENTS

### Health care



## Pharma



## Automobile





## Optical & Electronics



## Research Institutions



## Food & Dairy Industries



## Microflow Devices India Pvt. Ltd.

**Regd. Off & Works**  
Plot No.1 Sidco Industrial Estate Phase-II  
Thirumudivakkam Chennai - 600132

Mumbai | Kolkata | Noida | Vizag | Salem | Madurai | Trichy | Bangalore | New Delhi | Hyderabad

Phone : 044-24781010/1011 95000 96250  
Email : [info@microflow.in](mailto:info@microflow.in)  
Web : [www.microflow.in](http://www.microflow.in) | [www.microflow.co.in](http://www.microflow.co.in)  
[www.microflowindia.com](http://www.microflowindia.com) | [www.microflowcleanroom.com](http://www.microflowcleanroom.com)



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