Profile
Microflow Devices India Pvt. Ltd. was founded by Young and Dynamic Engineers.
Our endeavour is to ensure the greatest possible reliability and innovative excellence in our products to reflect the highest quality in design and workmanship to be the unsurpassed standard of comparison, and to be recognized as a Company of dedication, dependability and integrity.
Today Microflow Devices due to its dedicated efforts and sustained investments in technology is recognized as world’s pioneer contamination control of enclosed spaces. The momentum has made us major players in diverse industrial sectors like Pharmaceuticals, Hospitals, Laboratories, Aerospace, Electronics, Tissue Culture, Microbiology, Biotechnology, Oncology, Ray - diagnosis, ray - therapy, veterinary Science, Virology etc.,
Microflow Devices working in the field of aseptic technology with an objective of providing engineering services towards minimizing and controlling contamination from vectors like ambient environment, personal process contamination, bioclean room shell, material decontamination and cleaning, material handling within the facility.
Microflow Devices also helps clients to establish protocols for bioclean room operation, maintenance and executes assignments for complete facilities including design, HVAC layouts, air filtration systems and clean room finishes.
Out of consideration for several possible applications, each of a highly specialized nature, we have numerous optional features available that can be added or built into our system at the time of manufacture or retrofitted at side at a later date, so that you may evolve or upgrade the configuration to meet your needs.

Microflow Range of Products
- Laminar Air Flow Work Stations
- Biological Safety Cabinets
- Dispensing and Sampling Booth
- Static and Dynamic Pass Boxes
- Air Showers
- Fume Exhaust Systems
- AC Integrations / Positive / Recircuial Pressure Modules
- Sterile Operation Theatre (OT)
- Garment Cubicles
- HEPA / ULPA Pre Filters
- Validation
- Inoculation Chambers
- Stomachers (Laboratory Blenders)
- Incinerators
- Clean Rooms

Clean Room
Clean rooms are used in practically every industry where small particles can adversely affect the manufacturing process. They vary in size and complexity, and are used extensively in industries such as semiconductor manufacturing, pharmaceuticals, biotech, medical device and life sciences, as well as critical process manufacturing common in aerospace, optics, military and Department of Energy.
A clean room is any given contained space where provisions are made to reduce particulate contamination and control other environmental parameters such as temperature, humidity and pressure. The key component is the High Efficiency Particulate Air (HEPA) filter that is used to trap particles that are 0.3 micron and larger in size. All of the air delivered to a clean room passes through HEPA filters, and in some cases where stringent cleanliness performance is necessary, Ultra Low Particulate Air (ULPA) filters are used.
Personnel selected to work in clean rooms undergo extensive training in contamination control theory. They enter and exit the clean room through airlocks, air showers and/or gowning rooms, and they must wear special clothing designed to trap contaminants that are naturally generated by skin and the body.
Laminar Air Flows Work Stations

- Horizontal / Vertical / Ceiling Suspended / Mobile Laminar Air Flow
- Microflow Laminar flow bench provides a HEPA filtered airflow across the work area, and a particulate free work surface.
- Specifications Material of Construction: CRCA Power Coated / PU painted / Stainless Steel 304 / 316
- Cleanliness Level: Class 100 • Standard ISO 14544 - 1
- Advantages of Vertical Laminar Flow: Air - Stream is not directed at the operator causing less stress over Sterile Air wipes all the areas, there is no dead space.

Fume Exhaust Systems

We offers a wider range of Fume Exhaust Hood to suit every specific application of the user. These are designed to exhaust toxic, or otherwise harmful vapours etc., for protecting laboratory personnel and equipment, fume exhaust hoods provided by us are made of water proof ply & block boards. Its external body is fabricated from laminated sheets, stainless steel and interiors coated with epoxy paint. A face velocity of 100 feet per minute (fpm) provides efficient vapour capture while reducing hood turbulence.
**IVF OT/CLEAN ROOM**

The HEPA Filter system creates an extremely homogeneous Airflow with very little turbulence. Any bacteria, Viruses or dust particles are extracted directly before the air enters the area. This means that the area is completely isolated within the surrounding room, 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 IVF OT/ Clean rooms are made of Stainless Steel 304, Powder Coated and Korean Panels etc are designed as per NABH guidelines.

**Biological Safety cabinet:**

The Biological Safety Cabinet (BSC) is the principal 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 and BSC Incation 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 they pose to personnel working directly with the biological agents or visitors who may only be in the laboratory for a short time.

**Class I Flow 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 Micro Flow 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.
Class II Biological Safety cabinet:
The class II Cabinets are designed for personal, environmental and product protection. They are divided into two type (A and B) based on construction type, airflow velocities, patterns and exhaust systems. Type A Biological Safety Cabinets are classified as A1 (formerly type A) and A2 (formerly B3). Type B Biological Safety Cabinets are classified as B1 and B2.

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.

Pass Box:
Static Pass Box
Microflow pass boxes are self - contained units installed at the entrance to clean rooms. They minimize the amount of particulate contamination entering the clean room, by reducing operator “traffic” Equipment and material are passed into the clean room via the pass box.
**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 Polyurethane PU coated construction.

![Dynamic Pass Box Image](image1)

**Dispensing & Sampling booth:**

Microflow Power 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 weighting and dispensing of critical Pharmaceutical and other powders. These provide down flow of HEPA filtered clean air creating 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.

![Dispensing & Sampling booth Image](image2)

**Technical Specifications**

- Type - Recirculated type or exhaust Type
- Material of Construction available in Stainless Steel or CRCA with Polyurethane PU coated construction
- Air cleanliness - Class ISO - 5 (As per ISO 146441)
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 Filter

Hepa filters are designed to meet requirement of very fine filtration up to 0.3 micron at high efficiency of 99.99%

A HEPA filter (high efficiency particulate air) thus is a filter that is excellent at removing tiny particles from the air and trapping them. A true HEPA filter (there are filters called HEPA like) is able to remove a minimum of 99.97 percent of airborne particles that are 0.3 micrometers in diameter.

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.
STERILE 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 within the surrounding room, 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, Powder Coated and Bioclad Panels etc are designed as per NABH guidelines.

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