

SUPREME AIR

Laboratory Fume Hoods



KEWAUNEE



Supreme Air Fume Hoods

Kewaunee's Fume Hood Offering

- Traditional Constant Volume
- VAV
- Dynamic Barrier - Ultra Low Flow
- ADA Accessible
- Full Access Walk-in
- Isotope
- Perchloric Acid
- Distillation
- Demonstration
- Teaching
- Custom Enclosures
- Liners
 - Kemglass - FRP
 - Stainless Steel
 - Phenolic Resin

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H30 Walk-in Fume Hood



H05 Vertical Rising Sash Bench Hood

Supreme Air Fume Hood Construction

The design is based on rigid frame construction that assures a 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 hard-working laboratory safety device into an attractive part of the total laboratory environment.

Energy saving lighting with exterior relamping

- Single bulb, low profile T5 fluorescent light fixture
- Optional special purpose lighting

Task specific liner options

- Phenolic resin
- Kemglass
- Type 304 Stainless Steel
- Low profile, self-gasketing, interior access panel — removable without tools

Customizable accessory offering

- A full array of service fittings and electrical fixtures
- Monitoring and safety alarms
- Pre-piping and pre-wiring
- UL listed when pre-wired per UL 61010A-1
- UL 1805 classified with Kemglass or Stainless Steel liner

Low profile PVC sash tracks

- Smooth sash operation
- Reduced air turbulence
- Seals the interior side panel

Easy operating full vision sash with:

- Full length painted aluminum handle for neat, clean appearance and streamline air features
- Exclusive sash leveling and alignment features

Top front panel available as:

- Solid panel with integral louvers
- Vision panel with integral louvers (shown)
- Solid panel with Sight-tight Chevron by-pass grille
- Vision panel with Sight-tight Chevron by-pass grille



Independent frame construction

- Rigid structural frame
- Allows liner panel replacement
- Stainless steel fasteners concealed with corrosion resistant caps

Narrow-radius corner posts

- Enhances aerodynamic air flow
- 4" width creates more interior work space

Radiused air foil

- Streamline air flow — low turbulence
- Heavy gauge steel for durability
- Available painted or in stainless steel

Exclusive Kemresin work tops

- Dished worksurface available in multiple colors
- Many other options, including stainless steel

Dynamic Barrier Fume Hood Features

The Dynamic Barrier 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 Barrier fume hood is an ultra low constant volume design based on Kewaunee's Supreme Air fume hood line. Its basic size, shape, and construction is the same as the standard Supreme Air 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, the Kewaunee Supreme Air Dynamic Barrier fume hood avoids the requirements of expensive, high maintenance alternatives. It has been vigorously tested to ANSI/ASHRAE 110-1995 guidelines. In addition, the Dynamic Barrier fume hood has been subjected to stringent dynamic testing including walk-bys, cross-drafts, and multiple breathing zone challenges, while maintaining unsurpassed containment.

Double vertical sash design
allows 37" opening height for apparatus setup while projecting only 9" above the hood.

Frameless upper sash
for unobstructed view.

Low profile sash frame
offers easy access through horizontal panels.

Six-panel combination lower sash provides multiple protective working configurations.

Sash stop at 10" high provides full width work opening while maximizing splatter and fume barrier for user protection.

Aerodynamically shaped lower sash handle provides smooth airflow through vertical opening.

UL 1805 Listed when specified with Kemglass or Stainless Steel liner



Dynamic Barrier by-pass bathes area behind sash with uncontaminated air maximizing user protection.

Static pressure averaging mechanism provides accurate face velocity readings regardless of sash positioning.

Air Alert 600 Fume Hood Monitor provides a visual one-hour timeline of fume hood performance.

Service ports provide convenient, safe passage of wires and tubes for equipment connections.

Flush sill for unobstructed access through vertical opening.

UL 61010A-1 Listed when pre-wired

Guide to Fume Hood Selection

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" 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), necessary to contain fumes with a typical face velocity of 80-120 FPM. Traditionally, such fume hoods can reduce the exhaust CFM from 40% to 60% from open by-pass levels. Kewaunee's Dynamic Barrier fume hoods actually reduce exhaust requirements up to 73%.

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 by-pass velocity with the sash closed, the exhaust volume will be 25 CFM per square foot of internal hood worksurface. 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 by-pass 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 of internal hood worksurface in VAV operation is the same.

Auxiliary air fume hoods are **Constant volume** hoods designed for use when it is not feasible to introduce the required make-up air through the room ventilation system. Up to 70% of the exhaust volume can be supplied through an auxiliary air chamber mounted above the hood. These hoods require a separate ducted fan system for the supply of the auxiliary air.

Open by-pass hoods are designated by a dash [-] in the ninth space of the part number. **Restricted by-pass** hoods are designated by the letter "B" in the ninth space of the part number. As an example H05K5472-00 is an open by-pass hood and H05K5472B00 is a restricted by-pass hood.

An **Auxiliary air** hood is designated by adding the appropriate auxiliary air chamber to the **Open by-pass** hood.

Guide to Fume Hood Selection (continued)

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). 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 and 120 feet per minute.

Newer technologies have allowed face velocities as low as 55 FPM 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 codes require the use of a specific face velocity, these codes should be followed.

Sash Arrangements

Vertical sash hoods provide the best horizontal and vertical access to the hood interior but they also have the highest exhaust requirements. The exhaust requirements can be reduced by using gravity sash stops, although, this restricts the vertical access into the work area. Split sash hoods can be used where needed for two work areas.

Auto-Return Vertical Sash hoods use a vertical sash that will automatically return to a pre-set position if released from a higher position. A full-open lock-out is provided for set-ups.

Horizontal sash hoods provide good access into the hood vertically and allow for lower exhaust requirements. These sashes do restrict the access across the hood for loading of equipment and apparatus. This limitation becomes less significant in larger hoods.

Combination vertical rising/horizontal sash hoods, as the name implies, provide the benefits of both the vertical and horizontal sash hoods. For normal operation the sash can be partially raised vertically, or the horizontal panels can be used. The sash can be fully opened

vertically for loading equipment into the hood.

Telescoping combination sash used on Kewaunee's Dynamic Barrier fume hood uses an interlocking twin sash mechanism that combines a restricted combination vertical rising/horizontal sash and small vertical rising sash to allow a very large 37" vertical opening. This sash facilitates set-ups while keeping the work opening small.

Configurations

Bench hoods are set on a worksurface approximately 36" above the floor and provide a convenient work area for the standing position. A minimum of 42" of interior working height is provided.

Walk-in hoods are used where taller apparatus is required or equipment is rolled into the hood. These hoods

provide a minimum 78" of interior working height.

Distillation hoods are used where taller apparatus is required and convenient access to the floor of the hood is needed. These hoods provide a minimum 77" of interior working height.

ADA fume hoods are designed in accordance with the guidelines for the Americans with Disabilities Act. These hoods are also used when a sitting position is desired for work at the hood. They provide the same size work area as the corresponding bench hoods.

Special Purpose Fume Hoods

Isotope hoods are designed for use with radioactive materials. The Type 304 stainless steel cove corner seamless welded construction eases cleaning and decontamination.

Perchloric Acid hoods are required when this acid is heated above ambient temperature. The Type 316 stainless steel liner is fabricated to eliminate the possibility of formation of perchloric acid

deposits. This hood includes a water wash down feature.

For answers to frequently asked questions about Kewaunee fume hoods visit the Kewaunee web site.

Guide to Fume Hood Selection (continued)

Baffle Design

Fixed baffles come with fixed slots in the rear baffle. The size of the slots are optimized to provide the best performance for general purpose use.

In some instances (e.g. use of large hot plates) it is advantageous to be able to change the air flow patterns within the hood by adjusting the slots in the rear baffle. This adjustment should only be done by someone familiar with hood air flows and performance.

Internally adjustable baffles come with movable baffle strips which can adjust the relative size of the top and bottom slots. The middle slot in the baffle is fixed.

Single point adjustable baffles are adjustable by moving a selector knob, near the front of the hood, which restricts the flow to the lower slot, thus increasing the flow at the upper baffle slot. This adjustment can be done without disturbing the apparatus within the hood.

The fixed baffle is the default option in the part number. Internally adjustable baffles are chosen by adding the suffix "A" to the part number (H05K5472-00A). Single point adjustable baffles are chosen by adding the suffix "C" to the part number (H05K5472-00C).

Liner Material

Kemglass, and **Phenolic Resin** are general purpose liners with very good to excellent chemical resistance. **Type 304 stainless steel** is usually used where cleanability and/or heat resistance are the prime requirements.

Phenolic Resin (T) liner is reinforced

with cellulose fibers and is surfaced with white melamine material. The brown phenolic resin is visible at the edges of the sheet material.

Kemglass (G) is white fiberglass reinforced polyester sheet material.

Type 304 stainless steel (S) is 14 gauge stainless steel sheet with a No. 4 finish.

HOOD LINER CHARACTERISTICS

| LINER MATERIAL | RESISTANCE TO HEAT | CHEMICAL RESISTANCE | | CLEANABILITY |
|-----------------|--------------------|---------------------|----------|--------------|
| | | ACIDS | SOLVENTS | |
| Phenolic Resin | G | E | E | G |
| Kemglass | G | E | G | G |
| Stainless Steel | E | F | E | E |

E = Excellent G = Good F = Fair P = Poor

Work Tops

Epoxy Resin work tops are available in four colors, have excellent chemical resistance, and good heat resistance. They are the normal choice for general purpose hoods and highly corrosive applications.

Stainless Steel work tops are available in Types 304 and 316. They are used where cleanability and heat resistance are important. Type 316 is preferred where improved chemical resistance is desired.

The hood work top is specified by a separate part number from the hood for all hoods except Isotope and Perchloric Acid hoods..

For answers to frequently asked questions about Kewaunee fume hoods visit the Kewaunee web site.

Fume Hood Selection Chart

| Hood Number | Purpose | Sash Type | By-pass | | | Page No. |
|----------------------------------|-----------|-------------------------------------|----------------------------|--------------------|--|--------------------------|
| Constant Volume | | | | | | <i>Click Page Number</i> |
| Bench | H05 | General Purpose | Vertical | Open | | 10-11 |
| | H08 | ADA | Vertical | Open | | 16-17 |
| | H20 | Isotope | Vertical | Open | | 22-23 |
| | H25 | Perchloric Acid | Vertical | Open | | 24-25 |
| Walk-In | H30 | General Purpose | Vertical | Open | | 30-31 |
| Distillation | H36 | Distillation | Vertical | Open | | 38-39 |
| Low Constant Volume | | | | | | <i>Click Page Number</i> |
| Bench | H50 | General Purpose Ultra Low Volume | Telescoping Combination | Dynamic Barrier | | 12-13 |
| | H07 | General Purpose | Combination | Restricted | | 14-15 |
| | H09 | ADA | Combination | Restricted | | 18-19 |
| | H10 | General Purpose | Split Vertical | Open | | 20-21 |
| | H05 | General Purpose | Vertical w/Sash Stop | Open | | 10-11 |
| | H70 | General Purpose | Horizontal | Restricted | | 26-27 |
| | HOP | General Purpose | Combination | Restricted | | 28-29 |
| Walk-In | H52 | General Purpose | Low-flow Combination | Dynamic Barrier | | 32-33 |
| | H32 | General Purpose | Combination | Restricted | | 34-35 |
| Variable Air Volume (VAV) | | | | | | <i>Click Page Number</i> |
| Bench | H05 | General Purpose | Vertical | Restricted | | 10-11 |
| | H07 | General Purpose | Combination | Restricted | | 14-15 |
| | H70 | General Purpose | Horizontal | Restricted | | 26-27 |
| | H20 | Isotope | Vertical | Restricted | | 22-23 |
| | HOP | General Purpose | Combination | Restricted | | 28-29 |
| Walk-In | H30 | General Purpose | Vertical | Restricted | | 30-31 |
| | H32 | General Purpose | Combination | Restricted | | 34-35 |
| | H34 | General Purpose | Horizontal | Restricted | | 36-37 |
| Distillation | H36 | Distillation | Vertical | Restricted | | 38-39 |
| Auxiliary Air | | | | | | <i>Click Page Number</i> |
| Bench | H05 & H01 | General Purpose | Vertical | Open | | 10-11 |
| | H10 & H01 | General Purpose | Split Vertical | Open | | 20-21 |
| | H08 & H01 | ADA | Vertical | Open | | 16-17 |
| | H20 & H01 | Isotope | Vertical | Open | | 22-23 |
| | H25 & H01 | Perchloric Acid | Vertical | Open | | 24-25 |
| Walk-In | H30 & H01 | General Purpose | Vertical | Open | | 30-31 |
| Distillation | H36 & H01 | General Purpose | Vertical | Open | | 38-39 |

Guide to Fume Hood Selection (continued)

Supreme Air Fume Hood Catalog Number Explanation

H05K5472-00 A...9

Fume Hood Type

- H01 = Auxiliary Air Chamber
- H05 = Vertical Sash Bench Hood
- H07 = Combination Sash Bench Hood
- H08 = ADA Vertical Sash Bench Hood
- H09 = ADA Combo Sash Bench Hood
- H10 = Split Sash Bench Hood
- H20 = Isotope Bench Hood
- H25 = Perchloric Acid Bench Hood
- H30 = Vertical Sash Walk-In Hood
- H32 = Combination Sash Walk-In Hood
- H34 = Horizontal Sash Walk-In Hood
- H36 = Vertical Sash Distillation Hood
- H50 = Dynamic Barrier Bench Hood
- H52 = Dynamic Barrier Walk-In Hood
- H70 = Horizontal Sash Bench Hood
- HOP = HOPEC Bench Hood

Interior Liner Material

- G = Kemglass (fiberglass reinforced polyester)
- L = Type 316 Stainless Steel
- S = Type 304 Stainless Steel
- T = Phenolic Resin

Add On Options

See list below

Special Configurations

By-Pass Option

- = Open By-Pass
- B = Restricted By-Pass

Hood Length

- 48 = 4'-0" / 48"
- 60 = 5'-0" / 60"
- 72 = 6'-0" / 72"
- 96 = 8'-0" / 96"
- 20 = 10'-0" / 120"
- 44 = 12'-0" / 144"

Hood Height

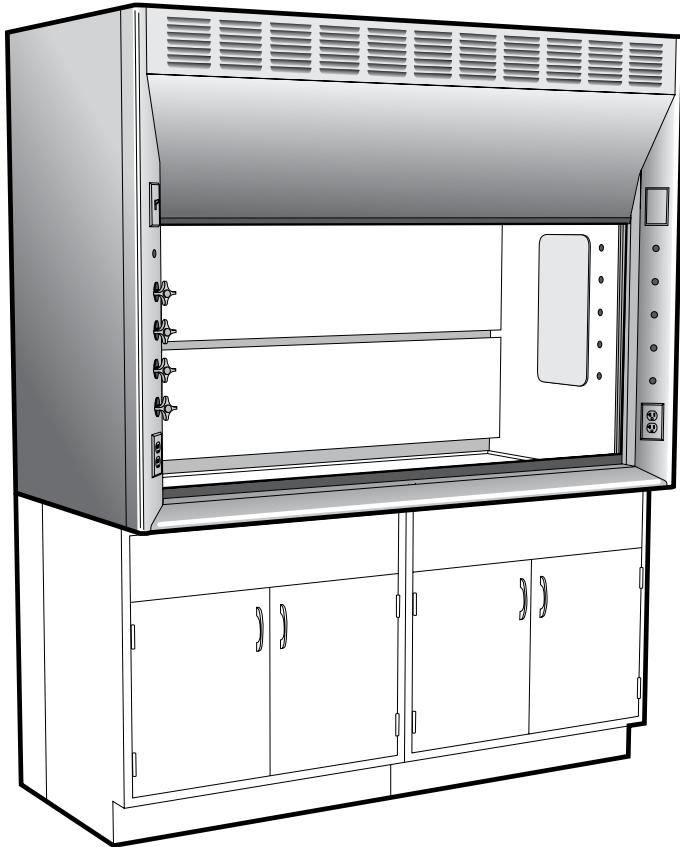
- 13 = Air Chamber
- 54 = Bench Hood
- 90 = Walk-In Hoods & Distillation Hoods

Add On Options Lettering Code:

- | | | |
|--|---|---|
| A = Adjustable Baffles | L = Explosion Proof Light | Z = Air Alert 300 Alarm (location 2) |
| C = Single Point Adjustable Baffles | M = Air Alert 600 Airflow Alarm | 1 = Frameless Tempered Glass Sash |
| D = Distillation Rack | O = Stainless Steel Deflector Vane | 2 = Framed Safety Glass Sash |
| E = Fire Extinguisher | Q = Stainless Steel Sash Handle | 3 = Framed Tempered Glass Sash |
| F = Two Extra GFI Receptacles (120 VAC 20 amp - replaces bottom fixture holes on each side) | R = Extra GFI Receptacle on right side (replaces bottom fixture hole) | 4 = St. Steel Safety Glass Sash |
| G = Front Load Fittings | S = Extra GFI Receptacle on left side (replaces bottom fixture hole) | 5 = St. Steel Tempered Glass Sash |
| H = Pre-wired/UL Listed | T = Sight-Tight Chevron Grille | 6 = Tissue Screen |
| I = Safety Shield | V = Vision Panel | 7 = Type 316 Stainless Steel Duct Collar |
| K = Vapor Proof Light | W = Air Alert 300 Alarm (location 1) | 8 = Gravity Sash Stop |
| | | 9 = Work Shelf Supports |

General Purpose Bench Fume Hood

with Vertical Rising Sash



Available Options:

- Adjustable Baffles
- Air Flow and Static Pressure Alarms
- Service Fittings and Piping
- Electrical Fixtures and Wiring
- UL listed when pre-wired per UL 61010A-1
- 1805 UL classified with Kemglass or Stainless Steel liner
- Vapor Proof and Explosion Proof Lighting
- Stainless Steel Deflector Vane
- Alternate Sash Handles
- Sash Frames
- Tempered Sash Glass
- Tissue Screen
- Fire Extinguisher
- Distillation Rack
- Sash Stop
- Stainless Steel Duct Collar

Available Models:
Open By-Pass
Restricted By-Pass
Auxiliary Air

Features:

- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Frameless sash with full-length formed steel handle for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H05

Specifications:

Supreme Air General Purpose Bench Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, counterbalanced, frameless sash of 1/4" combination safety glass and

interior plumbing access panels. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene, 1 15/16" O.D. (8 foot hoods are furnished with two duct collars.) Supreme Air

Bench Hoods are available with either an Open By-Pass or a Restricted By-Pass for VAV use. An auxiliary air chamber is available for use on the Open By-Pass hood.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

| | |
|-------------------------|-------------|
| Work Top | see page 49 |
| Base Cabinets | see page 63 |
| Service Fittings | see page 54 |
| Cupsink | see page 53 |
| Fan/Blower | see page 82 |

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|------------|--------|-----|-----|-----|---------|
| Overall Dimension | 89 3/4" ** | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 28" * | 40" | 52" | 64" | 88" | ... |
| Work Top | 37" ** | 40" | 52" | 64" | 88" | 25 1/2" |
| Clearance (sash up) | 97" ** | ... | ... | ... | ... | ... |

* Sash opening height above airfoil. Add 1" in height to calculate sash opening area.
** Subtract 1" in height if wood base cabinets are used.

