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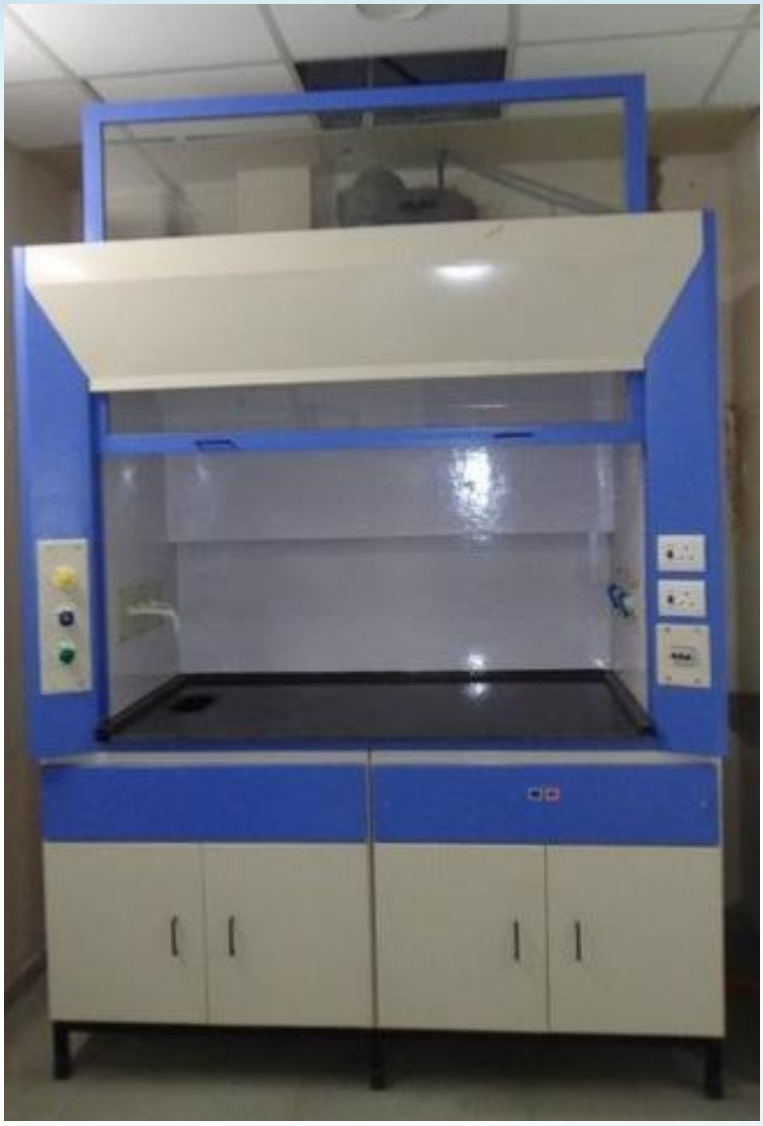
RESOTECH- FUME HOOD MACHINE

Professional Manufacturer of Test Equipment



MAKE :- RESOTECH

MODEL NO. :- RESOTECH-FUME HOOD2607

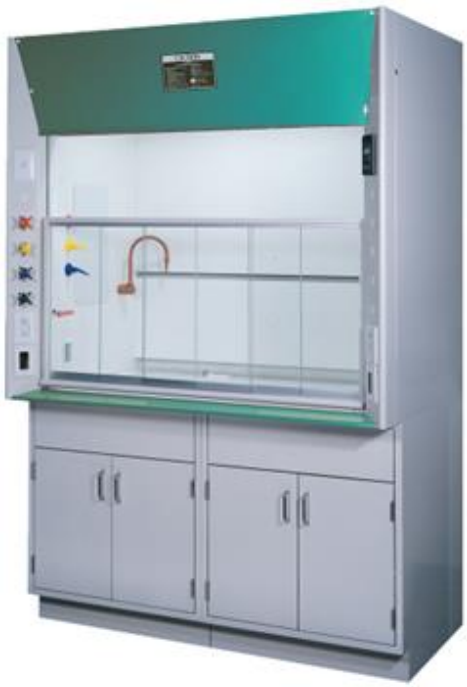
MANUFACTURERS & SUPPLERS

SPECIAL PURPOSE MACHINE, MATERIAL TESTING MACHINE, LEAKAGE TESTING MACHINE, PACKIGING TESTING MACHINE, ENVIRONMENTAL TEST CHAMBER, ASSY. LINE EQUIPMENT, SOLUTION FOR ELECTRONIC AUTOMATION AND PRODUCT DEVELOPMENT, COMPUTERIZED CONTROL MACHINE , PLC HMI SCADA VISUAL BASIC SOFTWARE DEVELOPMENT SOLUTION AND OTHER SERVICES.

