

# Prestro Creation

ISO 9001 : 2015  
Certified Company

Expert In Clean Room Services,  
Negative Or Positive Pressure  
And All Type Of Labs



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## Welcome to Prestro Creation



To Design, develop and manufacture products and equipments required for installation of Cleanroom interiors at par with international Standards.

**Prestro creation** as pioneers in Design, Engineering and Construction of high tech Clean Room facilities. Quality Clean Rooms with highly efficient energy saving techniques is our forte. Our Clean Room Facilities are competitive to international standards and market. We have an extensive in house technical resource with vast experience in pharmaceuticals, medical, electronic, Custom Air Handling Units, HVAC Air Handling Units, Central Air Handling Units, nuclear industry who adds value to our customers business.

## We are committed to Timely Delivery and Quality Solution.

We strictly work in accordance to the guidelines that are established by

- ISO 14644-1 Clean Room Standards
- BS 5295 Clean Room Standards
- US FED STD -209E Clean Room Standards
- EU GMP Guidelines Clean Room Standards

Recommended Air Changes and Ceiling Coverage

ISO Class	Air Changes Per Hour	Ceiling Coverage
ISO 1	500-750	80-100%
ISO 2	500-750	80-100%
ISO 3	500-750	60-100%
ISO 4	400-750	50-90%
ISO 5	240-600	35-70%
ISO 6	150-240	25-40%
ISO 7	60-150	15-25%
ISO 8	5-60	5-15%

## CLEAN ROOM TECHNOLOGY

Clean room technology is being used in every industry where small particles present in air can unpropitiously affect the specialized process of that organization. These processes include manufacturing, testing, packaging, storage, etc. Clean room conditions are achieved by using various classes of filters to remove particles from air. The filters act like a grid by not letting through particles of a certain size.

Clean room is a confined space where provisions are precisely followed to reduce the particulate contamination and to control other environmental parameters like humidity, temperature and pressure. HEPA/ULPA filters along with other EACs are the heart of the clean room as they trap particles ranging in different sizes as per the requirement of the process.

### The Technology Is Divided Into Four Parts:

1. Design
2. Contamination
3. Testing
4. Operation



Designing of a clean room contributes to pre-acquiring knowledge of various parameters like location, height of ceiling, distance from outdoor units, also it needs precise work to provide sufficient contamination removal along with favourable cooling/heating.

Commissioning is a prominent part of the technology as it verifies the consistency and work pattern of the system. Every component should be checked for their performance before bringing them to operations.

At last, operations should be precise and maximum efficiency should be achieved within the system. Low energy consumption with more cooling output is the key to a good HVAC system.

### Experience in Industry

With over more than 50 projects in India and overseas in the last few years, Medical devices pharmaceutical & biotech industries and engineering services.

To Create World Class PRESTRO CREATION Clean Room facilities by ensuring innovative cost effective technology , best implementation practices , high quality products and dedicated team to meet dynamic Industrial requirement in adherence to all International Standards

## 1. WALL PANEL SYSTEM

Wall panels are extremely critical for Cleanrooms and are hence a core component of our product offerings. Standard specifications are given below, but note that Clean wall panels can also be customized per requirement.



### SPECIFICATIONS

- Standard size : 1150 X 3000mm (Other sizes customizable on request)
- MOC : GI Pre-Coated / GI powder-coated / SS -304
- Thickness: 0.4 To 1mm
- Skin Type: GPSP sheet / Aluminium sheet
- Panel Thickness: 50 / 60 / 80 / 100mm
- Fastened to extruded aluminium / GI profiles
- Fire retardant PUF / ROCKWOOL as In-fill (Other In- Fill options available on request)
- Factory- made cutouts for integration with Pass boxes, Autoclaves, etc.

Factory- made cutouts for in-built power sockets and Magnehelic manometers

## 2. CEILING SYSTEM

A perfect ceiling makes a perfect Cleanroom! Ceiling Systems designed by Clean adhere to global quality standards and fit in perfectly with the paneling within the room. They are fastened to profile placed on a particle-tight extruded aluminium grid matrix with silicone sealant.

### SPECIFICATIONS

- Standard size : 1150 X 3000mm (Other sizes customizable on request)
- MOC : GI Pre-Coated / GI powder-coated / SS -304
- Thickness: 0.4 To 1mm
- Skin Type: GPSP sheet / Aluminium sheet
- Panel Thickness: 50 / 60 / 80 / 100mm
- Factory-made Cut-outs (For Filter & Light Fixtures and other Services)
- Fire retardant PUF / ROCKWOOL as In-fill (Other In-Fill options available on request)
- Ceiling suspension

### 3. DOORS

Prestro creation produces a wide range of Cleanroom compatible doors, meant for air ingress in the room. The door is fitted with mechanically-interlocked vertical edges that add strength and rigidity, making them perfectly suitable for light and heavy use.