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H05T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| Overall Hood Length | Sash Opening Sq. Ft. | Total CFM and Static Pressure | | | | | |
|---------------------|----------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 8.1 | 650 | 0.15" | 810 | 0.25" | 980 | 0.35" |
| 5'-0" / 60" | 10.5 | 840 | 0.20" | 1050 | 0.30" | 1260 | 0.45" |
| 6'-0" / 72" | 12.9 | 1040 | 0.25" | 1290 | 0.40" | 1550 | 0.60" |
| 8'-0" / 96" | 17.7 | 1420 | 0.15" | 1770 | 0.25" | 2130 | 0.35" |

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Note: CFM requirements shown above are for **Open By-Pass** hoods. The CFM requirements for a **Restricted By-Pass** hood with the sash fully open is the same as above. The by-pass opening with the sash closed is 20% of that with the sash fully open.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, work top, cupsink, and base units must be ordered separately.**

General Purpose Bench Fume Hoods — Vertical Rising Sash

| | | | | |
|--|--|--|--|-----------------|
| 4'-0" | 5'-0" | 6'-0" | 8'-0" | |
| | | | | |
| H05_5448-00 Open By-Pass | H05_5460-00 Open By-Pass | H05_5472-00 Open By-Pass | H05_5496-00 Open By-Pass | End View |
| H05_5448B00 Restricted By-Pass | H05_5460B00 Restricted By-Pass | H05_5472B00 Restricted By-Pass | H05_5496B00 Restricted By-Pass | |

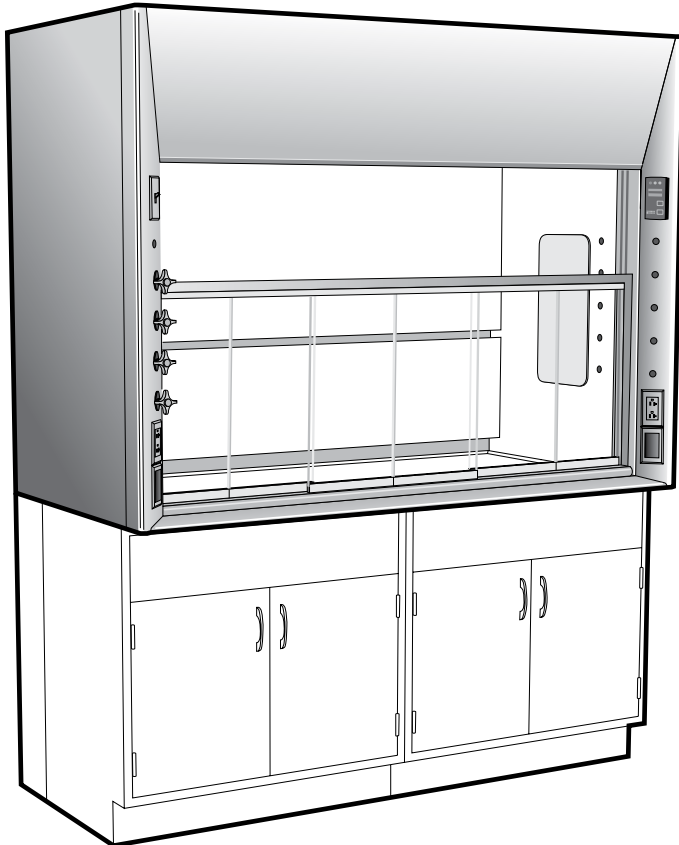
Auxiliary Air

All Open By-Pass hoods can be Auxiliary Air hoods by adding an Auxiliary Air Chamber. See page 43 for catalog numbers.

Notes: See page 44 for chart of available options. Open By-Pass Fume Hood shown. Restricted By-Pass Fume Hoods do not have louvered top front panel.

Ultra Low Constant Volume Fume Hood

with Telescoping Combination Vertical Rising/Horizontal Sash



Available Models:
Dynamic Barrier By-Pass

Available Option:

Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
1805 UL classified with Kemglass
or Stainless Steel liner
Lighting
Stainless Steel Deflector Vane
Tempered Sash Glass
Tissue Screen
Fire Extinguisher
Distillation Rack
Stainless Steel Duct Collar

Features:

- Requires over 70 percent less exhaust air volume than a traditional by-pass fume hood.
- Double telescoping vertical sash design allows full view into hood interior and 37" opening height for apparatus setup.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Low profile sash frame for easy access through horizontal panels.
- Service ports provide convenient, safe passage for equipment connections.
- Exclusive Air Alert 600 Monitor provides a visual one-hour timeline of fume hood performance.
- Exclusive static pressure averaging mechanism provides accurate face velocity readings regardless of sash opening.
- Quiet fume hood operation, under 40 dBA with properly sized fans and ductwork.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Dynamic Barrier Fume Hood

H50

Specifications:

Dynamic Barrier Supreme Air Bench Fume Hoods are furnished with a choice of liner and baffles with center and lower exhaust slots. Each fume hood is complete with a lower deflector vane, lower sash frame fitted with six 1/4" combination safety glass panels,

interlocking upper frameless 1/4" combination safety glass sash, and an Air Alert 600 Monitor with static pressure averaging. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish.

The exhaust duct collar is polyethylene, 7¹⁵/₁₆" O.D. (8 foot hoods are furnished with two duct collars.)

Dynamic Barrier Supreme Air Bench Hoods are not designed for use with auxiliary air chambers.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

| | |
|-------------------------|-------------|
| Work Top | see page 49 |
| Base Cabinets | see page 63 |
| Service Fittings | see page 54 |
| Cupsink | see page 53 |
| Fan/Blower | see page 82 |

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|-----------|--------|-----|-----|-----|---------|
| Overall Dimension | 89 3/4" * | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 37" | 40" | 52" | 64" | 88" | ... |
| Work Top | 37" * | 40" | 52" | 64" | 88" | 25 1/2" |
| Clearance (sash up) | 98 3/4" * | ... | ... | ... | ... | ... |

* Subtract 1" in height if wood base cabinets are used.

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H50T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| Overall Hood Length | Maximum Face Opening of Horizontal Sashes | | | | Face Opening with Vertical Sash at 10" Sash Stop | | | | Total CFM and Static Pressure | |
|---------------------|---|-----|-------------------|----------|--|-----|-------------------|----------|-------------------------------|-------|
| | W | H | Ft ² * | Velocity | W | H | Ft ² * | Velocity | CFM | S.P. |
| 4'-0" / 48" | 14 1/2" | 22" | 2.25 | 100 fpm | 40" | 10" | 2.78 | 81fpm | 225 | 0.11" |
| 5'-0" / 60" | 18" | 22" | 2.80 | 100 fpm | 52" | 10" | 3.61 | 80fpm | 280 | 0.15" |
| 6'-0" / 72" | 22" | 22" | 3.50 | 100 fpm | 64" | 10" | 4.44 | 80fpm | 350 | 0.21" |
| 8'-0" / 96" | 30" | 22" | 4.85 | 100 fpm | 88" | 10" | 6.11 | 80fpm | 485 | 0.11" |

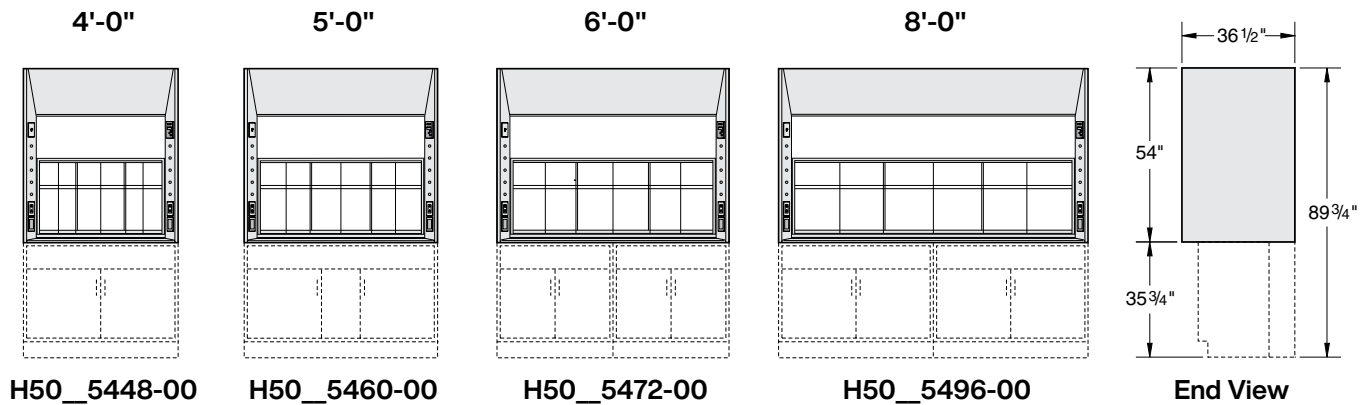
* Includes free area contributions from sash clearance spaces and by-pass opening.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch, Air Alert 600 Air Flow Monitor and two cord ports. **No wiring for the electrical fixtures is included unless H-Option is added to part number.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. **Service fittings, fan, fan switch, work top, cupsink, and base units must be ordered separately.**

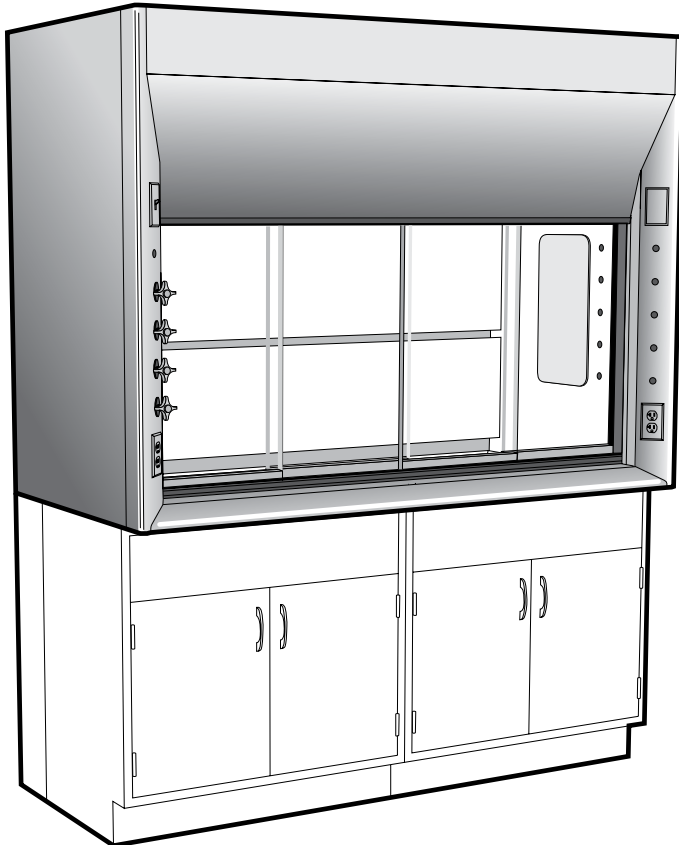
Dynamic Barrier Bench Fume Hoods — Telescoping Combination Vertical Rising/Horizontal Sash



Note: See page 44 for chart of available options.

Combination Sash Bench Fume Hood

with Combination Vertical Rising/Horizontal Sash



Available Models:
Restricted By-Pass
Open By-Pass
(by special request only)

Available Options:

- Adjustable Baffles
- Air Flow and Static Pressure Alarms
- Service Fittings and Piping
- Electrical Fixtures and Wiring
- UL listed when pre-wired per UL 61010A-1
- 1805 UL classified with Kemglass or Stainless Steel liner
- Vapor Proof and Explosion Proof Lighting
- Stainless Steel Deflector Vane
- Stainless Steel Sash Frame
- Tempered Sash Glass
- Tissue Screen
- Fire Extinguisher
- Distillation Rack
- Sash Stop
- Stainless Steel Duct Collar

Features:

- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Narrow framed sash with four horizontal glass panels on two tracks for neat clean appearance and improved exhaust efficiency.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H07

Specifications:

Supreme Air Combination Sash Bench Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, counterbalanced, narrow framed sash with 1/4" combination safety glass horizontal panels and interior plumbing access panels. Hood exteriors are fabricated of cold rolled

steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene, 1 15/16" O.D. (8 foot hoods are furnished with two duct collars.)

Combination Sash Bench Hoods are furnished with a Restricted By-Pass to match the restricted sash opening. They are designed for use with both constant volume and VAV applications. An Open By-Pass is available on request for applications where the hood is operated with the sash fully open. Combination Sash Bench Hoods are not designed for use with Auxiliary Air Chambers.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

| | |
|------------------|-------------|
| Work Top | see page 49 |
| Base Cabinets | see page 63 |
| Service Fittings | see page 54 |
| Cupsink | see page 53 |
| Fan/Blower | see page 82 |

Liner Options:

- T = Phenolic Resin
- G = Kemglass
Fiberglass reinforced polyester
- S = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H07T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|------------|--------|-----|-----|-----|---------|
| Overall Dimension | 89 3/4" ** | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 28" * | 40" | 52" | 64" | 88" | ... |
| Work Top | 37" ** | 40" | 52" | 64" | 88" | 25 1/2" |
| Clearance (sash up) | 97" ** | ... | ... | ... | ... | ... |

* Sash opening height above airfoil. Add 1" in height to calculate sash opening area.
** Subtract 1" in height if wood base cabinets are used.

| Overall Hood Length | Sash Opening Sq. Ft. * | Total CFM and Static Pressure | | | | | |
|---------------------|------------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 4.8 | 380 | 0.05" | 480 | 0.10" | 580 | 0.15" |
| 5'-0" / 60" | 6.3 | 500 | 0.10" | 630 | 0.15" | 760 | 0.20" |
| 6'-0" / 72" | 7.8 | 620 | 0.10" | 780 | 0.15" | 940 | 0.25" |
| 8'-0" / 96" | 10.9 | 870 | 0.10" | 1090 | 0.10" | 1310 | 0.15" |

* Maximum sash opening with vertical sash down and horizontal panels fully open. Includes By-Pass opening and 1" below deflector vane.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, work top, cupsink, and base units must be ordered separately.**

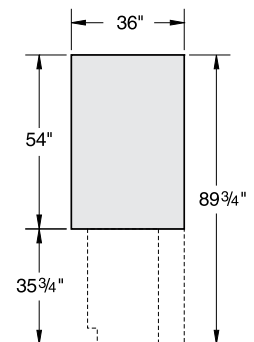
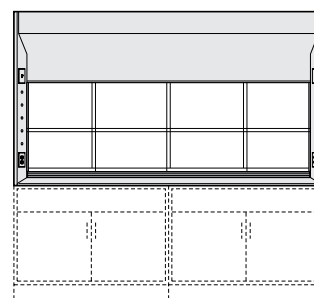
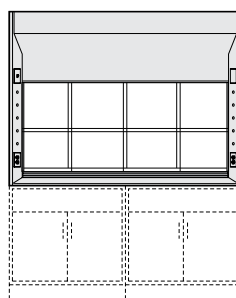
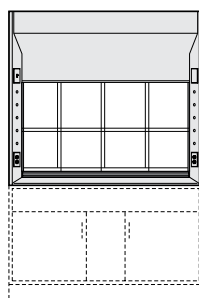
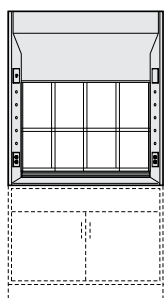
Combination Sash Bench Fume Hoods — Combination Vertical Rising/Horizontal Sash

4'-0"

5'-0"

6'-0"

8'-0"



H07_5448B00
View

Restricted By-Pass

H07_5460B00

Restricted By-Pass

H07_5472B00

Restricted By-Pass

H07_5496B00

Restricted By-Pass

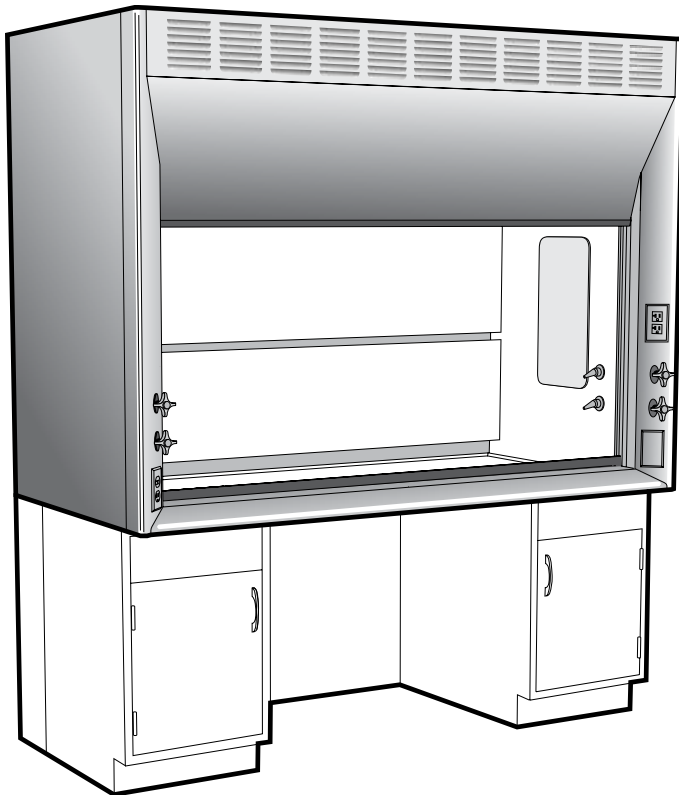
End

Open By-Pass by special request

Notes: See page 44 for chart of available options. Restricted By-Pass Fume Hood shown. Open By-Pass Fume Hoods do not have louvered top front panel.