The mechanical properties of materials are determined by performing carefully designed laboratory experiments that replicate as nearly as possible the service conditions. In the real life, there are many factors involved in the nature in which loads are applied on a material. The following are some common examples of how these loads might be applied: UNIVERSAL, compressive and shear, just to name a few. These properties are important in materials selections for mechanical design.

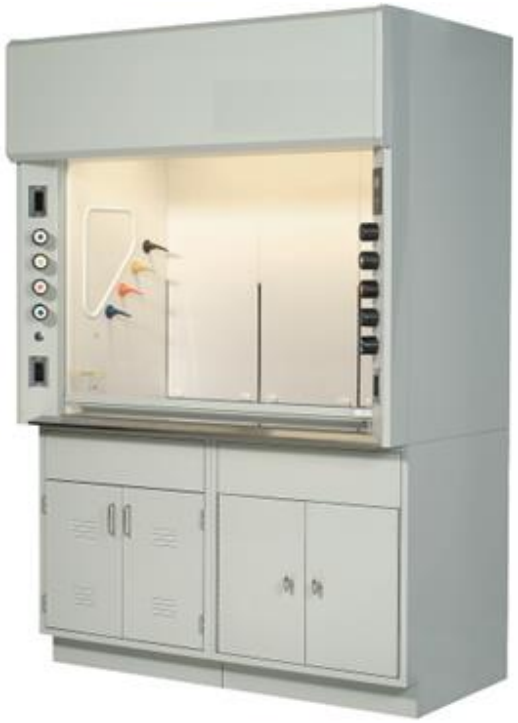
FUME HOOD

Dynamic Bench Fume Hood Features



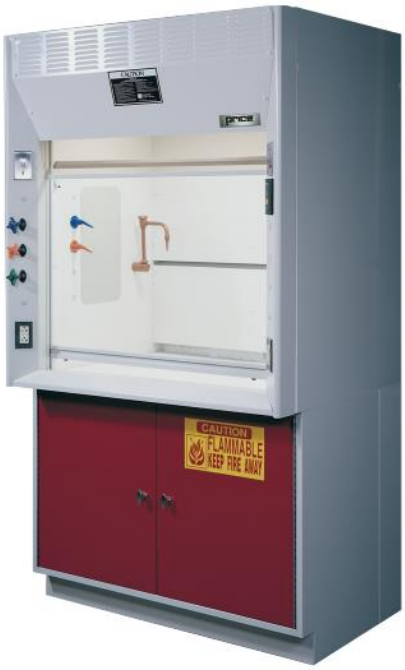
The Dynamic Bench fume hood requires over 70 percent less exhaust air volume than a traditional by-pass fume hood. The design conserves natural resources while saving thousands of dollars per fume hood on initial HVAC system requirements and on annual energy consumption. The Dynamic Bench fume hood is an ultra low constant volume design. Its basic size, shape and construction is the same as the standard Chemical Bench design; but, it incorporates new and innovative features that reduce exhaust air usage while increasing the ease of use and maintaining unsurpassed containment. Based on proven constant volume technology, Dynamic Bench fume hoods avoid the requirements of expensive, high maintenance alternatives. It has been vigorously tested to ANSI/ ASHRAE 110-1995 guidelines. In addition, the Dynamic Bench fume hood has been subjected to stringent dynamic testing including walk-bys, cross-drafts, and multiple breathing zone challenges, while maintaining unsurpassed containment.

