

Ramnath Filteration Systems



**Right Source
for
Clean Air Solutions**



Designing - Manufacturing - Sales - Testing - Spare - Services

www.ramnathfilteration.com

COMPANY PROFILE

RAMNATH FILTRATION is a Small Scale Enterprise established in 2006, specialized in designing, manufacturing, installation and validation of durable, cost effective custom built CLEAN ROOMS from Class-100 to Class 100,000 and CLEAN ROOM EQUIPMENTS.

From customers' economic point of view, we have designed room wise Ceiling Suspended type mini AHU with in-built Air Cooling facilities to get room temperature up to 20 degree. This result oriented system is designed for all type of Clean Rooms as per FDA norms in such a way that you can avoid a common centralized AHU and 90% of GI Ducting, thereby saving substantially on space, economy and avoid air loses.

We also specializes in standard/custom built Clean Room Equipments in Powder Coated 1.2 mm thick MS CRCA or Pre-coated SS-304/SS-316 construction such as –

01. LAMINAR FLOW WORK STATION – Vertical or Horizontal Air flow type, with SS-304/Wooden Laminated working table, Available in Working Area : 2 ft x 2 ft, 3ft x 2 ft, 4ft x 2 ft, 6ft x 2 ft.
02. PASS THROUGH BOX
Single Skin type or Double Skin type with Electronic Door Interlocking System and double glass windows. Available in any sizes as per your requirements.
03. AIR SHOWER – A small Door Interlocked Room in which high speed air jets rid personnel of contaminants prior to entering the Clean Room.
04. BIO SAFETY CABINET – Vertical Air Flow Type. Available in Powder Coated MS CRCA/Pre-coated SS-304 in any sizes.
05. AIR CURTAINS – Single Phase as well as three phase.
Suitable for 7 feet to 15 feet door height and 3 feet to 12 feet door width.
06. FILTRATION MODULES – Wall Mounted type for positive air pressure and ceiling suspended vertical air flow Type for air re-circulation in the Room. With or without in-built Air Conditioning System. Normally these units are used for Ductless Clean Room installation.
07. CLEAN ROOM GARMENT CABINET
With Aluminum Sliding Shutter, Ultra Violet Tube with Filtration facility.
08. POWDER DISPENSING/SAMPLING BOOTH – Available in any sizes.
Construction: Powder Coated MS CRCA or Pre coated SS-304/SS-316

LAMINAR FLOW WORK STATION

These work stations have wide application in Laboratories, Hospitals, Pharmaceutical Industries, Semiconductor Industries, etc. where a dust and bacteria free environment is necessary.

RAMNATH LAMINAR FLOW WORK STATIONS are manufactured in two types –

Horizontal Air Flow Type and Vertical Air Flow Type

HORIZONTAL FLOW UNITS offers maximum product protection and are used for dry processes. However, these are not suitable for operations where toxic fumes, vapors are encountered or work with chemicals, solvents, powders is involved. Also horizontal type Laminar Flow Units are suitable for dealing with small, miniature, precision objects. A large object placed on this type of bench is apt to cause the irregularity of air flow.

VERTICAL FLOW UNITS are widely used in investigation work with mildly pathogenic or toxic material in microbiological applications. These type of work stations are suitable for dealing with large objects. When provided with abundantly performed work surface, vertical flow work stations reduce interference between the operator and product and toxic fumes, vapors, etc. generated during the work on table.



TECHNICAL SPECIFICATIONS

Performance :

- Class of Cleanliness of air : Class-100 as per US Fed Std 209E
- Velocity of Air (M/Sec) at discharge : 0.45 +_ 0.10
- Noise level near the Work Station : 65 dBA or less
- Light intensity on work surface : 1000 Lux (min)
- Vibration level at work surface : +- 2.5 micrometer or less
- Power supply : 230 V.AC, 1 Ph, 50 Hz, 3 wire

Construction:

- Material of construction : Powder Coated MS CRCA/Pre-coated SS-304/SS-316
- Table Top : SS-304/wooden laminated
- Side Panels : Acrylic/Glass in aluminium frame
- Front Panel : Sliding, Aluminium frame + Glass

Size available: : 2 x 2 Ft, 3 x 2 Ft, 4 x 2Ft, 6 x 2 Ft

GARMENT CABINET

One important aspect of clean room design involves Change Room. Personnel and Clothes worn by them bring lot of dust in clean room. Garment Cabinet provides the area for proper storages, facility of clean room garments. The garments are hung in clean laminar air flow. The main body of Garment Cabinet is made of MS CRCA/pre-coated SS-304

