

# LABORATORY CHEMICAL FUME HOOD

Brand- **BioGenix®**

A **fume hood** provides safe ventilation to protect against exposure to hazardous or toxic fumes, vapors, or airborne particulate. A chemical fume hood is primarily used in laboratory and manufacturing applications to protect the user or environment outside the hood, but can also be used to protect the materials or experiment under the hood.

Ducted fume hood designs connect to a remote exhaust system to safely ventilate outside the building. Ductless fume hood configurations filter and recirculate purified air via a built-in blower and filtration system.



## Product Description

**Laboratory fume hoods** are exhaust hoods specifically designed to draw air away from the working area to protect laboratory operators from inhaling hazardous air contaminants such as carbon monoxide or other toxic chemicals. There are two main types of chemical fume hoods. Ductless laboratory vent hoods filter air through activated charcoal and HEPA filters and release cleaned exhaust in the laboratory room. These hoods usually have greater portability and higher CFM capacity than ducted lab hoods. Ducted lab ventilation hoods draw fumes inside the building's exhaust system where they are treated and then released outside.

## Features of Fume Hood

- Set the following functions in one: Exhaust waste gas, Fresh air supplement;
- Each electrical or mechanical device can be started and stopped independently;
- Double door mobile storage cabinet has exhaust and double lock function;
- Provide a safe power supply: Emergency cut-off, Electric leakage protection, and Main power control;
- Safe light source: including adjustable white LED light and non-UV yellow LED light, External isolation installation;
- Thermal overload protection for electrical and mechanical devices;
- Motorized valve controls the exhaust flow rate;
- Other functions: water supply terminal, gas supply terminal, and other experimental equipment can be installed according to customers' demands.



## Key Benefits:

- UL classified
- Smooth covered corners
- Built in wash down system
- Excellent aesthetics
- 5-degree sloped front
- Superior containment at 0.3m/s
- High energy savings

**Fume Hood fan:** Each Fume hood should be provided with an independent exhaust fan of suitable capacity. Fan should be in construction as explained below.

- Fan Housing in **molded PP construction**
- Backward curved type Impeller with Aero Foil shape blade in PP Construction for high efficiency performance.
- Fan Motor, direct driven type IP 55 construction suitable for 415 volt, 50 Hz, 3 phase AC power supply. The fans should be provided with Electrical Panel with necessary internals and VFD for fan.
- Mounting structure and base frame in heavy guage, steel construction duly hot deep galvanized

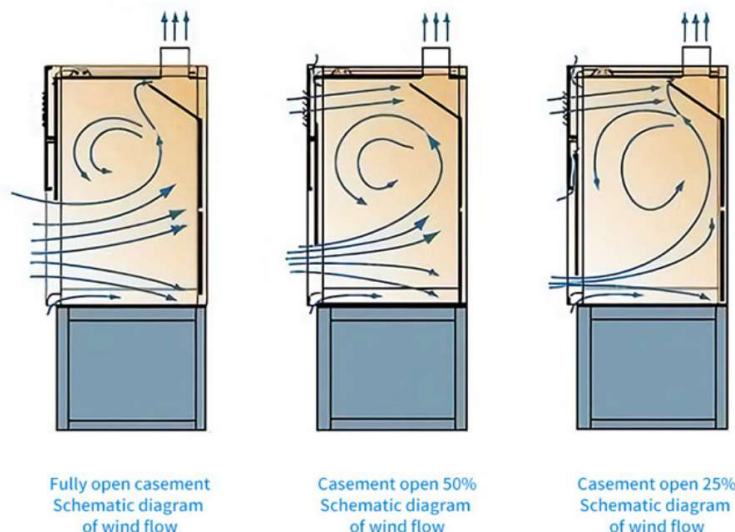
## Serviceability

- Stainless steel interior chamber allows easy cleaning of surface
- Removable baffle system allows cleaning inside the hood
- Chain and sprocket system requires minimal service