High Performance Fume Hood Features



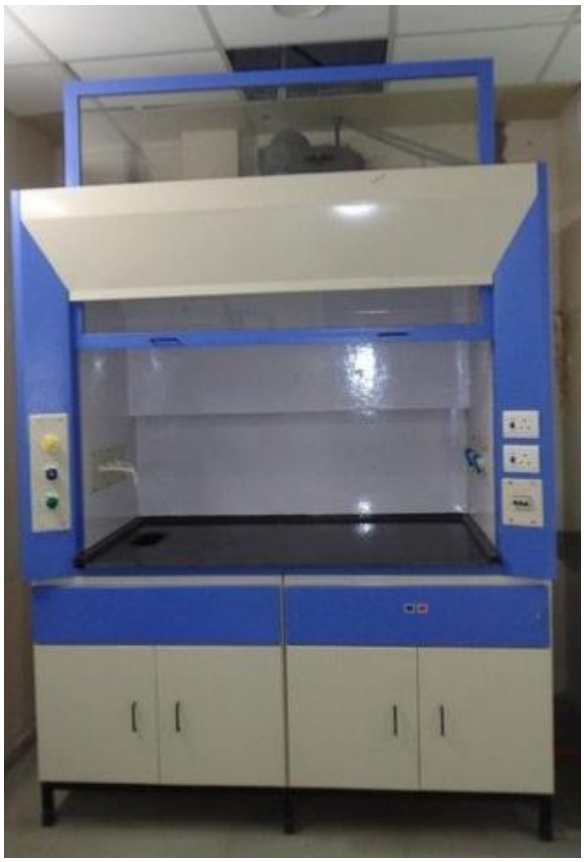
FUME HOODS The High Performance fume hood is a new generation of fume hood. The design combines safety with an energy efficient design and a multitude of user-friendly features. The High Performance hood is a low constant volume design building on the features of the proven Chemical Bench hood. It's aesthetic design incorporates reduced air volume technologies with more efficient air flow containment to provide unsurpassed safety and barrier-free use. Based on proven constant volume technology, the High Performance fume hood avoids the requirements of expensive, high maintenance alternatives. It has been tested using the ANSI/ASHRAE 110-1995 procedures to verify compliance with ANSI/ AIHA Z9.5-2003. In addition, the High Performance hood has been tested using severe dynamic challenges (including the walk-by simulation apparatus of EN 14175) to confirm its superior containment capability

Chemical Fume Hood Features



FUME HOODS Chemical Fume Hoods are designed with a rigid frame construction that assures solid installation and low vibration and sound levels. Access panels are easily removable to access service lines and fittings. Radius corner posts and airfoils, plus easy operator control of interior baffle settings assure a high level of comfort, safety and efficiency. Given the variety of models available and the comprehensive option packages to be selected, this new generation of fume hoods can be tailored to the application needs of your modern laboratory. Aesthetically pleasing curved airfoils, vision sash panels, contemporary controls and devices, designer colors and combinations make a hardworking laboratory safety device into an attractive part of the total laboratory environment.

Introduction



Selection of the proper type of fume hood to use in a laboratory should be based upon two interrelated considerations:

1. The hood must allow the user to perform the work in a safe, efficient manner.

2. The need to reduce air conditioning cost.

The hood must be large enough to accommodate the required containers and apparatus within the prescribed safe work area of the hood (6” (152mm) behind the plane of the sash). The configuration of the hood should be such that containers can be moved in and out of the hood easily. The sash opening of the hood must allow sufficient access for safely manipulating the containers and apparatus within the hood. The interior of the hood must resist the corrosive effects of chemicals. The hood understructure should provide for storage of the required chemicals for the work being done in the hood. The total cost of a hood is greatly affected by its exhaust air requirements. The annual cost of heating and cooling the air exhausted by the hood can be as high as the initial cost of the hood itself. Choosing the proper hood type and sash configuration can significantly reduce these costs.

Types of Fume Hoods

Open by-pass : fume hoods are designed for operation on constant air volume exhaust systems. The air by-pass provides for an alternate route for air to enter the hood as the sash is closed. The size of the by-pass is set so that, as the sash is closed, the velocity of the air increases to no more than three and one half times the velocity with the sash fully open. As a result, the static pressure loss through the front opening of these hoods is insignificant when compared to the pressure loss through the rear baffle and duct entry. Since the hood static pressure and the exhaust volume remain essentially constant, regardless of the sash position these hoods are classified as Constant Volume fume hoods.