ADA Bench Fume Hood

with Vertical Rising Sash



Available Options:

- Adjustable Baffles
- Air Flow and Static Pressure Alarms
- Service Fittings and Piping
- Electrical Fixtures and Wiring
- UL listed when pre-wired per UL 61010A-1
- 1805 UL classified with Kemglass or Stainless Steel liner
- Vapor Proof and Explosion Proof Lighting
- Stainless Steel Deflector Vane
- Alternate Sash Handles
- Sash Frames
- Tempered Sash Glass
- Tissue Screen
- Fire Extinguisher
- Distillation Rack
- Stainless Steel Duct Collar

Available Models:
Open By-Pass
Restricted By-Pass
Auxiliary Air

Features:

- Designed to meet guidelines of the Americans with Disabilities Act (ADA)
- Complete with Gravity Sash Stop.
- Fixtures and service fittings moved down to within reach of wheelchair bound operator.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Frameless sash with full-length formed steel handle for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H08

Specifications:

Supreme Air Vertical Rising Sash ADA Bench Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, counterbalanced, frameless sash with 1/4" combination safety glass, and interior plumbing access panels. Hood exteriors are fabricated of cold rolled

steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene, 1 15/16" O.D. Each hood is furnished with a sash stop mounted at 14" above the lower deflector to keep the sash from rising above the operators reach.

Supreme Air ADA Bench Hoods with Vertical Rising Sash are available with either an Open By-Pass or a Restricted By-Pass for VAV use. An auxiliary air chamber is available for use on the Open By-Pass hood.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

- Work Top** see page 49
- Base Cabinets*** see page 63
- Service Fittings** see page 54
- Cupsink** see page 53
- Fan/Blower** see page 82

*ADA guidelines require a space 30" wide by 30" high by 25" deep for a wheelchair to roll beneath a fume hood.

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H08T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| DIMENSIONS | HEIGHT | LENGTH | | | DEPTH |
|---------------------|---------|--------|-----|-----|---------|
| Overall Dimension | 84" | 48" | 60" | 72" | 36" |
| Sash Opening | 14" | 40" | 52" | 64" | ... |
| Work Top | 31 1/4" | 40" | 52" | 64" | 25 1/2" |
| Clearance (sash up) | 91" | ... | ... | ... | ... |

| Overall Hood Length | Sash Opening Sq. Ft. | Total CFM and Static Pressure | | | | | |
|---------------------|----------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 4.7 | 380 | 0.05" | 470 | 0.10" | 570 | 0.15" |
| 5'-0" / 60" | 6.1 | 490 | 0.10" | 610 | 0.10" | 740 | 0.15" |
| 6'-0" / 72" | 7.6 | 600 | 0.10" | 760 | 0.15" | 910 | 0.20" |

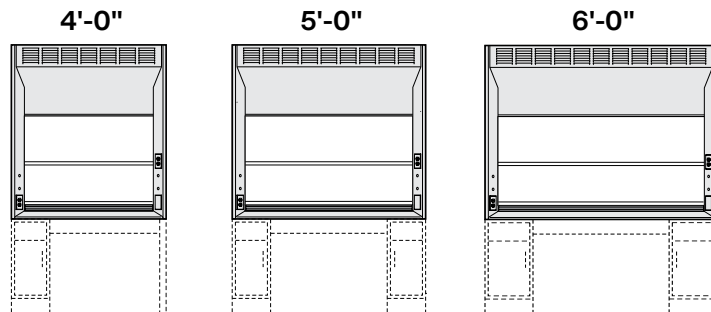
Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Note: CFM requirements shown above are for **Open By-Pass** hoods with sash stop at 14". CFM requirements for sash fully open is same as H05. The CFM requirements for a **Restricted By-Pass** hood with the sash fully open is the same as above.

Accessories Include: 120 volt AC 20 amp GFI duplex receptacle, combination 20 amp light switch—120 volt receptacle, and single-tube, T-5 fluorescent light fixture with bulb. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to two (2) remote control service fittings. The right hand post is punched for a second electrical fixture at the bottom which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, work top, cupsink, and base units must be ordered separately.**

ADA Bench Fume Hoods — Vertical Rising Sash



H08_5448-00
Open By-Pass

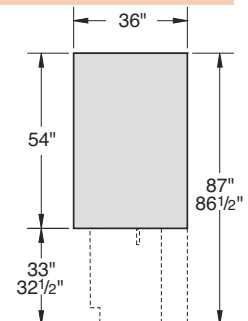
H08_5460-00
Open By-Pass

H08_5472-00
Open By-Pass

H08_5448B00
Restricted By-Pass

H08_5460B00
Restricted By-Pass

H08_5472B00
Restricted By-Pass



End View

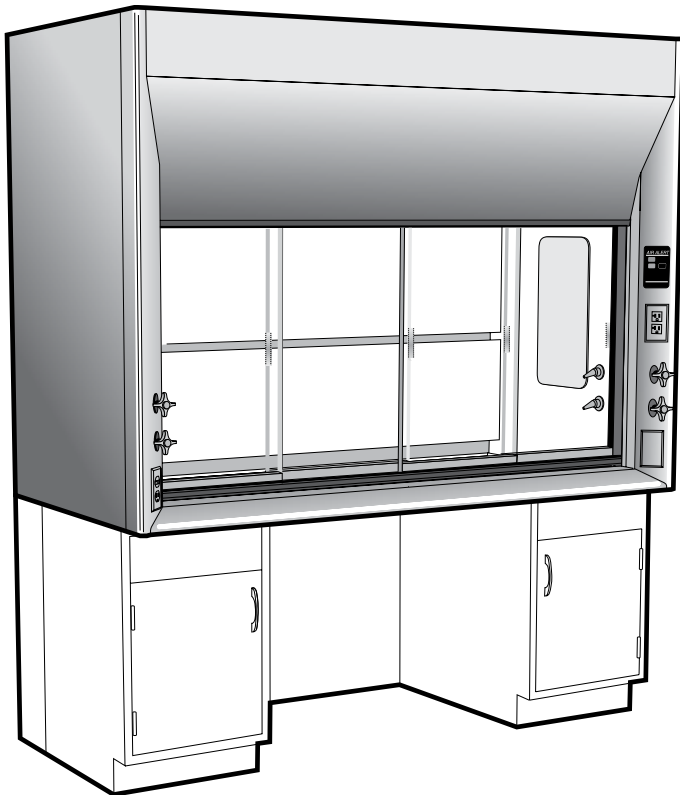
Auxiliary Air

All Open By-Pass hoods can be Auxiliary Air hoods by adding an Auxiliary Air Chamber. See page 43 for catalog numbers.

Notes: See page 44 for chart of available options. Open By-Pass Fume Hood shown. Restricted By-Pass Fume Hoods do not have louvered top front panel.

ADA Bench Fume Hood

with Combination Vertical Rising/Horizontal Sash



Available Models:
Restricted By-Pass
Open By-Pass
(by special request only)

Features:

- Designed to meet guidelines of the Americans with Disabilities Act (ADA)
- Complete with Air Alert 300 Alarm and Gravity Sash Stop.
- Fixtures and service fittings moved down to within reach of wheelchair bound operator.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Narrow framed sash with four horizontal glass panels on two tracks for neat clean appearance and improved exhaust efficiency.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Available Option:

Adjustable Baffles
Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
1805 UL classified with Kemglass
or Stainless Steel liner
Vapor Proof and Explosion Proof Lighting
Stainless Steel Deflector Vane
Stainless Steel Sash Frame
Tempered Sash Glass
Tissue Screen
Fire Extinguisher
Stainless Steel Duct Collar

Supreme Air Fume Hood

H09

Specifications:

Supreme Air Combination Sash ADA Bench Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, counterbalanced, narrow framed sash with 1/4" combination safety glass horizontal panels and interior plumbing access panels. Hood exteriors are fabricated of cold rolled

steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene, 1 15/16" O.D. Each hood is furnished with an Air Alert 300 Alarm and a sash stop mounted at 14" above the lower deflector.

furnished with a Restricted By-Pass to match the restricted sash opening. They are designed for use with both constant volume and VAV applications. An Open By-Pass is available on request for applications where the hood is operated with the sash fully open. Combination Sash Bench Hoods are not designed for use with Auxiliary Air Chambers.

ADA Combination Sash Hoods are

Additional Parts Required to Make Up a Complete Fume Hood Assembly

| | |
|-------------------------|-------------|
| Work Top | see page 49 |
| Base Cabinets* | see page 63 |
| Service Fittings | see page 54 |
| Cupsink | see page 53 |
| Fan/Blower | see page 82 |

*ADA guidelines require a space 30" wide by 30" high by 25" deep for a wheelchair to roll beneath a fume hood.

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H09T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| DIMENSIONS | HEIGHT | LENGTH | | | DEPTH |
|---------------------|---------|--------|-----|-----|---------|
| Overall Dimension | 84" | 48" | 60" | 72" | 36" |
| Sash Opening | 29" | 40" | 52" | 64" | ... |
| Work Top | 31 1/4" | 40" | 52" | 64" | 25 1/2" |
| Clearance (sash up) | 91" | ... | ... | ... | ... |

| Overall Hood Length | Sash Opening Sq. Ft. * | Total CFM and Static Pressure | | | | | |
|---------------------|------------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 4.8 | 380 | 0.05" | 480 | 0.10" | 580 | 0.15" |
| 5'-0" / 60" | 6.3 | 500 | 0.10" | 630 | 0.15" | 760 | 0.20" |
| 6'-0" / 72" | 7.8 | 620 | 0.10" | 780 | 0.15" | 940 | 0.25" |

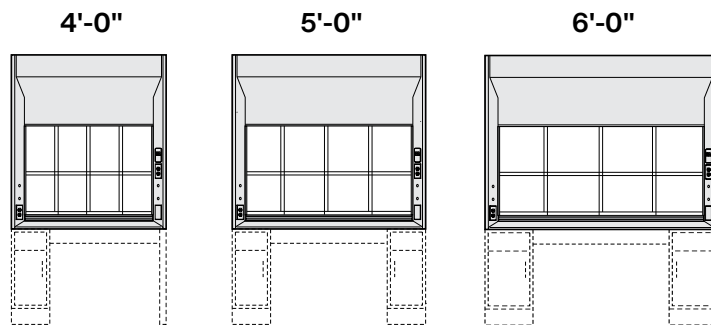
* Maximum sash opening with vertical sash down and horizontal panels fully open. Includes By-Pass opening and 1" below deflector vane.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Accessories Include: 120 volt AC 20 amp GFI duplex receptacle, combination 20 amp light switch—120 volt receptacle, single-tube, T-5 fluorescent light fixture with bulb, and an Air Alert 300 Airflow Alarm. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to two (2) remote control service fittings. The right hand post is punched for a second electrical fixture at the bottom which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, work top, cupsink, and base units must be ordered separately.**

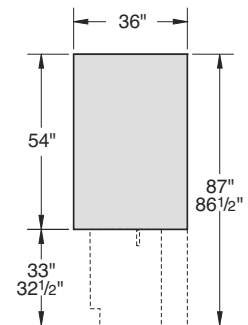
ADA Bench Fume Hoods — Combination Vertical Rising/Horizontal Sash



H09_5448B00
Restricted By-Pass

H09_5460B00
Restricted By-Pass

H09_5472B00
Restricted By-Pass



End View

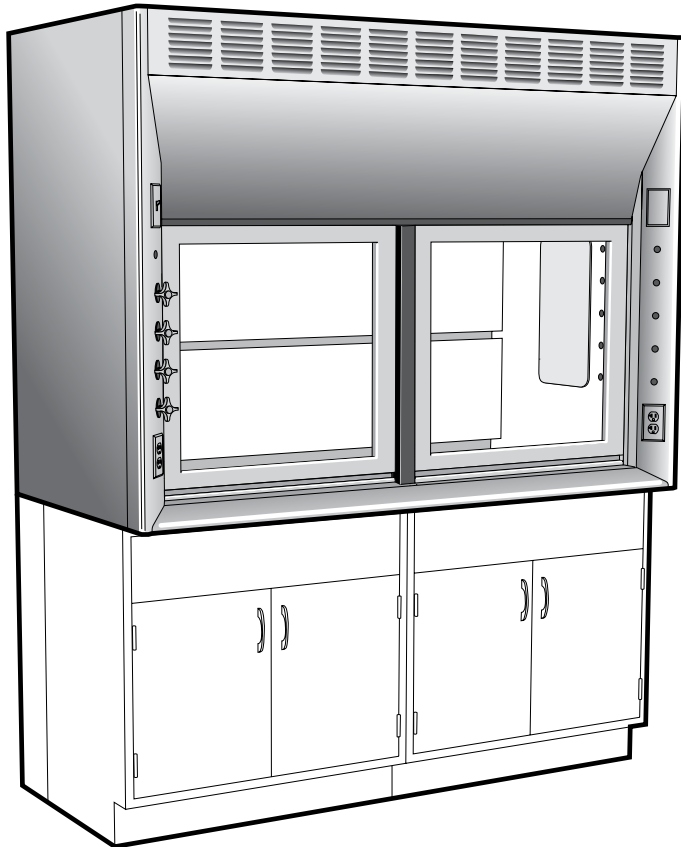
Open By-Pass available by special request.

Note: See page 44 for chart of available options.

Note: Restricted By-Pass Fume Hood shown. Open By-Pass Fume Hoods have louvered top front panel.

Split Sash Bench Fume Hood

Split Vertical Rising Sash with Disappearing Center Post



Available Option:

Adjustable Baffles
Air Flow and Static Pressure Alarms
Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
1805 UL classified with Kemglass
or Stainless Steel liner
Vapor Proof and Explosion Proof Lighting
Stainless Steel Deflector Vane
Stainless Steel Sash Frame
Tempered Sash Glass
Tissue Screen
Fire Extinguisher
Distillation Rack
Sash Stop
Stainless Steel Duct Collar

Available Models:
Open By-Pass
Restricted By-Pass
Auxiliary Air

Features:

- Two piece vertical rising sash with a disappearing center post allows safer operating conditions.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Narrow framed sash with full-length formed steel handles for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H10

Specifications:

Supreme Air Split Sash Bench Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, counterbalanced, two-piece, steel framed sash with 1/4" combination safety

glass and interior plumbing access panels. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. All are furnished with two polyethylene, 1 15/16" O.D. exhaust duct collars. Supreme Air Bench Hoods are

available with either an Open By-Pass or a Restricted By-Pass for VAV use. An auxiliary air chamber is available for use on the Open By-Pass hood.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

| | |
|-------------------------|-------------|
| Work Top | see page 49 |
| Base Cabinets | see page 63 |
| Service Fittings | see page 54 |
| Cupsink | see page 53 |
| Fan/Blower | see page 82 |

| DIMENSIONS | HEIGHT | LENGTH | | | DEPTH |
|---------------------|------------|--------|------|------|---------|
| Overall Dimension | 89 3/4" ** | 96" | 120" | 144" | 36" |
| Sash Opening | 28" * | 88" | 112" | 136" | ... |
| Work Top | 37" ** | 88" | 112" | 136" | 25 1/2" |
| Clearance (sash up) | 107" ** | ... | ... | ... | ... |

* Sash opening height above airfoil. Add 1" in height to calculate sash opening area.