## Safety Tested

- Each Frontier Perchloric fume hood is Ashrae tested to make sure it complies with the Ashrae 110:1995 Standards.
- Wash down system is tested to ensure over 95% of the area behind the baffle is washed
- Sash is clearly labelled with all operating instructions and illustrations.
- Air Control Air velocity Monitor with low air alarm facilitated by the product

## Fume Hood Air Flow Diagram



# Technical Specification

<b>Size(W*D*H)</b>	1200*850*2350 mm	1500*850*2350 mm	1800*850*2350 mm
<b>Exhaust air volume</b>	1200-1800m <sup>3</sup> /h	1500-2000m <sup>3</sup> /h	1800-3000m <sup>3</sup> /h
<b>Air Velocity</b>	0.4-0.8m/s		
<b>Noise</b>	≤48dB(A)		
<b>Sash</b>	6mm thickness tempered glass		
<b>Operation Table Board</b>	Trespa panel / Epoxy resin / Stainless Steel / Ceramics /PP		
<b>Lighting equipment</b>	Full Cover Type Three-way Lamp, Lamp Cover with 220v * 20w * 2		
<b>Operation panel</b>	Lighting Switch, ON/OFF Switch, Two Sets of 220V/10A Versatile Electric Socket		
<b>Ventilation equipment</b>	Selecting rust-resistance, low wasting, low noise and famous fan and special wind tube. Noise can be reduced at about 55 DB .		
<b>Accessories</b>	Cock: made by brass, the surface is treated by EPOXY baking paint; Cup slot:acid and alkali resistance, PP water cup		
<b>Sink</b>	PP Sink, Epoxy Resin Sink, Stainless Steel Sink		
<b>Electric Socket</b>	Multi-functional with splash-proof box and safeguard cover.		

## Scope of Application

**Fume hoods** are a form of regulation in environments that are exposed to harmful vapors and fumes. In order to protect people from the harmful effects of these fumes, fume hoods are used to get rid of the harmful aspects and allow the individuals to work safely. Labs use fume hoods when working with substances that let off a harmful fume or odor. Laboratory workers can work with substances directly under the fume hood, or simply place the substance in the fume hood after the work is done.

### Exhaust Ducting:

Exhaust ducting in PP+FRP construction (3mm + 2mm) complete with necessary bends, reducers, T-connections, supports, flanges, gaskets, nut bolts etc.

#### Services

#### Tube Construction

Compressed Air (1 no.) - PU pipe dia. 4 mm id

Nitrogen Gas (1 No.) - PU pipe dia. 4 mm id

Vacuum Valve (1 No.) - SS braided Teflon Hose id atleast 8.0 mm

Potable Water (1 No.) - Nylon braided PVC Hose (duly insulated in case of chill water. application)

# Optional Specification

BioGenix offers a variety of options and accessories to meet application requirements.

- Additional service fixtures and electrical outlets.
- Base cabinetry is available for support requirements and as an additional storage area for chemicals. Base cabinetry has the option to be installed with MCB/ELCB, a fume hood circuit that helps protect laboratory equipment during sudden fluctuations of current. This circuit is only available for 230 VAC, 50/ 60 Hz hoods.
- Esco Enviro-safe Fume Hood Scrubber for air pollution control of water-soluble chemicals present in the exhaust fumes.
- **200 mm dia. Duct damper** in PP const. complete with pre-drilled flanges on both sides, manual operation handle, and extended spindle, suitable for manual as well as motorized drive.
- **Scaffold Grill (1630 x 750mm)** in Vertical rod design, fabricated out of 12.0mm dia., Epoxy rods, having 150mm pitch between two rods.
- Ceiling enclosure panels in GI powder-coated construction up to false ceiling height.

## WORKING SIZE (In Ft.) :

MODEL NO	WORKING AREA
BSFM-100	2' X 2' X 2'
BSFM-150	3' X 2' X 2'
BSFM-200	4' X 2' X 2'
BSFM-300	6' X 2' X 2'
BSFM-400	8' X 2' X 2'

Note: BioGenix provides the fabricated working size and specification as per the requirement



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