Low constant volume : fume hoods use a restricted sash opening or a lower face velocity, or both to reduce the exhaust quantity of air, measured in cubic feet per minute (CFM), liters per second (L/S), necessary to contain fumes with a typical face velocity of 80-120 FPM (.41-.61 m/s. Traditionally, such fume hoods can reduce the exhaust CFM(L/S) from 40% to 60% from open by-pass levels.

Restricted by-pass : fume hoods are designed for operation on variable air volume (VAV) exhaust systems when used with a fume hood face velocity controller (not provided with hood). On standard restricted by-pass hoods, the size of the air by-pass provides sufficient area that, with 100 feet per minute (.51 meters per second) by-pass velocity with the sash closed, the exhaust volume will be 25 CFM per square foot(11.8 L/S per square meter) of internal hood work surface. This is the lowest exhaust volume sufficient to dilute and prevent the escape of contaminates (see ANZI/AIHA Z9.5 and NFPA 45). This by-pass size is not appropriate for all VAV applications due to functional differences in face velocity controllers and variations in room exhaust requirements. If a different by-pass size is required, it should be specified at the time the hood is ordered. Hoods with horizontal and combination sashes are only cataloged as restricted bypass hoods. In these hoods the size of the by-pass required for constant volume operation and for providing a minimum 25 CFM per square foot (11.8 L/S per square meter) of internal hood work surface in VAV operation is the same.

CBH Hoods only : Open By-Pass are designated by a dash (-). Restricted By-Pass are designated by the letter ”B”. As an example, CBH-72VS-00 is an open by-pass, while CBH-72VSB00 would be a restricted by-pass. (This rule does not apply to the HPH or DBH hoods.)

Double Sided Fume Hood : This model gives flexibility of using both sides of the fume hood to perform laboratory applications. Space saving and affordable, this model is commonly used to replace conventional fume hoods in two adjacent rooms. Only requires one ducting system to operate. Suited to be used with 10 or 12 duct.

Full Glass Fume Hood : The full glass fume hood is designed to meet the growing requirements of instructional laboratories. Clear glass at all sides of the fume hood enhances visibility for conducting demonstrations makes it a popular choice for educational purposes. Only available in 1200mm and 1500mm.

Face Velocity

In a laboratory fume hood, the control of contaminants is achieved by drawing air through the face (sash) opening. The face velocity is defined as the average velocity of the air in this opening and is expressed in units of feet per minute (FPM)(m/s meters per second). The Occupational Safety and Health Administration (OSHA) in its Laboratory Standard does not specify a required fume hood face velocity. As a result, hood users must look to published guidelines for recommendations on proper face velocities. The most authoritative of these published guidelines is the ANSI/AIHA Z9.5 American National Standard for Laboratory Ventilation. This publication recommends using an average face velocity of between 80-120 FPM (0.41-0.61 m/s). Newer technologies have allowed face velocities as low as 55 FPM (.28 m/s) to show good containment. Part of the reasoning for these newer, lower face velocities is that the face velocity by itself does not define the protection level of a fume hood. There are other factors which are as important such as: the design of the hood, the location of the hood within the laboratory, the quality of the supply air distribution, and most importantly the work practices of the user. The ANSI/AIHA Z9.5 recommendation assumes that these factors have been optimized through proper design and work rules. Where local and state(provincial) codes require the use of a specific face velocity, these codes should be followed.

ACCESSORIES:

Fume Hood Shelf Reduce clutter and store your supplies in the hood with this specially designed fume hood shelf. The white polypropylene made shelf lifts items of worktop, allowing for uninterrupted laminar air flow in the hood. Available in 3 standard sizes, and also custom sizes.

Automatic Sash Closer

This enhancement provides added protection to the laboratory environment by automatically closing the sash when the operator is away from the fume hood. This results in improve fume hood containment and reduces cross draft in high traffic areas. Equipped with a safety sensor, it detects incoming presence or obstruction and stops the sash from closing, preventing accidents. Green your facility by coupling it with a VAV system. The reduced airflow will lead to substantial energy saving.

Automatic Variable Air Volume Damper

This system automatically controls the damper position to continuously achieve a predetermined face velocity required for the fume hood. It is widely used with single fan for multiple fume hoods design, otherwise known as manifold exhaust system. Further enhance energy saving by adding variable speed drives (VSD) to modulate fan speed.