Cleanroom doors are available with an interfacing profile for a flush and easy installation on the existing walls.

- Fully flush surfaces with wall system
- A large variety of swing out pharmaceutical doors
- Manual, semiautomatic and fully-automatic sliding doors
- Door hardware by leading global manufacturers
- Custom dimensions
- Heavy-duty structure for high durability

DIFFERENT TYPES OF DOORS	INFILL
<ul style="list-style-type: none"><li>• Scientific Doors</li><li>• Fire Rated Doors</li><li>• Emergency Doors</li><li>• Sliding Doors</li><li>• Roll up Doors</li></ul>	<ul style="list-style-type: none"><li>• Honey Comb Kraft</li><li>• PUF (Polyurethane Foam)</li><li>• Rock Wool</li></ul>



### 4. ACCESSORIES

Here's a list of major accessories required for Clean room construction

- Coving
- 3D corner coving
- View Panels
- Inbuilt / Projected Raisers

### 5. FLASHING

L and U outer and inner flashing. Ceiling support heavy aluminum T. Door and window flashing

## 6. AHU

An air handler, or air handling unit, is a device used to regulate and circulate air as part of a heating, ventilating, and air-conditioning system. An air handler is usually a large metal box containing a blower, heating or cooling elements, filter racks or chambers, sound attenuators, and dampers.

## 7. Dehumidifier

A dehumidifier is an electrical appliance which reduces and maintains the level of humidity in the air, usually for health or comfort reasons, or to eliminate musty odor and to prevent the growth of mildew by extracting water from the air. It can be used for household, commercial, or industrial applications.

## 8. DX SYSTEM AND CHILLER

A chiller is a machine that removes heat from a liquid via a vapour compression or absorption refrigeration cycle. Dx or Direct expansion system works in such a way that the evaporator coil comes in direct contact with air to be supplied. When the refrigerant in the evaporator coil expands, it will cool the air by absorbing the heat from it. The expansion of the liquid refrigerant is handled by the flow control device. Whether Dx system with outdoor unit or a chiller, it consists of 4 major components:

1. Expansion device
2. Evaporator
3. Compressor
4. Condenser



**The. Selection of condenser is done on the basis of degree of coolness to be provided or the temperature of refrigerant after passing through the compressor**

### Types of condensers:

- Air cooled
- Water cooled
- Evaporative cooled

### Advantages of DX system

- Low installation costs.
- Ease to test, adjust and balance the system.
- Minimum ceiling or wall space needed.
- Low energy consumption.
- Low maintenance costs.
- Comfort under varying load conditions.
- Low noise level (NC 35).
- Good relative humidity control.



## 9. DUCTING

Ducts are conduits or passages used in heating, ventilation, and air conditioning to deliver and remove air. The needed airflows include, for example, supply air, return air, and exhaust air. Ducts commonly also deliver ventilation air as part of the supply air.



## 10. HEPA HOUSING MODULE

HEPA Filter Housing, also called HEPA Box Module, Air Plenum Box, Air Intel, is used for holding HEPA Filter at end terminal. For different size of Hepa Filters, the housing is different. We are the manufacturer of all custom sizes of Hepa Housings.

1. MS Hepa Housing.
2. SS Hepa Housing.
3. Aluminum Hepa Housing Power Coated/Without Power Coated

We are also manufacturing SS Grills of all sizes for these HEPA Housing in a very competitive price.

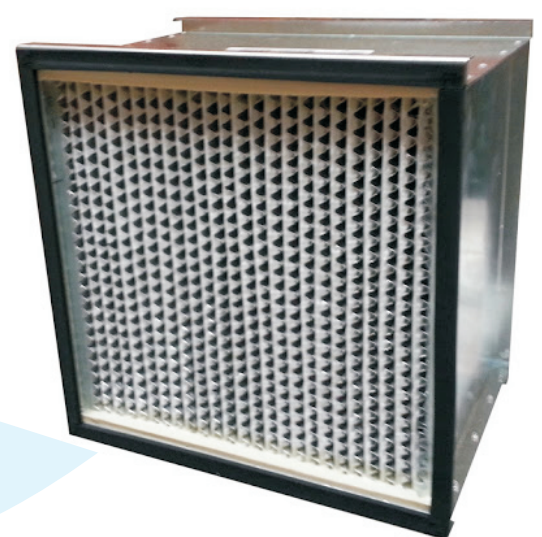
## 11. HEPA FILTER

### Standard Size & Technical DATA

Standard Size	Panel		Air Flow	Pressure Drop		Efficiency
	MM	D		CFM	Initial	
H	W	D				
610	610	305	1000	15mm	25mm	>99.97% @0.3micron
610	610	305	2000	15mm	25mm	
610	305	305	500	15mm	25mm	
305	305	305	250	15mm	25mm	
610	610	150	500	15mm	25mm	
610	915	150	750	15mm	25mm	
610	1220	150	1000	15mm	25mm	
305	305	150	250	15mm	25mm	

### CONSTRUCTION & STANDARD

Filter Media	:	Micro Fiber Glass Paper Deep Pleated
Separator	:	Aluminum Foil
Frame Material	:	Aluminum / SS/GI
Frame Type	:	Box / Flange



## 12. AIRSHOWER

We are manufacturing Air showers in below mentioned materials.

