

LAMINAR AIR FLOW



Descriptions:

A laminar air flow workstation is a closed cabinet fitted with HEPA filtered air flow system with unidirectional constant flow of air with almost no or minimal turbulence. The air flow velocity remains between 0.4 m/s to 0.6 m/s. The purpose of using such workstations in laboratory is to create particle and bacteria free working environment to carry out specialized work. As these units discharge air towards user, they provide no personal protection but product protection from room contaminants.

Types:

Vertical Laminar Air flow

It is the most used type of laminar air flow. In vertical flow cabinet, room air is entered in working area



through HEPA filter fitted on top of the cabinet. Thus, air flows downward (vertically) towards work surface and leaves the cabinet sweeping out particles and bacteria.

Horizontal Laminar Air Flow

In horizontal air flow cabinet, room air is entered in working area through HEPA filter fitted on the back side of the cabinet. Filtered air flows horizontally towards the user creating sterile working environment.

Construction

These cabinets are ergonomically designed to provide long service life. Only thick metal sheets and pipes are used in construction so that you may get the finest and safest Laminar bench in the market today. There are 4 different MOC used.

Complete Stainless Steel 304 / 316

Inner Stainless Steel, Outer Mild Steel

Stainless Steel bench, rest mild Steel

Stainless Steel bench, wooden Body

Air Filtration

The efficiency of a Laminar Air Flow workstation depends upon the quality of pre filters and HEPA filters. In our LAF, the Air filtration system is created to work efficiently even in critical environment. Pre filter that we use are box type pleated having efficiency 95% down to 5 micron and made of HDPE + Non-woven + HDPE mesh media and fitted in aluminium case. The HEPA filters are of high quality having efficiency 99.99 % down to 0.3 micron and fitted in aluminium anodized case. The blower assembly has $\frac{1}{4}$ HP; 1400 RPM branded motor and has aluminium anodized impellers.

The working area is carefully designed for comfortable working and easy cleaning. The workbench is made of stainless steel. Standard fittings are air / gas cock and electrical outlet. For illumination, we use fluorescent lamps. Front side of working area is covered by manual sliding door (sash), which is made of transparent acrylic plastic.

There are some optional features that can be added if required by customer. LCD display for air velocity, time and lamp on/off status are displayed on it. Germicidal UV lamp, extra electrical socket and magnahelic gauge are also fitted if required.

Germicidal UV lamp

UV lamp is an added option which is used to sterilize working area prior use. It is advised no contact to made in chamber during this time.

Technical Specifications:

Air flow direction	Vertical and Horizontal
Air cleanliness	Class 100
Construction	SS / Powder coated MS / GI sheet/ wooden
Air flow direction	Vertical / Horizontal
Sash (front door)	Manual sliding type (Acrylic transparent)
Side panels	Acrylic / polycarbonate / SS
Air velocity	0.45 m/s to 0.65 m/s
Illumination	Fluorescent or LED light
Noise level	65 \pm 5 db
Power supply	220 volts / 50 Hz
Air filtration	Pre-Filter - 10 microns (washable) HEPA filter (0.3 Microns)
Standard fittings	Air / gas cock, Mains on/off switch, Light on/off switch UV Light on/off switch, Blower on/off switch
Optional	Motorized sliding door LCD display for velocity, time & lamp on/off UV Germicidal lamp UV Hour meter Magnehelic gauge Extra power outlet switch Foot rest Levelling legs for stand DOP HEPA filter testing

Standard Size/ Dimension

Cat #	Dimensions (ft)	Dimensions (mm)	HEPA Filter Size	No. of Pre Filters
HBS-LAF22	2 x 2 x 2	610 x 610 x 610	2ft x 2ft x 6inch (1 No.)	1
HBS-LAF32	3 x 2 x 2	915 x 610 x 610	3ft x 2ft x 6inch (1 No.)	2
HBS-LAF42	4 x 2 x 2	1220 x 610 x 610	4ft x 2ft x 6inch (1 No.)	2
HBS-LAF62	6 x 2 x 2	1828 x 610 x 610	3ft x 2ft x 6inch (2 Nos.)	3
HBS-LAF82	8 x 2 x 2	2438 x 610 x 610	4ft x 2ft x 6inch (2 Nos.)	4