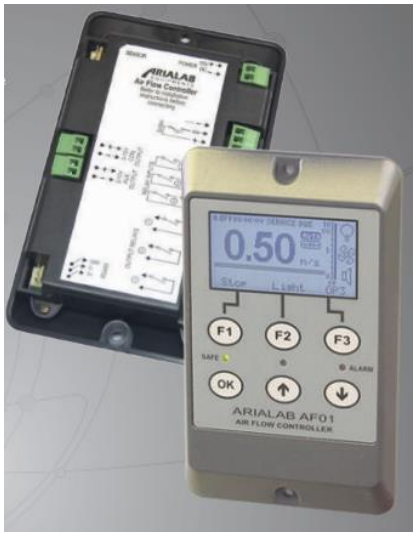
TECHNICAL SPECIFICATION

1. Motor type: Motor blower
2. Material: Rust and fire proof
3. Illumination light for clear view and working
4. Electrical outlets: 5 A (Two)
5. Power socket, Ducting.
6. Size: (4 X 2 X 2) feet
7. Vertical movement of the front door
8. Noise of the blower is less than 55 dBA
9. Water basin & water tap
10. SS lining on work bench
11. PVC fume duct
12. High CFM exhaust system
13. Storage: 2 Drawers
14. Utility Pipe lines for gases and water etc.
15. Microprocessor based PID controller with LCD Display for Air flow FL light on off

FUME HOOD SAFETY OPTIONS

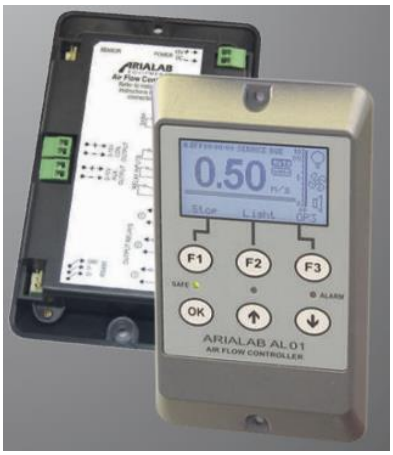
VAV AIRFLOW CONTROLLER

- ARIALAB AF01, a variable air volume or VAV System varies the air quantity to maintain a consistent fume hood face velocity so that it will not drop below the preset level by automating the frequency inverter (separate product).
- AF 01 is an added safety assurance to fume hood user by continuously ensuring fume hood is functioning at optimal face velocity at any sash position.
- AF 01 also has an inbuilt alarm to alert user during low flow and high flow.
- With a user friendly interface, AF 01 contains various configurable functions, including prep urge, post purge and maintenance program.



AIRFLOW MONITOR WITH ALARM (AL01)

- The Arialab AL 01 Fume Hood Airflow Monitor is a simple to install, affordable safety system for fume hoods.
- The unit main function is to indicate the safe level of air flow in laboratory fume hoods.
- The LCD provides continuous viewing of face velocity and will warn users of unsafe conditions. An alarm will be activated when air flow falls below preset level.
- With a user friendly interface, it also allows user to determine their preferred level of face velocity



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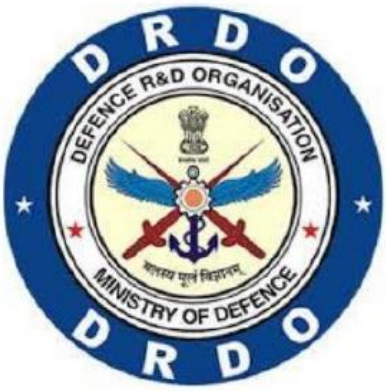

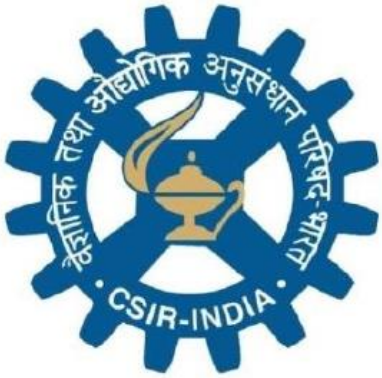

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