- a. MS Powder Coated
- b. SS-304
- c. Puff Panel

Air Shower concentrate air flow to lift off contamination such as lint, dirt, dust etc., while Person moves through a specially constructed chamber. The high velocity air from jet nozzles ensures efficient scrubbing action necessary to remove particulate matter. Contaminated air then flows through sidewalls of the air shower and flows through pre-filters and final HEPA filters then re-circulated again in the chamber.



## 13. EPOXY FLOORING

This specific self leveling epoxy flooring is considered ideal for providing dust proof, clean & hygiene surface to the floor. As such, the range is highly used in numerous places, pharmaceutical units, operation theatres and food factories. Our premium quality, easy to clean self leveling epoxy flooring is also extensively used in TV picture tube manufacturing units and many more.

### Features:

- Epoxy Flooring & Coatings
- 2 to 3 mm thickness of self leveling epoxy.
- 3 component.
- self Leveling Epoxy Topping.
- Anti-bacteria & anti-fungal.
- Resistant to a variety of acids & alkalis.





## 14. SCRUB SINK

Scrub sinks, also referred to as surgical sinks or medical sinks, are vital to keeping operating rooms (ORs) up and running, and are imperative to the health and safety of patients. They serve as the scrub station for surgeons and other OR staff to scrub their hands and arms before a surgical or invasive procedure.

The main features of a scrub sink include :

- 1. Water control :** Water controls on scrub sinks may be operated by hand or with a hands-free feature like a knee operated panel, foot pump, or infrared sensor.
- 2. Digital timer :** A digital timer is used to ensure that proper amount of time is spent on hand hygiene before entering the operating room. Timers count down from a pre-determined start to prevent scrubbing in for less than the desired length of time.



## 15. FAN FILTER UNIT (FFU)

We offer Fan Filter Units (FFU), which is a type of terminal module. These units are specially designed to offer superior - quality clean air into the work area. Very Convenient for the user and integrated with a blower and filtration system with in single low profile casing.

### Technical Specifications

1. Sleek Model & Robust Model.
2. Body - Ms Powder Coated / SS-304
3. Filter Type - Mini Pleat HEPA Filter and a PPE Filter,
4. Fan Controller with on/off switch.

### **Static and Dynamically Balanced motor Blower Assembly.**

Air Flow	:	Laminar
CFM	:	800-1000 (4x2 Feet Unit)
Noise Level	:	~65 db
Power Supply	:	230v Ac-1-Phase, 50 Hz



## 16. STATIC AND DYNAMICS PASS BOX

Dynamics pass boxes are used to transfer materials between two rooms of equal cleanliness levels and are designed for minimal personnel movement while dynamic pass boxes are used to transfer materials from uncontrolled to controlled environments. Dynamic pass box works like an airlock or laminar air flow unit. Clean air enters in the pass box and prevents the entrance of the contamination. Dynamic pass boxes may be cascade, sink or bubble type similar to air locks in pharmaceuticals.



## 17. BIOSAFETY CABINET

Bio Safety cabinets are used as the primary means of containment for working safely with infectious micro organisms. Bio cabinets are designed to prevent biological exposure to personnel and the environment and may also protect experimental material from being contaminated when appropriate practices and procedures are followed.

S.N.	COMPONENT	DESCRIPTION
1	BODY	BODY IS MADE UP OF MS POWDERCOATED/ SS 304
2	WORK TABLE	MADE UP OF SS 304 SHEET
3	FRONT PANEL	SLIDING TYPE CLEAR ACRYLIC SHEET OF 6 MM THICK
4	PRE FILTER	MADE OF NON WOVEN SYNTHETIC MEDIA EFFICIENCY 10 MICRON STD SIZE-01
5	HEPA FILTER	HEPA FILTER MADE FIBER GLASS MEDIA (IMPORTED) HEPA FILTER OF STD SIZE 01 NO EXHAUST HEPA FILTER OF STD SIZE-1 NO



## 18. LAMINAR AIR FLOW

The Laminar Flow Clean Bench is a completely self-contained, multipurpose, vibration-free clean bench that supplies a laminar flow pattern of HEPA filtered air. The clean bench provides a Class 100. Air enters the Laminar Flow Clean Bench through a prefilter which removes most of the large particles.