The main body houses all items like Pre filter, Hepa Filter, Blower Motor Assembly, Hanger arrangement, etc. The cabinet is provided with sliding type of powder coated aluminium sliding shutter with transparent plain glass. Imported U/V Tube is provided in Garment Cabinet. A rack is also provided on the side, if required



TECHNICAL SPECIFICATIONS

- Dimensions of work area : 950 mm W x 1855 mm H x 650 mm D
- Air Volume : 250 Cu. Mtr. Per hour
- Number of garments : 10-12
- Power Supply : 230 V AC, 1 Ph, 50 HZ
- Door : Powder Coated Aluminium + Glass
- Pre filter Media : HDPE, aluminium frame
- Hepa Filter media : Micro Glass Fibre Paper
- Lighting : Imported UV Tube Light

AIR CURTAINS

RAMNATH air curtains cut down the conditioning cost. Shuts out dust, fumes, insects and allow free movement of people and material. Various models are available for various door widths and heights.

The Air Curtains – vertical flow – are available in three types viz. Domestic, Industrial And Heavy Duty Industrial. The classification is done as per the velocity of air at the nozzle of air curtain. In each of these types various models are available to suit the door widths. Selection of air curtain is made to suit the door width and door heights. The domestic, industrial and heavy duty industrial air curtains are generally suitable for door heights up to 2.5 meters and 3 meters respectively. Door interlocking kit is also provided with the air curtain for door interlocking.

TECHNICAL SPECIFICATIONS

- Velocity of air at nozzle M/Sec - Domestic - 13, Industrial – 18 and Heavy duty Industrial – 22
- Noise level at 1 meter distance - Domestic 65 dBA, Industrial 80 dBA
- Electric supply - Domestic – 230 V AC, 1 Ph, 50 Hz
Industrial – 415 V AC, 3 Ph, 50 Hz



CONSTRUCTION

- Powder coated MS CRCA/SS-304

PASS BOX



In clean rooms and biologically clean rooms, the dust generated by people and material makes up the largest source of contamination. The material transportation in and out of such rooms should therefore be accomplished with the least possible human movement. The Pass Boxes are used for this reason.

TECHNICAL SPECIFICATIONS

- Dimensions of work area : As per customer requirement
- Power supply : 230 V AC, 1 Ph, 50 Hz
- Fluorescent Lighting : 20 Watt
- Door Interlocking : Once at a time (Magnetic Lock + Limit Switch) with buzze indication
- Maintenance Access : From inside
- U/V Tube Light : Imported UV Tube light, 15 Watt, 1.5 feet long
- Construction : Main Body - Powder coated MS CRCA/SS-304
- Door : Double skin Powder coated MS CRCA/SS-304 with clear double glass view window.

BIO-SAFETY CABINET

RAMNATH Bio Safety Cabinet is designed to serve two protective functions –

1. The operating personnel and the environment is protected from dangerous and toxic substances set free by the product/process in the working area.
2. The product is shielded off from the hazardous environmental influence. Bio Safety Cabinet is suitable to work with low and moderate risk biological agents. This Cabinet is partially front open having an inward air flow for personnel protection and Hepa filtered exhaust air flow for environmental protection.

TECHNICAL SPECIFICATIONS

1. PERFORMANCE

- Class of Cleanliness of air : Class 100 as per US Fed Std 209D
- Velocity of air at discharge of Hepa Filter : 0.46 plus/minus 0.10 M/Sec
- Velocity of inflow air through work area : Class-I - 1.0 +/- 0.05 M/Sec
- Access opening : Class-II – 0.4 +/- 0.05M/Sec
- Noise Level near Cabinet : 65 dBA or less
- Power supply : 230 V.AC, Single Phase, 50 Hz

2. CONSTRUCTION

- Material of construction : 1.2 mm thick Powder Coated MS CRCA/Pre-coated SS-304
- Table Top : SS-304 non magnetic
- Front Shutter : Aluminium + Transparent Glass



AIR SHOWER

RAMNATH Air Shower is designed to remove dust and bacteria adhering to personnel entering the clean room and the various components taken inside the Clean Room.

The Air Shower is a chamber equipped with a self contained blower motor Assemblies, Interlocked doors and a re-circulating system. The chamber has numerous nozzles arranged in predetermined pattern for most effective removal of loose particles, fibres, dust, etc. from the body, garments and other objects being carried inside the Clean Room. Air Shower also play the role of air lock for the Clean Room.