** Subtract 1" in height if wood base cabinets are used.

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H10T5472-00 would designate a 6' hood with a Phenolic Resin lining.

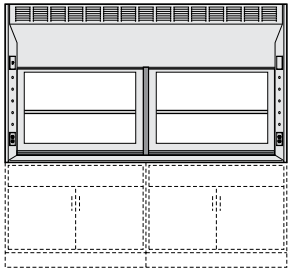
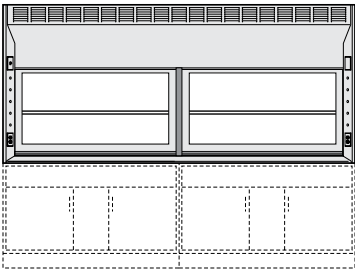
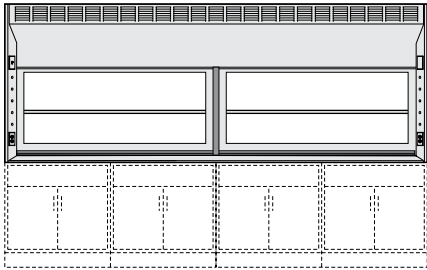
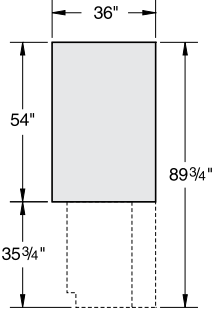
Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Note: CFM requirements shown above are for **Open By-Pass** hoods. The CFM requirements for a **Restricted By-Pass** hood with the sash fully open is the same as above. The by-pass opening with the sash closed is 20% of that with the sash fully open.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, work top, cupsink, and base units must be ordered separately.**

Split Sash Bench Fume Hoods — Vertical Rising Sash with Disappearing Center Post

| | | | |
|---|---|--|---|
| 8'-0" | 10'-0" | 12'-0" | |
|  |  |  |  |
| H10_5496-00 Open By-Pass | H10_5420-00 Open By-Pass | H10_5444-00 Open By-Pass | End View |
| H10_5496B00 Restricted By-Pass | H10_5420B00 Restricted By-Pass | H10_5444B00 Restricted By-Pass | |

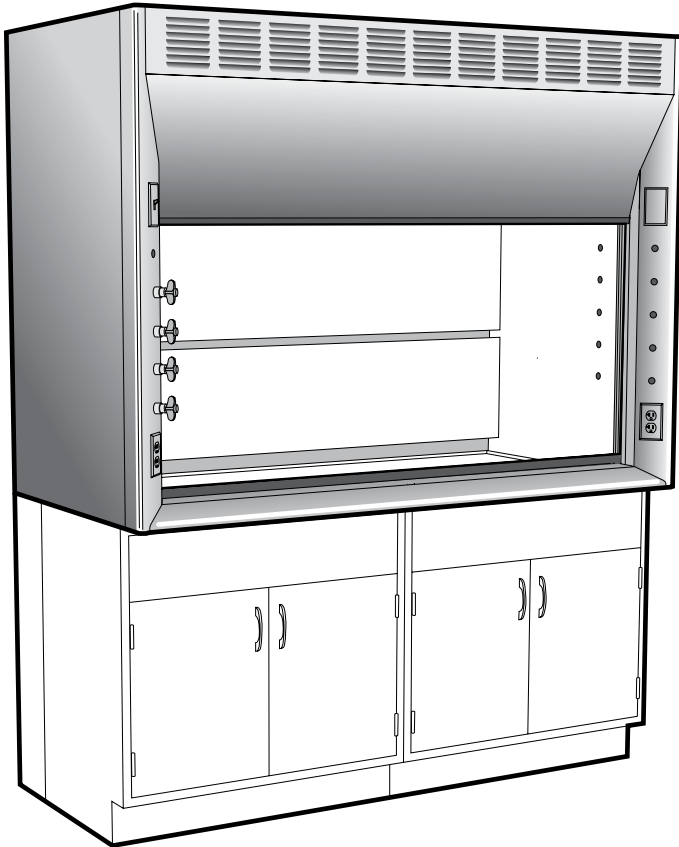
Auxiliary Air

All Open By-Pass hoods can be Auxiliary Air hoods by adding an Auxiliary Air Chamber. See page 43 for catalog numbers.

Notes: See page 44 for chart of available options. Open By-Pass Fume Hood shown. Restricted By-Pass Fume Hoods do not have louvered top front panel.

Isotope Bench Fume Hood

with Vertical Rising Sash



Available Option:

Adjustable Baffles
Air Flow and Static Pressure Alarms
Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
Vapor Proof and Explosion Proof Lighting
Stainless Steel Deflector Vane
Alternate Sash Handles
Sash Frame
Tempered Sash Glass
Tissue Screen
Sash Stop

Available Models:
Open By-Pass
Restricted By-Pass
Auxiliary Air

Features:

- Coved cornered, seamless welded stainless steel construction for easy cleaning and decontamination.
- Complete with integral work top and hemispherical cupsink.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Frameless sash with full-length formed steel handle for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H2O

Specifications:

Supreme Air Isotope Bench Fume Hoods are furnished with a type 304 stainless steel liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, counterbalanced, frameless sash of 1/4" combination safety

glass, dished work top, and 5" diameter cupsink. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is stainless steel, 1 15/16" O.D. (8 foot hoods are furnished with two duct

collars.) Supreme Air Isotope Hoods are available with either an Open By-Pass or a Restricted By-Pass for VAV use. An auxiliary air chamber is available for use on the Open By-Pass hood.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

| | |
|-------------------------|-------------|
| Base Cabinets | see page 63 |
| Service Fittings | see page 56 |
| Fan/Blower | see page 82 |

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|------------|--------|-----|-----|-----|---------|
| Overall Dimension | 89 3/4" ** | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 28" * | 40" | 52" | 64" | 88" | ... |
| Work Top | 37" ** | 40" | 52" | 64" | 88" | 25 1/2" |
| Clearance (sash up) | 97" ** | ... | ... | ... | ... | ... |

* Sash opening height above airfoil. Add 1" in height to calculate sash opening area.
** Subtract 1" in height if wood base cabinets are used.

| Overall Hood Length | Sash Opening Sq. Ft. | Total CFM and Static Pressure | | | | | |
|---------------------|----------------------|-------------------------------|------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 8.1 | not recommended | | 810 | 0.25" | 980 | 0.35" |
| 5'-0" / 60" | 10.5 | not recommended | | 1050 | 0.30" | 1260 | 0.45" |
| 6'-0" / 72" | 12.9 | not recommended | | 1290 | 0.40" | 1550 | 0.60" |
| 8'-0" / 96" | 17.7 | not recommended | | 1770 | 0.25" | 2130 | 0.35" |

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Note: CFM requirements shown above are for **Open By-Pass** hoods. The CFM requirements for a **Restricted By-Pass** hood with the sash fully open is the same as above. The by-pass opening with the sash closed is 20% of that with the sash fully open.

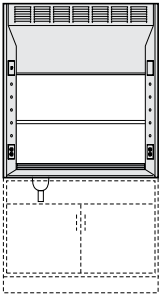
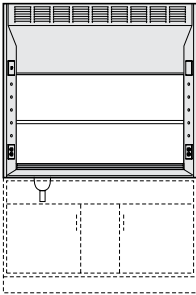
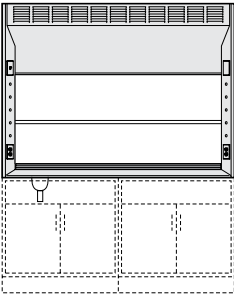
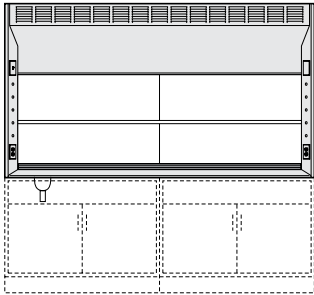
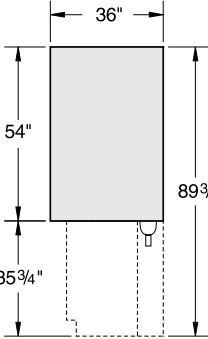
Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) front loading remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, and base units must be ordered separately.**

Stainless Steel Lining

Interior fume hood 14 gauge lining and 16 gauge baffles are type 304 stainless steel. The seamless welded 14 gauge, type 304 stainless steel work top is dished 1/2" to retain spillage, and has an integrally welded 5" diameter cupsink at the left rear. (It is not recommended to punch vent holes in the work top of isotope hoods for use with acid storage or vacuum pump storage base cabinets.)

Isotope Bench Fume Hoods — Vertical Rising Sash

| | | | | |
|---|---|---|--|---|
| 4'-0" | 5'-0" | 6'-0" | 8'-0" | |
|  |  |  |  |  |
| H2OS5448-00 Open By-Pass | H2OS5460-00 Open By-Pass | H2OS5472-00 Open By-Pass | H2OS5496-00 Open By-Pass | End View |
| H2OS5448B00 Restricted By-Pass | H2OS5460B00 Restricted By-Pass | H2OS5472B00 Restricted By-Pass | H2OS5496B00 Restricted By-Pass | |

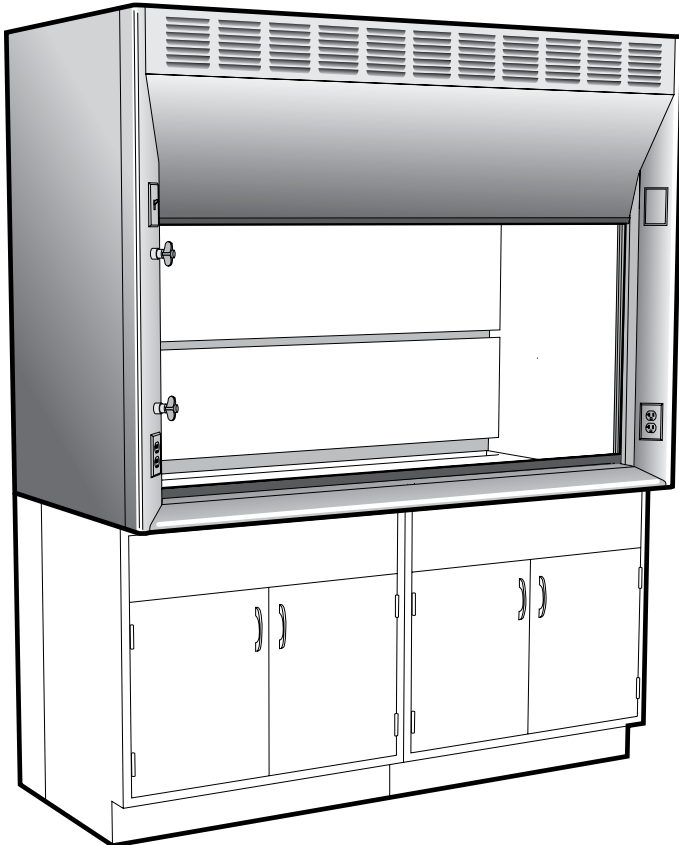
Auxiliary Air

All Open By-Pass hoods can be Auxiliary Air hoods by adding an Auxiliary Air Chamber. See page 43 for catalog numbers.

Notes: See page 44 for chart of available options. Open By-Pass Fume Hood shown. Restricted By-Pass Fume Hoods do not have louvered top front panel.

Perchloric Acid Bench Fume Hood

with Vertical Rising Sash



Available Models:
Open By-Pass
Auxiliary Air

Available Option:

Adjustable Baffles
Air Flow and Static Pressure Alarms
Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
Explosion Proof Lighting
Stainless Steel Deflector Vane
Sash Frame
Tempered Sash Glass
Sash Stop

Features:

- Coved cornered, seamless welded type 316 stainless steel construction for easy cleaning and decontamination.
- Complete with integral work top drain trough, cold water service fitting, and cold water hood washdown.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Frameless sash with full-length formed steel handle for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H25

Specifications:

Supreme Air Perchloric Acid Bench Fume Hoods are furnished with a stainless steel liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, counter balanced, frameless sash of 1/4" combination

safety glass, and a louvered top front panel. A full length perforated spray pipe is located behind the top baffle, and is provided to simplify periodic washdown procedures. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked

chemical resistant, synthetic resin finish. The exhaust duct collar is st. steel, 11¹⁵/₁₆" O.D. Perchloric Acid Hoods are available only with an Open By-Pass. An auxiliary air chamber is available.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

Base Cabinets * see page 63
Fan/Blower see page 82

* Only steel base cabinets are recommended for use under perchloric acid fume hoods.

| DIMENSIONS | HEIGHT | LENGTH | | | DEPTH |
|---------------------|---------|--------|-----|-----|---------|
| Overall Dimension | 89 3/4" | 48" | 60" | 72" | 36" |
| Sash Opening | 28" * | 40" | 52" | 64" | ... |
| Work Top | 37" | 40" | 52" | 64" | 25 1/2" |
| Clearance (sash up) | 97" | ... | ... | ... | ... |

* Sash opening height above airfoil. Add 1" in height to calculate sash opening area. Wood base cabinets are not recommended for use under perchloric acid fume hoods.

| Overall Hood Length | Sash Opening Sq. Ft. | Total CFM and Static Pressure | | | | | |
|---------------------|----------------------|-------------------------------|------|-----------------|------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 8.1 | not recommended | | not recommended | | 980 | 0.35" |
| 5'-0" / 60" | 10.5 | not recommended | | not recommended | | 1260 | 0.45" |
| 6'-0" / 72" | 12.9 | not recommended | | not recommended | | 1550 | 0.60" |

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Note: Due to the use of hot plates in perchloric acid hoods, Kewaunee recommends using a minimum of 120 FPM face velocity.

Accessories Include: Two front loaded remote controlled service fittings (one cold water, one cold water washdown), Two 120 volt AC 20 amp GFI receptacles, vapor-proof light fixture(s) (bulbs not included) with 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

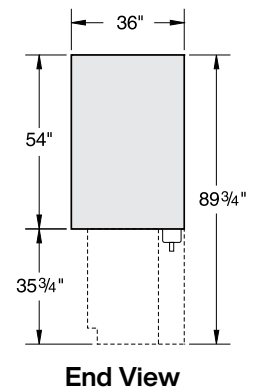
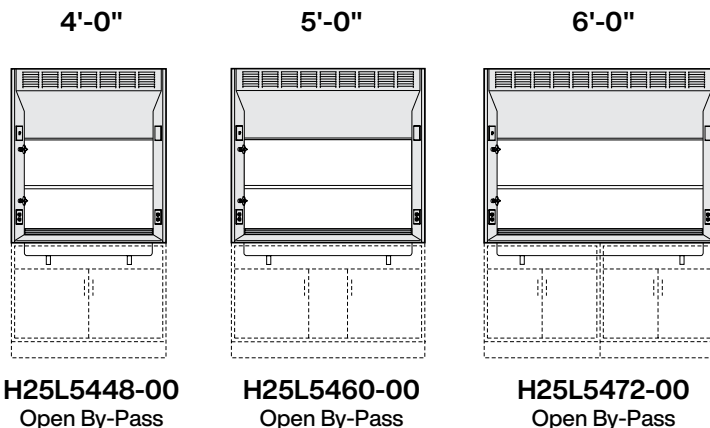
Optional Accessories: The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Fan, fan switch, and base units must be ordered separately.**

Stainless Steel Lining

Interior Perchloric Acid fume hood 14 gauge linings and 16 gauge baffles are type 316 stainless steel. The seamless welded 14 gauge, type 316 stainless steel work top is dished 1/2" to retain spillage, and has an integrally welded trough sink at the rear.

Note: acid storage or vacuum pump storage cabinets can not be vented through perchloric acid fume hood work tops.

Perchloric Acid Bench Fume Hoods — Vertical Rising Sash



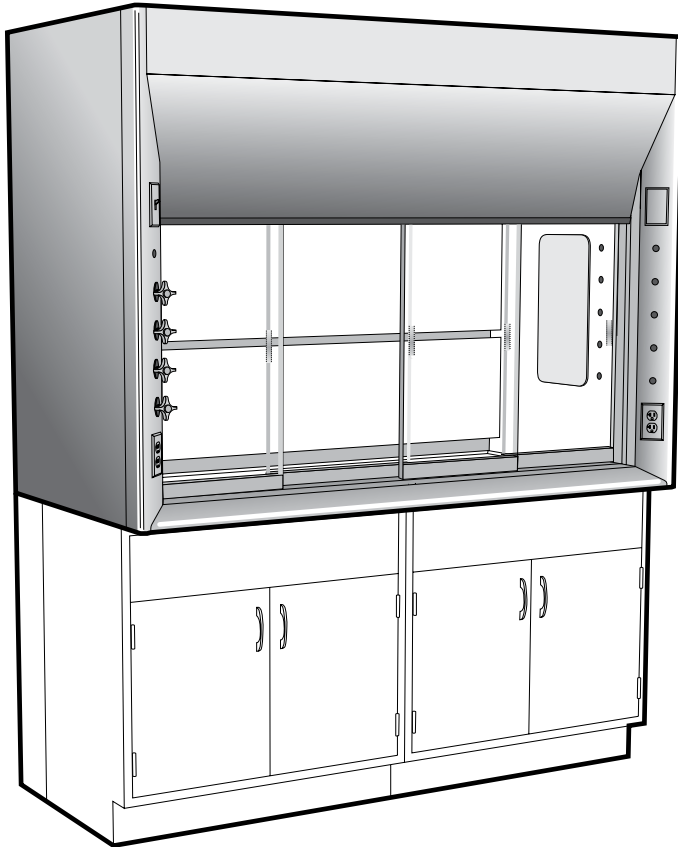
Auxiliary Air

All Open By-Pass hoods can be Auxiliary Air hoods by adding an Auxiliary Air Chamber. See page 43 for catalog numbers.