S.N.	COMPONENT	DESCRIPTION
1	Work Area	4x2x2, 3x2x2, 2x2x2 Feet
2	Type of Flow	Vertical / Horizontal
3	Cleanliness Class	Class 100 as per ISO (Class-5)
4	Noise Level	Less Than 65 db
5	Construction	Main Body SS304 Hairling Finish / MS Powder Coated Working Table
6	Hepa Filter	99.99% Efficiency
7	Front Size	Statically and Dynamically Balanced Motor with Vibration pads for low noise.
8	Front Door	Polycarbonate Sheet 6mm thick UV Tolerant
9	Side Covers	Poycarbonate Sheet 6 mm thick Tolerant
10	Fluorescent Light	LED Havells Make

## 19. DISPENSING BOOTH

Dispensing booth is a kind of partial purifying equipment for filling, refilling, weighing and sampling of raw material and compounds. It is provided with HEPA filter, which prevents the airborne dusts by down draught technique. Dispensing booth is also called sampling booth or weighing booth. It is also called RLAF Unit.

### Features :

1. No Risk of inhalation of powders.
2. Easy HEPA Filter exchange from underneath unit
3. Easy to Clean
4. No Cross Contamination
5. Easy to Clean
6. Easy HEPA Filter exchange from underneath unit



## 20. PCR HOOD

A PCR workstation, also called PCR Hood, is a work space, enclosed on three sides, that provides space for doing amplification of DNA and/or RNA. PCR hoods are used in biology and genetics labs so that there isn't any cross contamination between samples.

There are two models available.

1. PCR Gold with UV Decontamination, Fluorescent Light and Digital Controller.
2. Cross PCR with Hepa and Pre Filtration, Motor Blower



## 21. O. T. LAMINAR AIRFLOW

We have installed numerous Laminar Flow for OTs, We are confident to handle any upgrade of operation Theatres to meet regulations and NABH requirements. We manufacture our Laminar Flow units with state of the art HEPA filter. HEPA filters are selected for enhanced performance and extended life. These have been installed in many Hospitals & Pharma Companies and working continuously, 24x7.

1. HVAC system is designed by qualified and experienced Engineers to meet NABH requirements HVAC and LAF are integrated and matched perfectly.
2. We are manufacturing OT Plenum in both Aluminum and SS 304 with SS-304 Grills or Erection Cloth Diffusers.



## 22. CLEAN ROOM DRESS

Certain types of cleanroom apparel are designed to cover the entire body, while others are intended to cover particular areas, depending on the needs of the facility. A wide variety of hoods, goggles, face masks, gloves, coveralls, boots and footwear coverings are available in its



### 23. Cleanroom, Operation Theater and Equipments Validation, Testing & Certification.

We specialise in validation facilities and offer a complete range of performance tests including.

1. Air velocity test & air change per hour.
2. Hepa filter integrity testing.
3. Room differential pressure measurement.
4. Non-viable airborne particulate monitoring
5. Temperature & relative humidity measurement.
6. Clean up recovery test.

ISO Cleanroom Classification Table							
	ISO classification	Highest levels of particle concentrations (particles/m <sup>3</sup> ) equal to or greater than the parameters listed as follows.					
		0.1 µm	0.2 µm	0.3 µm	0.5 µm	1.0 µm	5.0 µm
Certify every 6 months	Iso Class 1	10	2	-	-	-	-
	Iso Class 2	100	24	10	4	-	-
	Iso Class 3	1,000	237	102	35	8	-
	Iso Class 4	10,000	2,370	1,020	352	83	-
	Iso Class 5	100,000	23,700	10,200	3,520	832	29
Certify every 12 months	Iso Class 6	1,000,000	237,000	102,000	35,200	8,320	293
	Iso Class 7	-	-	-	352,000	83,200	2,930
	Iso Class 8	-	-	-	3,520,000	832,000	29,300
	Iso Class 9	-	-	-	35,200,000	8,320,000	293,000



Our professionally qualified testing executives are able to offer comprehensive clean room validation to your requirements of all current standards and guidelines including :

1. ISO
2. WHO
3. GMP
4. NABH
5. OTHER CORPORATE SOP'S

#### OUR DOCUMENTATION :

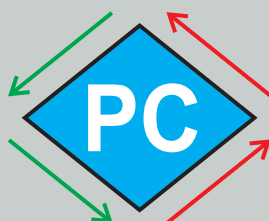
We take pride in producing professional, well structured reports to ensure your audits are trouble free.

*“We are committed unmatched customer service to its clients. It is promising excellent customer service in terms of product delivery. product information online and offline support”*

**WE PROMISE TO SERVE THE BEST**

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