RAMNATH AIR SHOWERS are manufactured in three categories –

1. TE = THROUGH ENTRY : Entry and Exit doors are opposite to each other
2. SE = SIDE ENTRY : Entry and Exit doors are at right angles to each other, either on right hand side or on left hand side.
3. DE = DOUBLE EXIT : Two exit doors are provided. One exactly opposite and other one either on right hand side or on left hand side

RAMNATH AIR SHOWERS are manufactured in two types depending upon the filtration level of final filters.

1. TYPE 100 : Final filters, filter air down to 0.3 micron at 99.97%
2. TYPE 10000 : Final filters, filter air down to 3.0 micron at 99.97%

CONSTRUCTION

- | | |
|---------------------------|---|
| Material of construction | : MS CRCA Powder coated/Pre-coated SS-304 |
| Lighting | : Fluorescent tube light Fixtures. |
| Blowers | : Impeller- aluminium, Casing – FRP |
| Electric Motor | : 0.75/1.0 HP, 3 Ph, 2800 RPM, IP-55 |
| Pre filter Media & Frame | : HDPE with anodized aluminium frame |
| HEPA filter Media & Frame | : Micro Glass Fibre with anodized aluminium frame |
| Nozzles | : Blower generated pre punched Nozzles/SS Nozzles of 30 mm dia having 6000 fpm velocity to clean the personnel effectively |
| Interlocking | : Electromagnetic door interlocking with emergency Door release switch.
Interlock : When entry door is open, exit door automatically gets locked.
Lock will release only when entry door is closed. |
| Flooring | : Vinyl pasted on MS Bottom/SS-304 |

POWDER DISPENSING SAMPLING BOOTH

Powder Dispensing/Sampling Booths are work enclosures which provide Class-100 cleanliness in the dispensing/sampling zone. These units are used to control hazardous emissions of powder dust during powder dispensing/sampling process without any risk to the operator and product as well protecting the environment.

TECHNICAL SPECIFICATIONS

- Type : Front open
- Direction of air flow : Vertical
- Construction : Powder coated MS CRCA/Pre-coated SS 304
- Cleanliness Class : Class-100 as per US Fed Std 209E
- Particle retention : 0.3 micron and above
- Noise level : 65 dBA on scale 'A'
- Velocity : 90 FPM +- 10%
- Illumination : Fluorescent tube light fixtures
- Pressure differential : 0-25 mm Magnehelic Gauges
- Power supply : 230 V.AC, single phase, 50 Hz
- Pre-filters : 10-15 micron having 3 layers of HDPE, 6 mm PD
- Intermediate filters : 3 micron and above, two layers of HDPE woven mesh and one layer of non-woven polyester bonde media. 9 mm PD, efficiency 97%
- Supply Hepa Filters : 99.97% down to 0.3 micron
- Exhaust Hepa Filter : 99.97% down to 0.3 micron
- Blower Assembly : Statically and dynamically balanced DIDW type.



CEILING SUSPENDED LAMINAR AIR FLOW MODULE

RAMNATH make FILTRATION Modules are designed to filter air borne contamination and maintain the air cleanliness class of the room. Window mounted filtration module helps to maintain positive air pressure inside the room and avoid inrush of outside contaminate air.

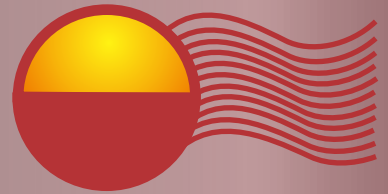
Filtration Modules have wide application in Laboratories, Hospitals, Pharmaceutical Industries, etc where dust and bacteria free environment is necessary.

We manufacture filtration modules in two types i.e. (1) Re-circulatory Type – Ceiling Suspended or Trolley Mounted and (2) Pressurizing Type – Wall Mounted

TECHNICAL SPECIFICATIONS

- Class of cleanliness at HEPA : Class-100 as per US Fed Std 209E
- Velocity of air at discharge of HEPA : 0.45 +- 0.1
- Power Supply : 230 V.AC, Single Phase, 50 Hz
- Noise Level at 1 meter distance : 55-60 dBA or less
- Maintenance access : From bottom side
- Construction : Powder coated MS CRCA/SS-304
- Available sizes : In any sizes as per customer requirement
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RIGHT SOURCE FOR CLEAN AIR SOLUTIONS

DESIGNING –
MANUFACTURING –
SALES –
TESTING –
SPARES-
SERVICES

RAMNATH FILTRATION SYSTEMS

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