Note: See page 44 for chart of available options.

Horizontal Sash – Bench Fume Hood

with Four Panel Horizontal Sash



Available Models:
Restricted By-Pass

Available Option:

- Adjustable Baffles
- Air Flow and Static Pressure Alarms
- Service Fittings and Piping
- Electrical Fixtures and Wiring
- UL listed when pre-wired per UL 61010A-1
- 1805 UL classified with Kemglass or Stainless Steel liner
- Vapor Proof and Explosion Proof Lighting
- Stainless Steel Deflector Vane
- Sash Frame
- Tempered Sash Glass
- Tissue Screen
- Fire Extinguisher
- Distillation Rack
- Sash Stop
- Stainless Steel Duct Collar

Features:

- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Frameless, four-panel, two-track, horizontal sash with 1/4" laminated safety glass for neat, clean appearance and streamline air features.
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H70

Specifications:

Supreme Air Horizontal Sash Bench Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, four-panel, frameless

sash of 1/4" combination safety glass and interior plumbing access panels. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene,

1 15/16" O.D. (8 foot hoods are furnished with two duct collars.) Supreme Air Bench Hoods are available only as a Restricted By-Pass hood. They may be used either with or without a VAV system.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

| | |
|-------------------------|-------------|
| Work Top | see page 49 |
| Base Cabinets | see page 63 |
| Service Fittings | see page 54 |
| Cupsink | see page 53 |
| Fan/Blower | see page 82 |

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|------------|---------|---------|---------|---------|---------|
| Overall Dimension | 89 3/4" ** | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 29" * | 18 1/2" | 24 1/2" | 30 1/2" | 42 1/2" | ... |
| Work Top | 37" ** | 40" | 52" | 64" | 88" | 25 1/2" |
| Clearance (sash up) | 89 3/4" ** | ... | ... | ... | ... | ... |

* Sash opening height above airfoil. Add 1" in height to calculate sash opening area.
 ** Subtract 1" in height if wood base cabinets are used.

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H70T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| Overall Hood Length | Sash Opening Sq. Ft. * | Total CFM and Static Pressure | | | | | |
|---------------------|------------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 5.2 | 410 | 0.10" | 520 | 0.10" | 620 | 0.15" |
| 5'-0" / 60" | 6.8 | 550 | 0.10" | 680 | 0.15" | 820 | 0.20" |
| 6'-0" / 72" | 8.5 | 680 | 0.15" | 850 | 0.20" | 1020 | 0.25" |
| 8'-0" / 96" | 11.8 | 940 | 0.10" | 1180 | 0.15" | 1410 | 0.15" |

* At maximum sash opening. Includes By-Pass opening and 1" below deflector vane.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, work top, cupsink, and base units must be ordered separately.**

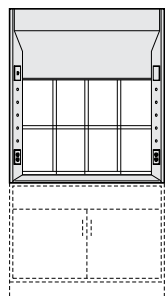
Horizontal Sash Bench Fume Hoods — Four Panel Horizontal Sash

4'-0"

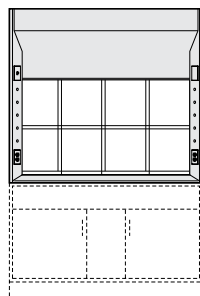
5'-0"

6'-0"

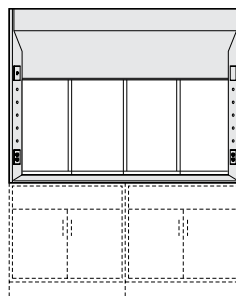
8'-0"



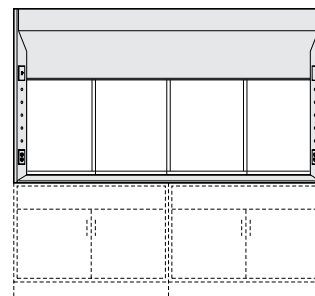
H70_5448B00
Restricted By-Pass



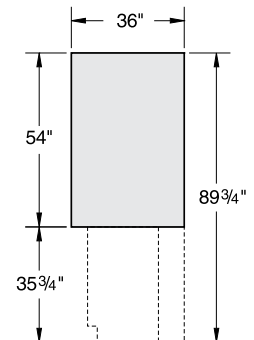
H70_5460B00
Restricted By-Pass



H70_5472B00
Restricted By-Pass



H70_5496B00
Restricted By-Pass

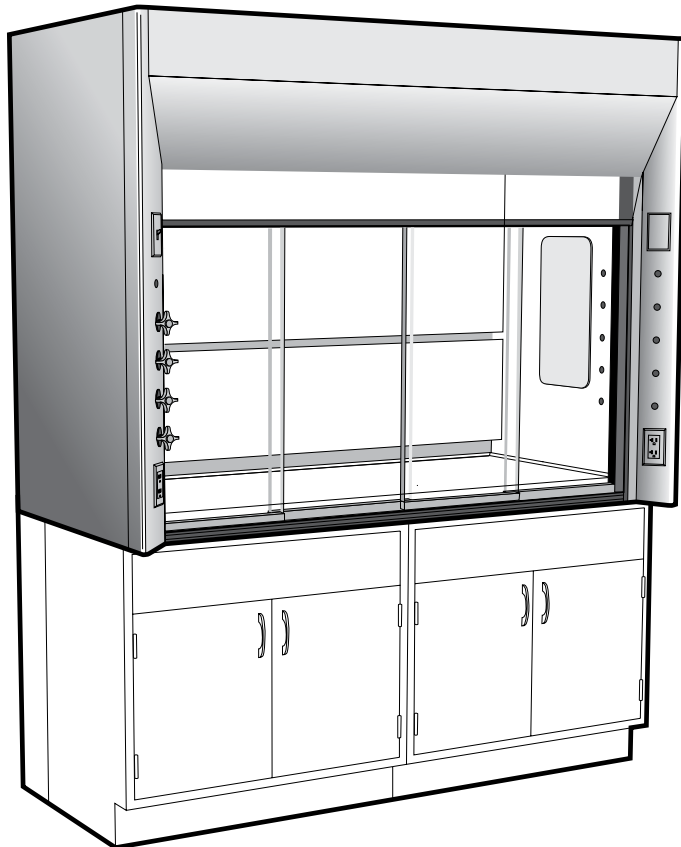


End View

Note: See page 44 for chart of available options.

HOPEC Style Bench Fume Hood

with Combination Vertical Rising/Horizontal Sash



Available Models:
Restricted By-Pass

Available Options:

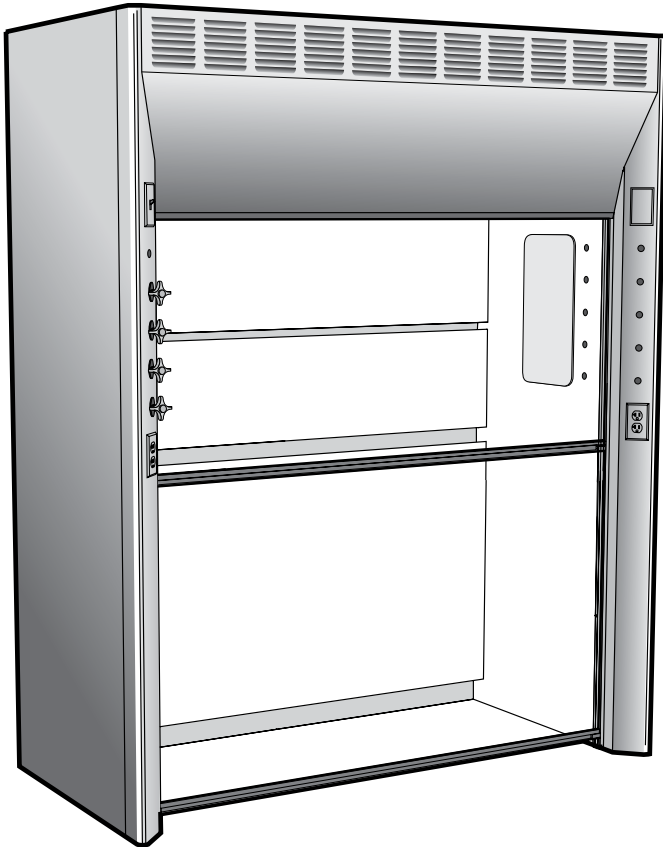
- Adjustable Baffles
- Air Flow and Static Pressure Alarms
- Service Fittings and Piping
- Electrical Fixtures and Wiring
- UL listed when pre-wired per UL 61010A-1
- 1805 UL classified with Kemglass or Stainless Steel liner
- Vapor Proof and Explosion Proof Lighting
- Stainless Steel Sash Frame
- Tempered Sash Glass
- Tissue Screen
- Fire Extinguisher
- Distillation Rack
- Sash Stops
- Stainless Steel Duct Collar

Features:

- Flush bottom airfoil with integral spill trough—painted stainless steel.
- Transparent Vision Panel standard, for increased hood interior visibility.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Narrow framed sash with four horizontal glass panels on two tracks for neat clean appearance and improved exhaust efficiency.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

General Purpose Walk-In Fume Hood

with Vertical Rising Sash



Available Option:

Adjustable Baffles
Air Flow and Static Pressure Alarms
Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
1805 UL classified with Kemglass
or Stainless Steel liner
Vapor Proof and Explosion Proof Lighting
Stainless Steel Deflector Vane
Alternate Sash Handles
Sash Frame
Tempered Sash Glass
Tissue Screen
Fire Extinguisher
Distillation Rack
Sash Stop
Stainless Steel Duct Collar
Work Floor & Removable Work Shelf

Available Models:
Open By-Pass
Restricted By-Pass
Auxiliary Air

Features:

- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Frameless sashes with full-length formed steel handle for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H30

Specifications:

Supreme Air General Purpose Walk-In Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with two counter-balanced, frameless sashes of 1/4" combination safety glass and

interior plumbing access panels. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene, 1 15/16" O.D. (8 foot hoods are furnished with two duct collars.) Supreme Air

Walk-In Hoods are available with either an Open By-Pass or a Restricted By-Pass for VAV use. An auxiliary air chamber is available for use on the Open By-Pass hood.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

- Optional Work Floor see page 50
- Optional Work Shelf see page 50
- Service Fittings see page 54
- Fan/Blower see page 82

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|---------|--------|-----|-----|-----|---------|
| Overall Dimension | 89 3/4" | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 28" * | 40" | 52" | 64" | 88" | ... |
| Optional Work Shelf | 37" | 40" | 52" | 64" | 88" | 24 1/2" |
| Clearance (sash up) | 103" | ... | ... | ... | ... | ... |

* Upper sash opening height above lower sash. Add 1" in height to calculate sash opening area.

| Overall Hood Length | Sash Opening Sq. Ft. | Total CFM and Static Pressure | | | | | |
|---------------------|----------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 8.1 * | 650 | 0.15" | 810 | 0.25" | 980 | 0.35" |
| 5'-0" / 60" | 10.5 * | 840 | 0.20" | 1050 | 0.30" | 1260 | 0.45" |
| 6'-0" / 72" | 12.9 * | 1040 | 0.25" | 1290 | 0.40" | 1550 | 0.60" |
| 8'-0" / 96" | 17.7 * | 1420 | 0.15" | 1770 | 0.25" | 2130 | 0.35" |

* Includes Upper Sash Opening only and 1" opening below lower sash.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Note: CFM requirements shown above are for **Open By-Pass** hoods. The CFM requirements for a **Restricted By-Pass** hood with the sash fully open is the same as above. The by-pass opening with the sash closed is 20% of that with the sash fully open.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, optional work floor, and removable work shelf must be ordered separately.**

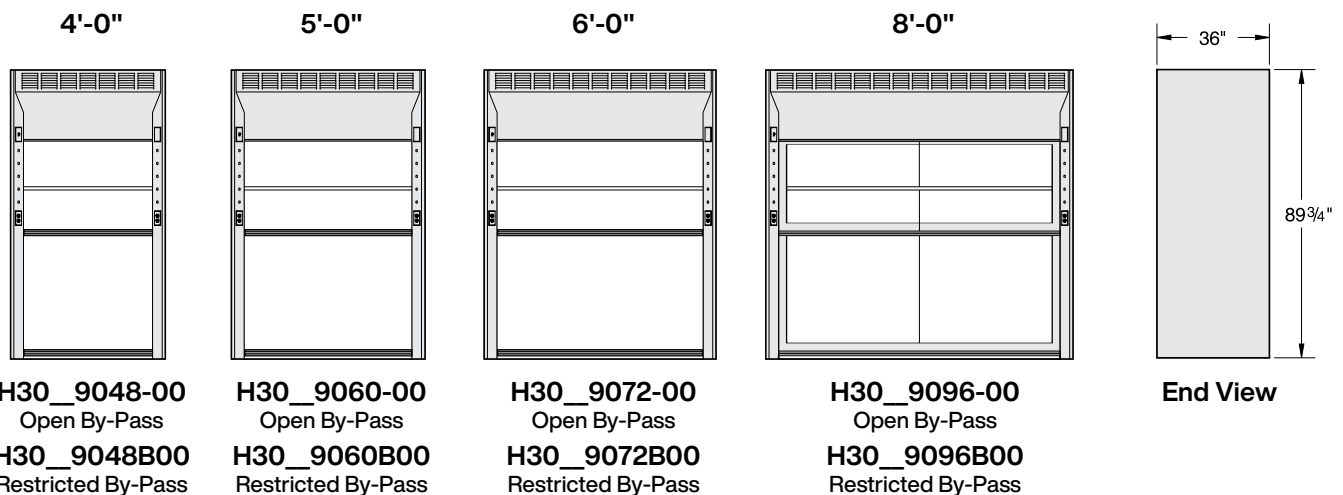
Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H30T5448-00 would designate a 4' hood with a Phenolic Resin lining.

General Purpose Walk-In Fume Hoods — Vertical Rising Sash



8' Walk-In Hood available with framed sash only.

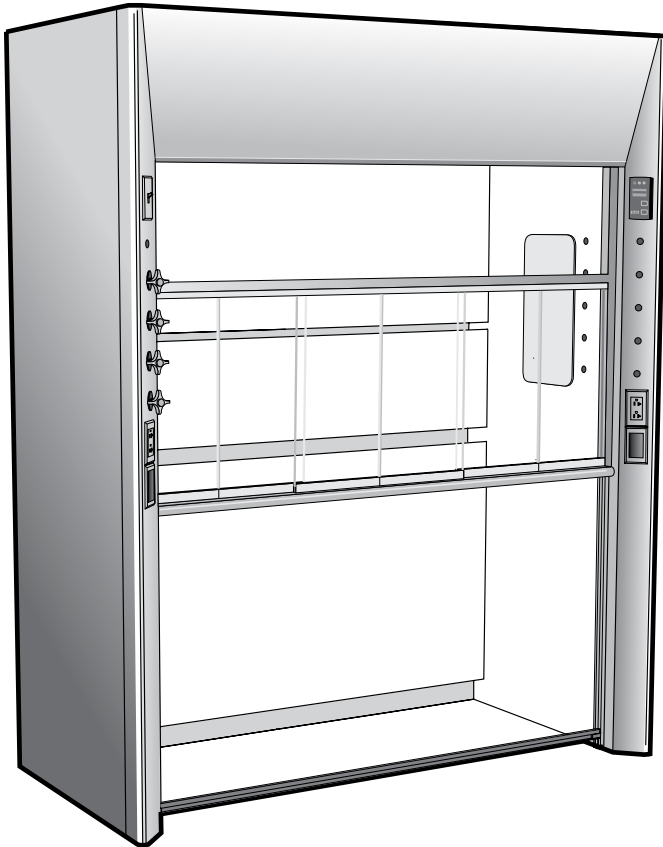
Auxiliary Air

All Open By-Pass hoods can be Auxiliary Air hoods by adding an Auxiliary Air Chamber. See page 43 for catalog numbers.

Notes: See page 44 for chart of available options. Open By-Pass Fume Hood shown. Restricted By-Pass Fume Hoods do not have louvered top front panel.

Ultra Low Constant Volume Fume Hood

with Low-flow Combination Vertical Rising/Horizontal Sash



Available Models:
Dynamic Barrier By-Pass

Features:

- Requires over 60 percent less exhaust air volume than a traditional by-pass fume hood.
- Extra large vertical sash design allows full view into hood interior and 73" opening height for apparatus setup.
- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Low profile sash frame for easy access through horizontal panels.
- Service ports provide convenient, safe passage for equipment connections.
- Exclusive Air Alert 600 Monitor provides a visual one-hour timeline of fume hood performance.
- Exclusive static pressure averaging mechanism provides accurate face velocity readings regardless of sash opening.
- Quiet fume hood operation, under 40 dBA with properly sized fans and ductwork.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Available Option:

Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
1805 UL classified with Kemglass
or Stainless Steel liner
Lighting
Stainless Steel Deflector Vane
Tempered Sash Glass
Tissue Screen
Fire Extinguisher
Distillation Rack
Stainless Steel Duct Collar
Removable Work Shelf

Dynamic Barrier Fume Hood

H52

Specifications:

Dynamic Barrier Supreme Air Walk-In Fume Hoods are furnished with a choice of liner and baffles with center and lower exhaust slots and interior plumbing access panels. Each fume hood is complete with a counter balanced, extra large, low-flow narrow framed upper

sash with six horizontal panels, and a frameless lower sash of 1/4" combination safety glass, and an Air Alert 600 Monitor with static pressure averaging. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic

resin finish. The exhaust duct collar is polyethylene, 7¹⁵/₁₆" O.D. (8 foot hoods are furnished with two duct collars.)

Dynamic Barrier Supreme Air Walk-In Hoods are not designed for use with auxiliary air chambers.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

- Optional Work Floor see page 50
- Optional Work Shelf see page 50
- Service Fittings see page 54
- Fan/Blower see page 82

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|---------|--------|-----|-----|-----|---------|
| Overall Dimension | 89 3/4" | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 37" | 40" | 52" | 64" | 88" | ... |
| Optional Work Shelf | 37" | 40" | 52" | 64" | 88" | 24 1/2" |
| Clearance (sash up) | 113" | ... | ... | ... | ... | ... |

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H52T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| Overall Hood Length | Maximum Face Opening of Horizontal Sashes | | | | Face Opening with Vertical Sash at 10" Sash Stop | | | | Total CFM and Static Pressure | |
|---------------------|---|-----|-------------------|----------|--|-----|-------------------|----------|-------------------------------|-------|
| | W | H | Ft ² * | Velocity | W | H | Ft ² * | Velocity | CFM | S.P. |
| 4'-0" / 48" | 14 1/2" | 22" | 3.00 | 100 fpm | 40" | 10" | 3.53 | 85 fpm | 300 | 0.17" |
| 5'-0" / 60" | 18" | 22" | 4.00 | 100 fpm | 52" | 10" | 4.81 | 85 fpm | 400 | 0.23" |
| 6'-0" / 72" | 22" | 22" | 5.00 | 100 fpm | 64" | 10" | 5.94 | 85 fpm | 500 | 0.37" |
| 8'-0" / 96" | 30" | 22" | 6.75 | 100 fpm | 88" | 10" | 8.01 | 85 fpm | 675 | 0.20" |

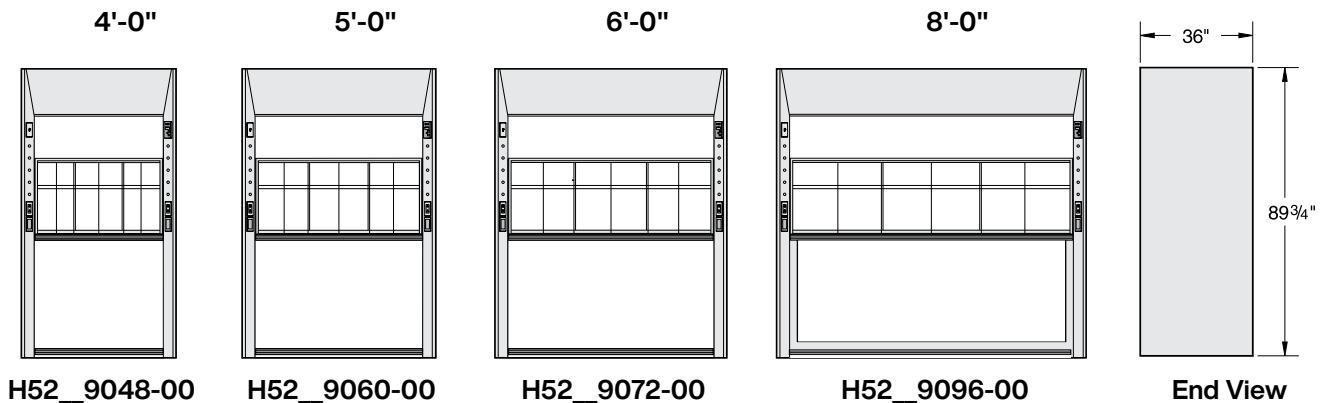
* Includes free area contributions from sash clearance spaces and by-pass opening.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch, Air Alert 600 Air Flow Monitor and two cord ports. **No wiring for the electrical fixtures is included unless H-Option is added to part number.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. **Service fittings, fan, fan switch, optional work floor and work shelf must be ordered separately.**

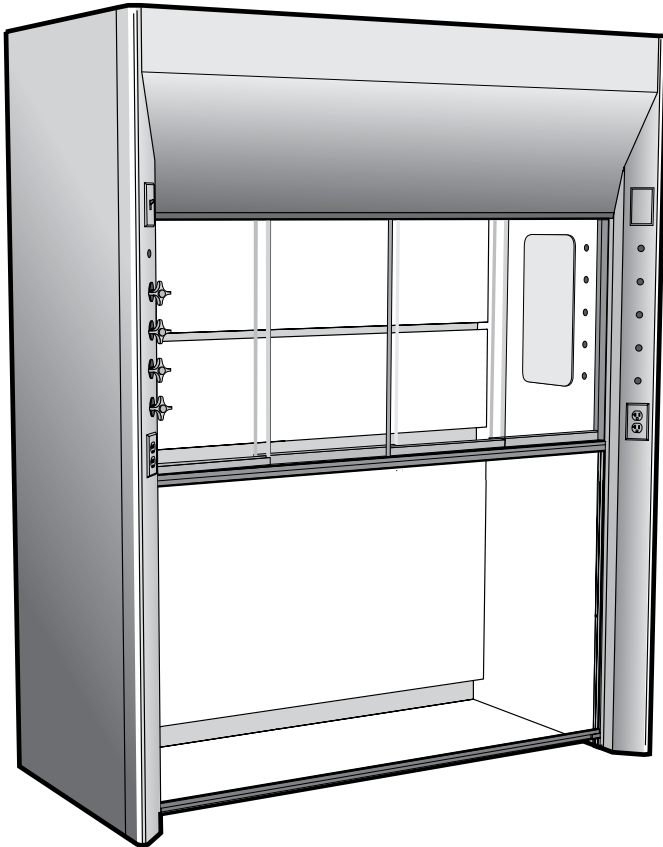
Dynamic Barrier Walk-In Fume Hoods — Low-flow Combination Vertical Rising/Horizontal Sash



Note: See page 44 for chart of available options.

Combination Sash – Walk-In Fume Hood

with Combination Vertical Rising/Horizontal Sash



Available Option:

- Adjustable Baffles
- Air Flow and Static Pressure Alarms
- Service Fittings and Piping
- Electrical Fixtures and Wiring
- UL listed when pre-wired per UL 61010A-1
- 1805 UL classified with Kemglass or Stainless Steel liner
- Vapor Proof and Explosion Proof Lighting
- Stainless Steel Deflector Vane
- Sash Frame
- Tempered Sash Glass
- Tissue Screen
- Fire Extinguisher
- Distillation Rack
- Sash Stop
- Stainless Steel Duct Collar
- Work Floor & Removable Work Shelf

Available Models:
Restricted By-Pass
Open By-Pass
(by special request only)

Features:

- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Narrow framed upper sash with four horizontal glass panels on two tracks, frameless lower sash with full-length formed steel handle for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H32

Specifications:

Supreme Air Combination Sash Walk-In Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a counter balanced, narrow framed upper sash with horizontal panels, and a frameless lower sash of 1/4" combination safety glass and interior plumbing access panels. Hood exteriors are fabricated of

cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene, 11¹⁵/₁₆" O.D. (8 foot hoods are furnished with two duct collars.)

Combination Sash Walk-In Hoods are furnished with a Restricted By-Pass to match the restricted sash opening. They are designed for use with both constant volume and VAV applications. An Open By-Pass is available on request for applications where the hood is operated with the sash fully open. Combination Sash Walk-In Hoods are not designed for use with Auxiliary Air Chambers.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

- Optional Work Floor see page 50
- Optional Work Shelf see page 50
- Service Fittings see page 54
- Fan/Blower see page 82

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H32T5448B00 would designate a 4' hood with a Phenolic Resin lining.

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|---------|--------|-----|-----|-----|---------|
| Overall Dimension | 89 3/4" | 48" | 60" | 72" | 96" | 36" |
| Sash Opening | 28" * | 40" | 52" | 64" | 88" | ... |
| Optional Work Shelf | 37" | 40" | 52" | 64" | 88" | 24 1/2" |
| Clearance (sash up) | 103" | ... | ... | ... | ... | ... |

* Upper sash opening height above lower sash.

| Overall Hood Length | Sash Opening Sq. Ft. * | Total CFM and Static Pressure | | | | | |
|---------------------|------------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 4.8 | 380 | 0.05" | 480 | 0.10" | 580 | 0.15" |
| 5'-0" / 60" | 6.3 | 500 | 0.10" | 630 | 0.15" | 760 | 0.20" |
| 6'-0" / 72" | 7.8 | 620 | 0.10" | 780 | 0.15" | 940 | 0.25" |
| 8'-0" / 96" | 10.9 | 870 | 0.10" | 1090 | 0.10" | 1310 | 0.15" |

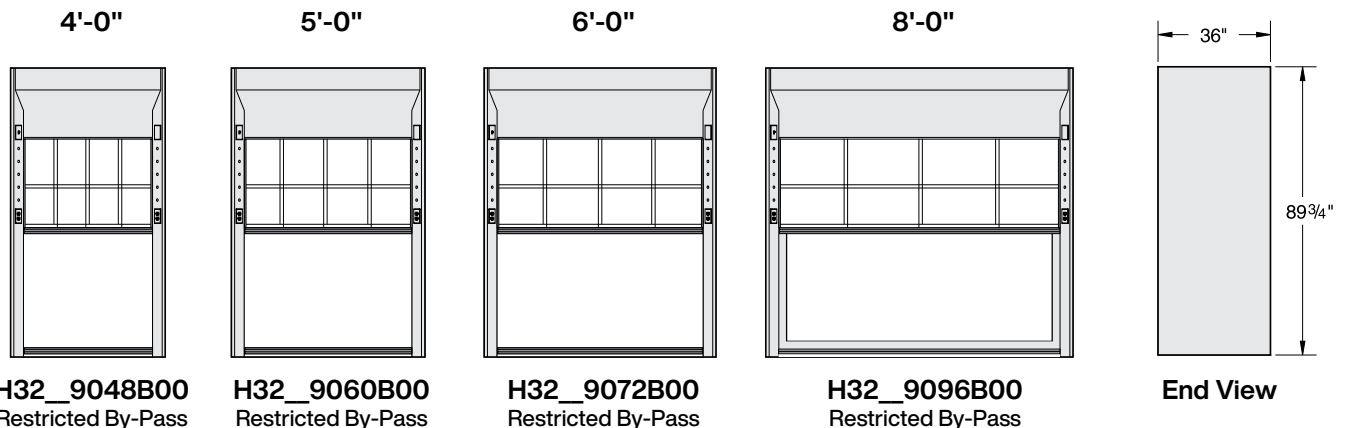
* Maximum sash opening with vertical sash down and horizontal panels fully open. Includes By-Pass opening and 1" below deflector vane.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, optional work floor, and removable work shelf must be ordered separately.**

Combination Sash Walk-In Fume Hoods — Combination Vertical Rising/Horizontal Sash



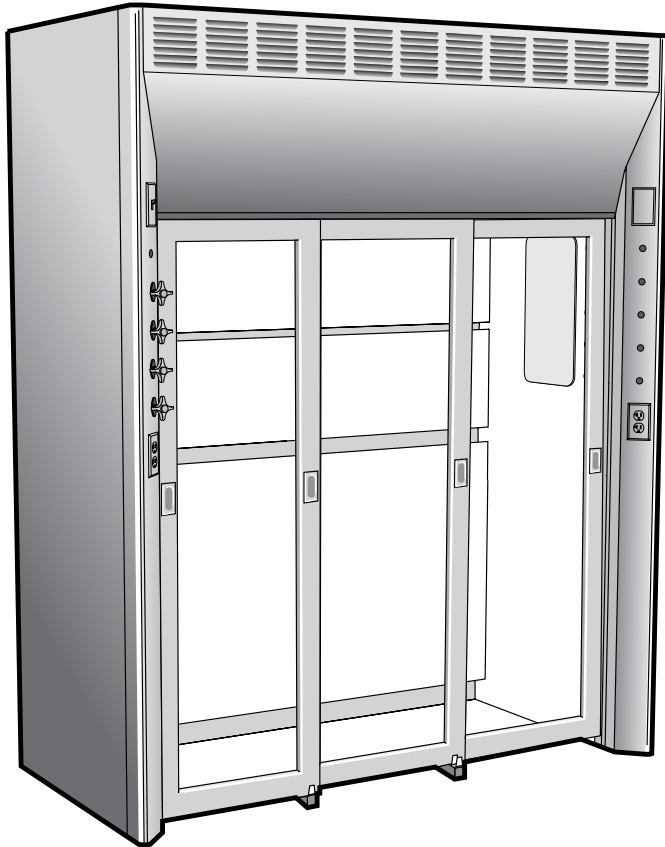
Open By-Pass by special request

8' Walk-In Hood available with framed sash only.

Notes: See page 44 for chart of available options. Restricted By-Pass Fume Hood shown. Open By-Pass Fume Hoods do not have louvered top front panel.

Horizontal Sash – Walk-In Fume Hood

with Three Panel Horizontal Sash



Available Models:
Restricted By-Pass

Available Option:

Adjustable Baffles
Air Flow and Static Pressure Alarms
Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
1805 UL classified with Kemglass
or Stainless Steel liner
Vapor Proof and Explosion Proof Lighting
Stainless Steel Deflector Vane
Stainless Steel Sash Frame
Tempered Sash Glass
Tissue Screen
Fire Extinguisher
Distillation Rack
Sash Stop
Stainless Steel Duct Collar
Work Floor & Removable Work Shelf

Features:

- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Three panel framed sash, hung from full length triple track overhead carrier on nylon rollers for smooth operation and easy access.
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H34

Specifications:

Supreme Air Horizontal Sash Walk-In Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with three panel framed sash of 1/4" combination safety glass, hanging on a triple track overhead

carrier and interior plumbing access panels. Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. They are furnished with two polyethylene exhaust duct collars, 11¹⁵/₁₆" O.D.

Supreme Air Horizontal Sash Walk-In Fume Hoods are available with a Restricted By-Pass only. They may be used either with or without a VAV system.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

- Optional Work Floor see page 50
- Optional Work Shelf see page 50
- Service Fittings see page 54
- Fan/Blower see page 82

| DIMENSIONS | HEIGHT | LENGTH | | | DEPTH |
|---------------------|---------|--------|-----|------|---------|
| Overall Dimension | 89 3/4" | 72" | 96" | 120" | 36" |
| Sash Opening | 67 3/4" | 41" | 57" | 73" | ... |
| Optional Work Shelf | 37" | 64" | 64" | 112" | 22 1/2" |

Liner Options:

- T** = Phenolic Resin
- G** = Kemglass
Fiberglass reinforced polyester
- S** = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H34T5472-00 would designate a 6' hood with a Phenolic Resin lining.

| Overall Hood Length | Sash Opening Sq. Ft. | Total CFM and Static Pressure | | | | | |
|---------------------|----------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 6'-0" / 72" | 22.1 * | 1770 | 0.35" | 2210 | 0.50" | 2650 | 0.70" |
| 8'-0" / 96" | 30.7 * | 2460 | 0.45" | 3070 | 0.70" | 3680 | 1.00" |
| 10'-0" / 120" | 39.3 * | 3140 | 0.65" | 3930 | 1.00" | 4710 | 1.40" |

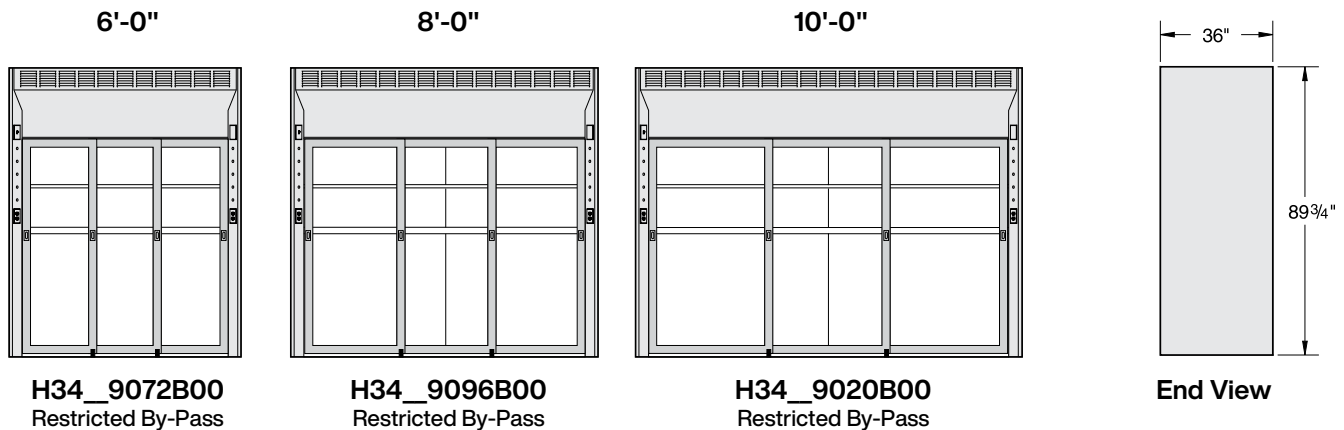
* Maximum sash opening plus By-Pass opening and 1" opening below sash.

Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Service fittings, fan, fan switch, optional work floor and removable work shelf must be ordered separately.**

Horizontal Sash Walk-In Fume Hood — With Three Panel Horizontal Sash

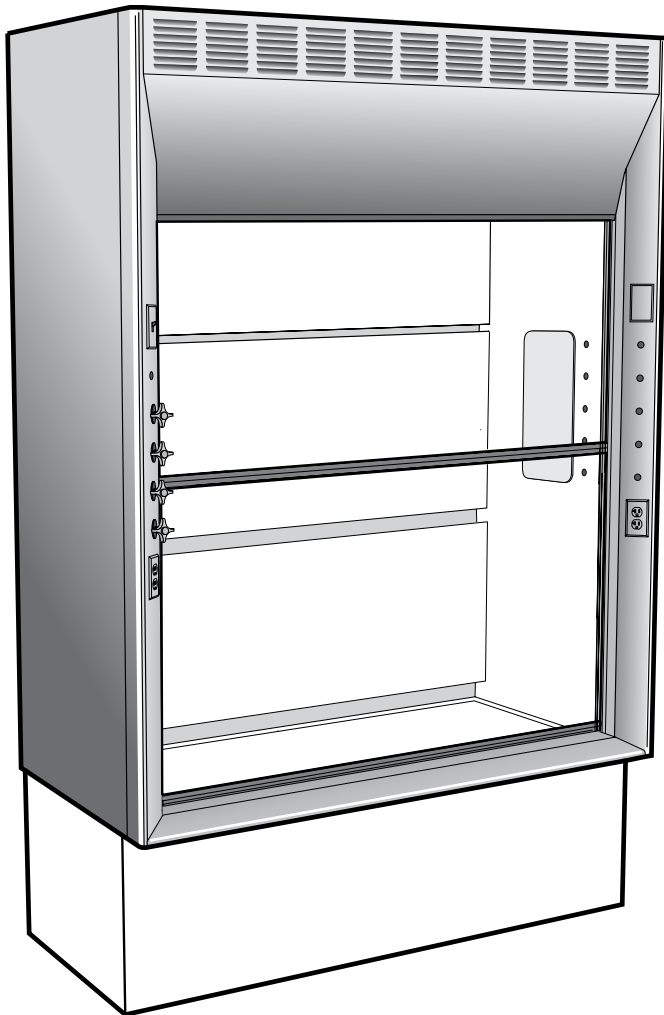


Consult your Kewaunee representative or the factory for other sash arrangements.

Note: See page 44 for chart of available options.

Distillation Fume Hood

with Vertical Rising Sash



Available Option:

Adjustable Baffles
Air Flow and Static Pressure Alarms
Service Fittings and Piping
Electrical Fixtures and Wiring
UL listed when pre-wired per UL 61010A-1
1805 UL classified with Kemglass
or Stainless Steel liner
Vapor Proof and Explosion Proof Lighting
Stainless Steel Deflector Vane
Sash Frame & Tempered Sash Glass
Tissue Screen
Fire Extinguisher
Distillation Rack
Sash Stop
Stainless Steel Duct Collar
Removable Work Shelf

Available Models:
Open By-Pass
Restricted By-Pass
Auxiliary Air

Features:

- Radiused corner posts and airfoils for smooth air movement assures high level of comfort, safety and efficiency.
- 4" thick endwalls provide more interior work space and clean-lined uncluttered design.
- Interior baffles designed to minimize turbulence and optimize containment.
- Frameless sashes with full-length formed steel handle for neat, clean appearance and streamline air features.
- Low profile PVC sash tracks and exclusive sash leveling and alignment features assure easy-smooth sash operation
- Large friction-fit interior access panels provide easy access to piping and service fittings.
- Heavy gauge cold rolled steel exterior panels with independent rigid structural frame.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Fume Hood

H36

Specifications:

Supreme Air Distillation Fume Hoods are furnished with a choice of liner and baffles with upper, center, and lower exhaust slots. Each fume hood is complete with a lower deflector vane, two counterbalanced, frameless sash of 1/4" combination safety glass and interior plumbing access panels.

Hood exteriors are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish. The exhaust duct collar is polyethylene, 1 15/16" O.D. (8 foot hoods are furnished with two duct collars.)

Supreme Air Distillation Hoods are available with either an Open By-Pass or a Restricted By-Pass for VAV use. An auxiliary air chamber is available for use on the Open By-Pass hood.

Additional Parts Required to Make Up a Complete Fume Hood Assembly

- Hood Base see bottom of page
- Work Top see page 49
- Optional Work Shelf see page 50
- Service Fittings see page 54
- Cupsink see page 53
- Fan/Blower see page 82

Liner Options:

- T = Phenolic Resin
- G = Kemglass
Fiberglass reinforced polyester
- S = Type 304 Stainless Steel

The blank left in the fume hood catalog numbers is for designating the desired lining.

Example: H36T5448-00 would designate a 4' hood with a Phenolic Resin lining.

| DIMENSIONS | HEIGHT | LENGTH | | | | DEPTH |
|---------------------|-----------|--------|-----|-----|-----|---------|
| Overall Dimension | 106 1/2" | 48" | 60" | 72" | 96" | 36" |
| Lower Sash Opening | 35 3/4" * | 40" | 52" | 64" | 88" | ... |
| Work Top | 18" | 40" | 52" | 64" | 88" | 25 1/2" |
| Optional Work Shelf | 37" | 40" | 52" | 64" | 88" | 24 1/2" |
| Clearance (sash up) | 119 3/4" | ... | ... | ... | ... | ... |

* Sash opening height above airfoil. Add 1" in height to calculate sash opening area.

| Overall Hood Length | Sash Opening Sq. Ft. | Total CFM and Static Pressure | | | | | |
|---------------------|----------------------|-------------------------------|-------|---------|-------|---------|-------|
| | | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 11.6 * | 930 | 0.30" | 1160 | 0.45" | 1400 | 0.65" |
| 5'-0" / 60" | 15.1 * | 1210 | 0.40" | 1510 | 0.60" | 1820 | 0.90" |
| 6'-0" / 72" | 18.6 * | 1490 | 0.55" | 1860 | 0.85" | 2240 | 1.20" |
| 8'-0" / 96" | 25.5 * | 2040 | 0.35" | 2550 | 0.50" | 3060 | 0.70" |

* Includes lower sash opening and 1" opening below deflector vane.

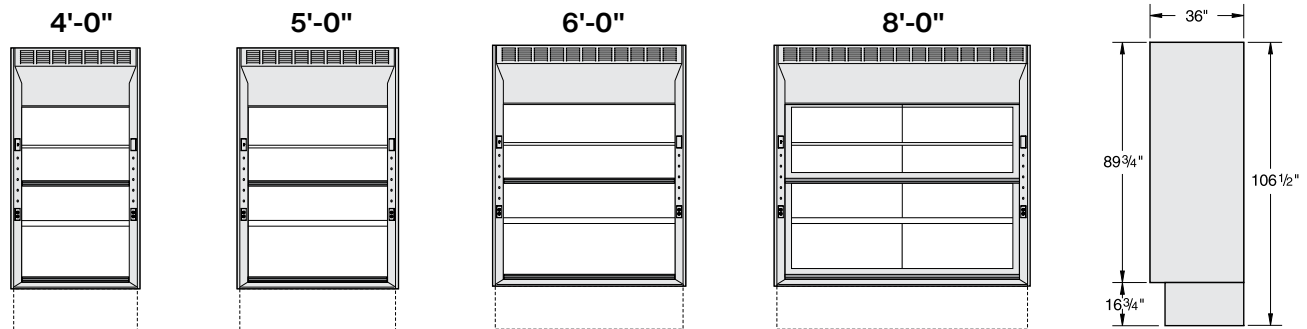
Static pressures shown are for the pressure drop through the hoods only. The total pressure drop through the hood and the duct system must be calculated to select the proper exhaust fan.

Note: CFM requirements shown above are for **Open By-Pass** hoods. The CFM requirements for a **Restricted By-Pass** hood with the sash fully open is the same as above. The by-pass opening with the sash closed is 20% of that with the sash fully open.

Accessories Include: Two 120 volt AC 20 amp GFI receptacles, single-tube, T-5 fluorescent light fixture with bulb and 20 amp light switch. **No wiring for the electrical fixtures is included unless H-Option is selected.**

Optional Accessories: Each front post and interior end liner is punched for up to five (5) remote control service fittings. The right hand post is punched for a second electrical fixture at the top which may be used for a fan switch or other electrical device. **Hood base, service fittings, fan, fan switch, work top, cupsink, and optional removable work shelf must be ordered separately.**

Distillation Fume Hoods — Vertical Rising Sash



H36_9048-00
Open By-Pass
H36_9048B00
Restricted By-Pass

H36_9060-00
Open By-Pass
H36_9060B00
Restricted By-Pass

H36_9072-00
Open By-Pass
H36_9072B00
Restricted By-Pass

H36_9096-00
Open By-Pass
H36_9096B00
Restricted By-Pass

End View

8' Distillation Hood available with framed sash only.

Distillation Hood – Base Assemblies

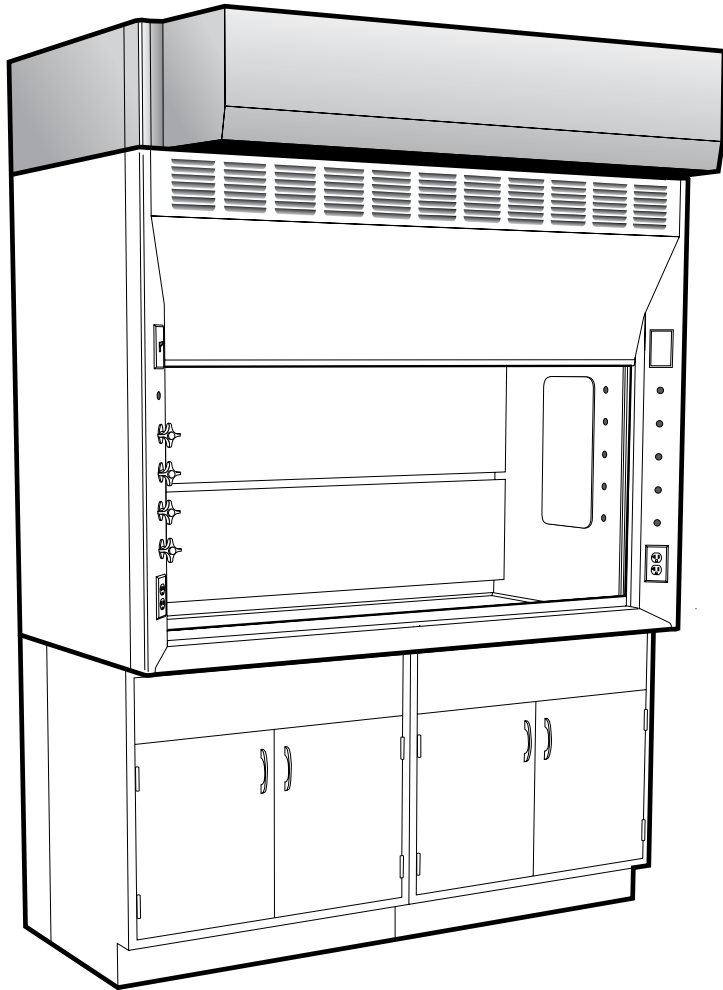
- | | | | | |
|-----------|-----------|-----------|-----------|---|
| 019245-48 | 019245-60 | 019245-72 | 019245-96 | Steel Base Assembly Wood Base Assembly |
| 019246-48 | 019246-60 | 019246-72 | 019246-96 | |

Auxiliary Air

All Open By-Pass hoods can be Auxiliary Air hoods by adding an Auxiliary Air Chamber. See page 43 for catalog numbers.

Notes: See page 44 for chart of available options. Open By-Pass Fume Hood shown. Restricted By-Pass Fume Hoods do not have louvered top front panel.

Auxiliary Air Chambers



Available for following Hoods:

- H05** General Purpose Bench Hood
- H08** ADA Bench Hood
- H10** Split Sash Bench Hood
- H20** Isotope Bench Hood
- H25** Perchloric Acid Bench Hood
- H30** General Purpose Walk-In Hood
- H36** Distillation Hood

Features:

- Provides up to 70 percent of the total exhaust air used by the hood, thereby saving energy and lowering operation costs.
- Include sash pocket enclosure and closure panels to back of hood for clean modern design.
- May be added to any Open By-Pass Supreme Air Fume Hood when originally installed or a later date.
- May be added to existing Supreme Air hood without disconnecting the exhaust duct.
- Heavy gauge cold rolled steel exterior panels designed to match Supreme Air Fume Hoods.
- Designed and tested using ASHRAE 110-1995, BS 7258, and DIN 12 924 standards.

Supreme Air Auxiliary Air Chambers

H01

Specifications:

Supreme Air Auxiliary Air Chambers may be added to the top of any Open By-Pass Supreme Air Fume Hood to convert them to Auxiliary Air fume hoods. Adding the auxiliary air chamber makes it possible for the fume hood to operate on up to 70% auxiliary air, thus

saving expensive conditioned room air from being exhausted. No modifications to the fume hood are required and the chamber comes complete with all necessary parts to make the conversion, except fan and duct work. The chambers are fabricated of cold rolled

steel, phosphate coated with a baked chemical resistant, synthetic resin finish to match the fume hood.

Auxiliary Air Requirements (based on 70% of hood air requirements)

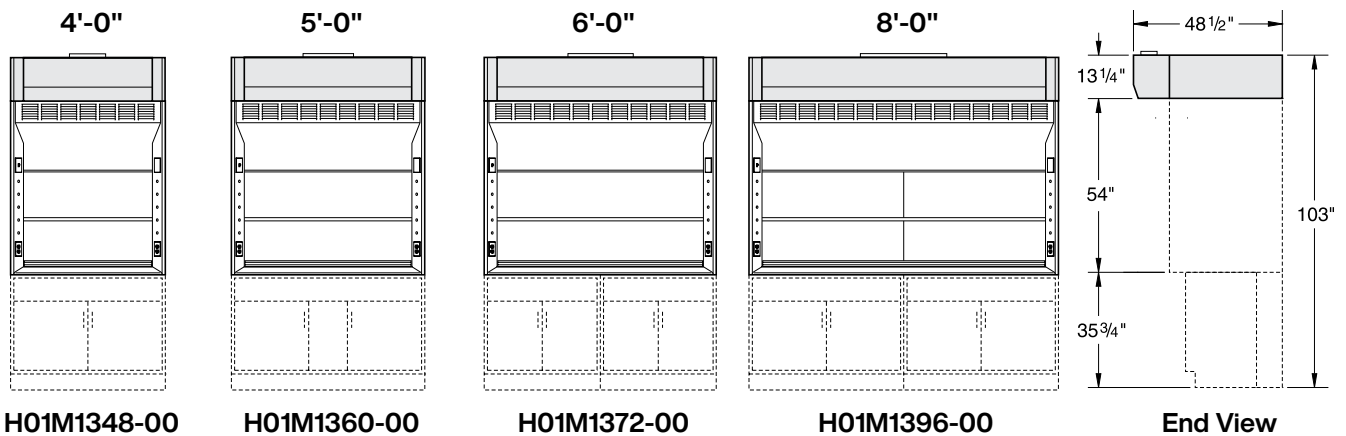
for Bench and Walk-In Fume Hoods

| Overall Hood Length | Total CFM and Static Pressure | | | | | |
|---------------------|-------------------------------|-------|---------|-------|---------|-------|
| | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 460 | 0.15" | 570 | 0.25" | 690 | 0.35" |
| 5'-0" / 60" | 590 | 0.15" | 740 | 0.25" | 880 | 0.30" |
| 6'-0" / 72" | 730 | 0.15" | 900 | 0.25" | 1090 | 0.30" |
| 8'-0" / 96" | 990 | 0.15" | 1240 | 0.25" | 1490 | 0.30" |
| 10'-0" / 120" | 1270 | 0.15" | 1580 | 0.25" | 1900 | 0.30" |
| 12'-0" / 144" | 1540 | 0.15" | 1920 | 0.25" | 2300 | 0.30" |

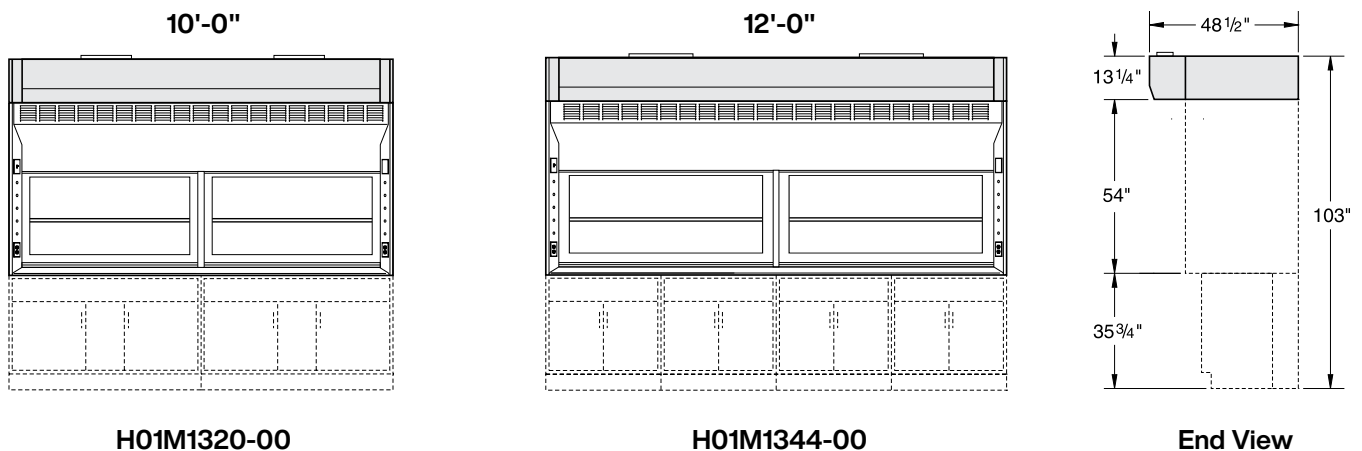
for Distillation Fume Hoods

| Overall Hood Length | Total CFM and Static Pressure | | | | | |
|---------------------|-------------------------------|-------|---------|-------|---------|-------|
| | 80 FPM | S.P. | 100 FPM | S.P. | 120 FPM | S.P. |
| 4'-0" / 48" | 650 | 0.35" | 810 | 0.50" | 980 | 0.65" |
| 5'-0" / 60" | 850 | 0.35" | 1060 | 0.50" | 1270 | 0.60" |
| 6'-0" / 72" | 1040 | 0.35" | 1300 | 0.50" | 1570 | 0.60" |
| 8'-0" / 96" | 1430 | 0.35" | 1790 | 0.50" | 2140 | 0.60" |

Auxiliary Air Chambers for Bench and Walk-In Fume Hoods



Auxiliary Air Chambers for Bench and Walk-In Fume Hoods



Supreme Air Fume Hood Option Availability

| Options | | H05 | H07 | H08 | H09 | H10 | H20 | H25 | H30 | H32 | H34 | H36 | H50 | H52 | H70 | HOP |
|------------------------------------|---|-----|------|-----|------|-----|-----|-----|----------------|------|-----|----------------|-----|-----|-----|------|
| Open By-Pass | - | A | NR | A | NR | A | A | Std | A | NR | | A | | | | |
| Restricted By-Pass | B | A | Std | A | Std | A | A | | A | A | Std | A | Std | Std | Std | Std |
| Phenolic Resin | T | A | A | A | A | A | | | A | A | A | A | A | A | A | A |
| Kemglass Liner | G | A | A | A | A | A | | | A | A | A | A | A | A | A | A |
| Stainless Steel Liner | S | A | A | A | A | A | Std | Std | A | A | A | A | A | A | A | A |
| Auxiliary Air Chamber | | OB | | A | | OB | OB | A | OB | | | OB | | | | |
| Adjustable Baffle | A | A | A | A | A | A | A | A | A | A | A | A | | | A | A |
| Single Point Adjustable Baffle | C | A | A | A | A | A | | | A | A | A | A | | | A | A |
| Distillation Rack | D | A | A | A | A | A | | | A | A | A | A | A | A | A | A |
| Fire Extinguisher | E | A | A | A | A | A | | | A | A | A | A | A | A | A | A |
| Additional GFI Receptacles (2) | F | A | A | | | A | A | A | A | A | A | A | | | A | A |
| Front Load Fittings | G | A | A | A | A | A | Std | Std | A | A | A | A | A | A | A | A |
| Pre-Wired / UL Listed | H | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Safety Shield | I | A | | A | | A | A | A | | | | | | | | |
| Vapor Proof Light | K | A | A | A | A | A | A | Std | A | A | A | A | A | A | A | A |
| Explosion Proof Light | L | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Air Alert 600 Alarm (at Top Right) | M | A | A | A | A | A | A | A | A | A | A | A | | | A | A |
| Stainless Steel Deflector Vane | O | A | A | A | A | A | A | A | | | | A | A | | A | |
| Stainless Steel Sash Handle | Q | A | | A | | A | A | A | A | | | A | | | | |
| Additional GFI Receptacle (Right) | R | A | A | | | A | A | A | A | A | A | A | | | A | A |
| Additional GFI Receptacle (Left) | S | A | A | | | A | A | A | A | A | A | A | | | A | A |
| Sight-Tight Chevron Grill | T | OB | OB | OB | OB | OB | OB | A | OB | OB | A | OB | | | | |
| Vision Panel | V | A | A | A | A | A | A | A | A | A | A | A | | | A | Std |
| Air Alert 300 Alarm (location 1) | W | A† | A | A† | Std | A† | A† | A† | A† | A | A | A† | | | A | A |
| Air Alert 300 Alarm (location 2) | Z | A† | A | A† | A | A† | A† | A† | A† | A | A | A† | | | A | A |
| Frameless Tempered Glass Sash | 1 | A | | A | | | A | A | A ⁸ | | | A ⁸ | | | A | |
| Framed Safety Glass Sash | 2 | A | Std* | A | Std* | Std | A | A | A | Std* | Std | A | | | A | Std* |
| Framed Tempered Glass Sash | 3 | A | A* | A | A* | A | A | A | A | A* | A | A | A | A | A | A* |
| St. Steel Safety Glass Sash | 4 | A | A* | A | A* | A | A | A | A | A* | A | A | | | A | A* |
| St. Steel Tempered Glass Sash | 5 | A | A* | A | A* | A | A | A | A | A* | A | A | | | A | A* |
| Tissue Screen | 6 | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Stainless Steel Duct Collar | 7 | A | A | A | A | A | Std | Std | A | A | A | A | A | A | A | A |
| Gravity Sash Stop | 8 | A | A | Std | Std | A | A | A | A | A | | A | | | | A |
| Work Shelf Supports | 9 | | | | | | | | A | A | A | A | | A | | |

A = Option is available.

Std = Option is standard.

NR = Option is available, but Not Recommended.

OB = Option is available on Open By-Pass models only.

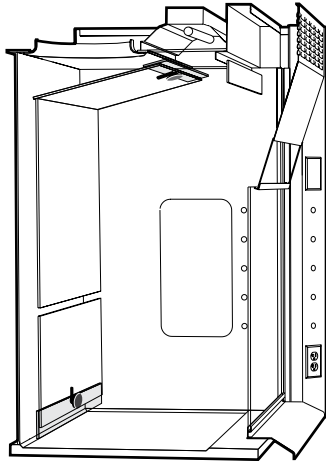
A⁸ = 8 foot Walk-In available with framed sash only.

* = Combination sash available in narrow frame only.

† = Not recommended for use with Auxiliary Air.

Supreme Air Fume Hood Options

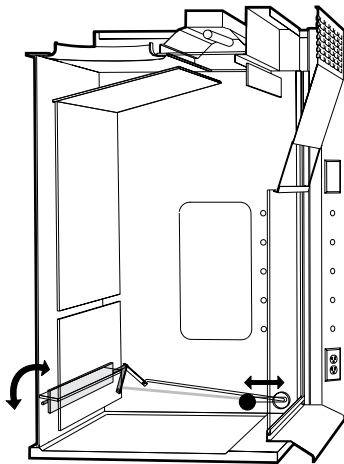
Adjustable Baffles – Option A



Internally adjustable baffles consist of movable baffle strips which can be adjusted by means of two slots and two threaded knobs. By sliding the strips up

or down, the operator can adjust the relative size of the top and bottom slots. The middle slot in the baffle remains fixed.

Single Point Adjustable Baffles – Option C

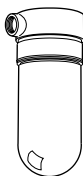


Single point adjustable baffles employ a pivoting baffle strip with an articulating arm, a linkage rod, and a thread knob. By sliding the knob which rides in a slot in the lining near the front

of the hood, the baffle strip is rotated to provide varying degrees of blockage to the bottom slot. This adjustment can be done without disturbing the apparatus within the hood.

Alternate Lighting

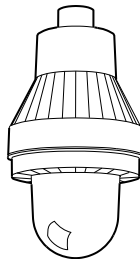
Option K Vapor Proof Incandescent Light



0750-0S (150 watt)

(Type A21, 150W, E26 base. Bulb not included)

Option L Explosion Proof Incandescent Light



0753-00 (150 watt)

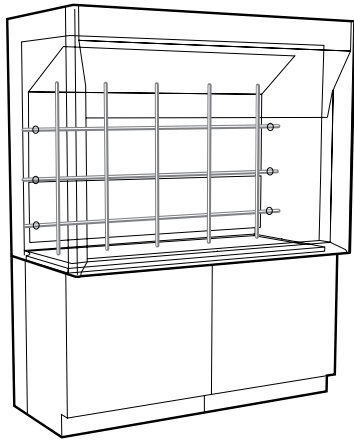
(Type A21, 150W, E26 base. Bulb not included)

Meets NEC Classifications:

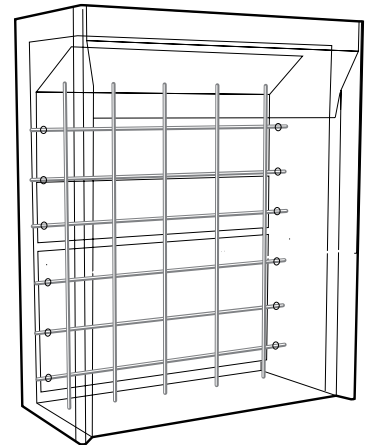
Class 1, Division 1 & 2, Group C & D
Class 2, Division 1 & 2, Group E, F, & G
Class 3

Supreme Air Fume Hood Options

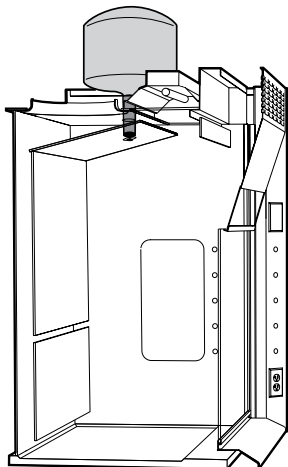
Distillation Racks - Option D



Supreme Air Fume Hoods may be furnished with a lattice style distillation rack. The rack consists of vertical and horizontal 1/2" diameter Duralumin rods. The rods are fastened with rod clamps to form a lattice of approximate 12" squares. Bench hoods have three horizontal rods, while walk-in and distillation hoods have six.



Fire Extinguisher - Option E



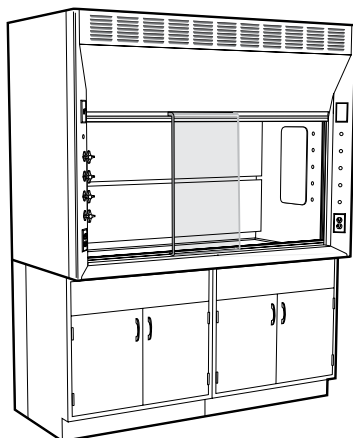
Supreme Air Fume Hoods may be fitted with a Fire Extinguisher System to control runaway experiments and the hazards of fire. At the heart of the system are multiple ABC dry chemical fire extinguisher, vertically mounted in the top of the fume hood for complete coverage. The extinguishers are fully self-contained and may be easily removed for maintenance and recharging.

Each fire extinguisher is equipped with a bright stainless steel, five pound

capacity, canister; a pressure gauge for easy status checking, a patented valve and delivery nozzle, and a 165° F fusible link for automatic fire containment.

To ensure complete coverage, four foot, five foot, and six foot long fume hoods are furnished with two extinguishers mounted on opposite sides of the duct collar. Eight foot long hoods are furnished with three extinguishers, one at each end, and one in the middle.

Sliding Safety Shield - Option I

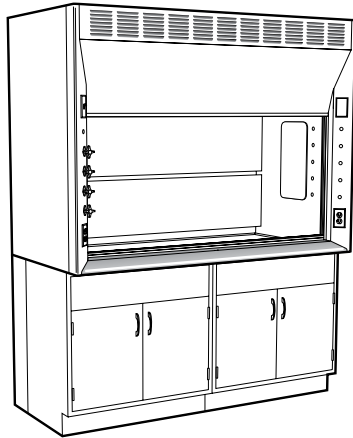


Supreme Air Bench Fume Hoods may be furnished with a polycarbonate safety shield designed to provide protection to fume hood users from small explosions, splattering of chemicals, breaking glass, etc. Designed to be used on Vertical Rising Sash Bench Hoods only, this 12" wide x 1/4" thick shield slides the full length of the hood face opening on ball

bearing rollers suspended from a track at the top of the sash opening, with a guide at the bottom to keep the shield from swinging. When the shield is not in use, it can be easily removed from the upper track and stored until it is needed again for safety purposes.

Supreme Air Fume Hood Options

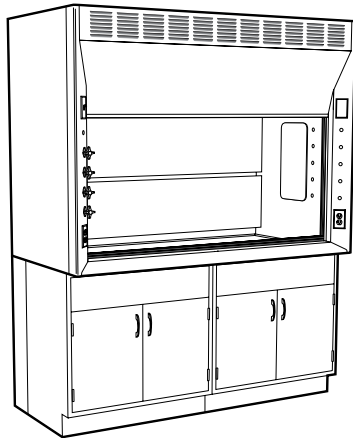
Stainless Steel Lower Deflector Vane - Option O



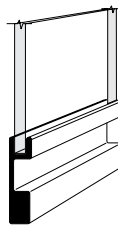
The standard painted cold rolled steel Lower Deflector Vane on bench and distillation Supreme Air fume hoods may be optionally replaced with stainless steel. Stainless steel offers improved

scratch and abrasion resistance. Fabricated of 12 gauge, type 304 stainless steel, the deflector vane is furnished with a No. 4 finish.

Stainless Steel Sash Handle - Option Q

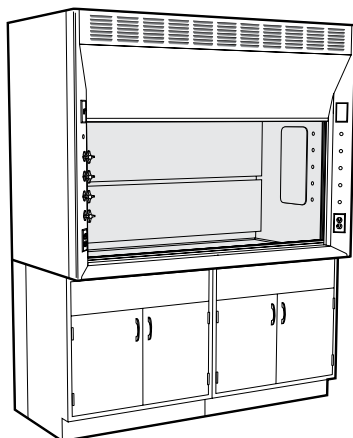


The standard painted aluminum sash handle may be replaced with a type 304 stainless steel sash handle.



Sash Handle Profile

Sash Frame and Glass Options



Standard Supreme Air fume hoods are fitted with frameless sashes of 1/4" laminated safety glass. Optionally, as the chart below indicates, these hoods may be furnished with framed sashes

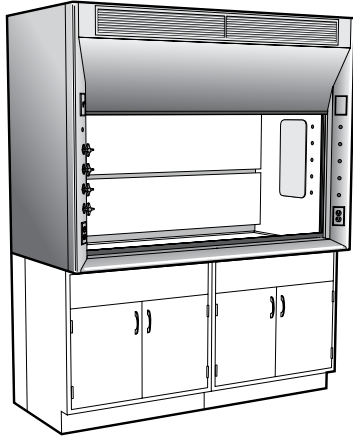
of either painted cold rolled steel or stainless steel. In addition, all sashes may be fitted with 1/4" tempered glass instead of laminated safety glass.

| Option | Sash Frame | Sash Glass |
|-------------------|-----------------|------------------|
| Standard | Frameless | Laminated Safety |
| Option 1 | Frameless | Tempered |
| Option 2 * | Painted CRS | Laminated Safety |
| Option 3 | Painted CRS | Tempered |
| Option 4 | Stainless Steel | Laminated Safety |
| Option 5 | Stainless Steel | Tempered |

* Painted CRS sash frames are standard on: H07, H09, H10, H32, H34, H50, H52, and HOP hoods

Supreme Air Fume Hood Options

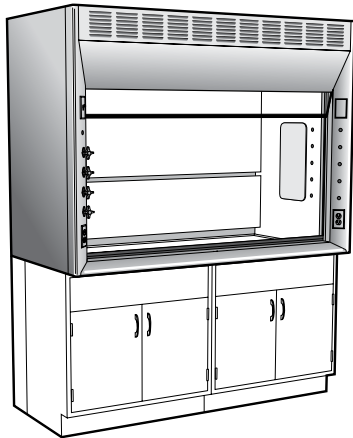
Sight-Tight Chevron Grille – Option T



The standard louvered top front panel on all Open By-Pass Supreme Air Fume Hoods may be replaced with an optional top front panel that contains a Sight-Tight Chevron Grille. The unique chevron shape of the grille vanes adds protection to the user from flying debris from within the hood.

Fabricated of aluminum, the Sight-Tight Grille is finished to match the hood. The Sight-Tight Grille option may be used in conjunction with the Vision Panel option.

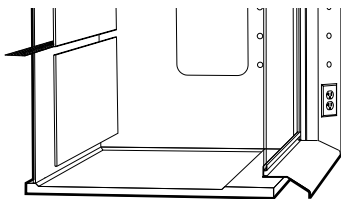
Vision Panel – Option V



The standard louvered top front panel on all Supreme Air Fume Hoods may be replaced with an optional top front panel that contains a transparent Vision Panel. The tinted acrylic Vision Panel offers added convenience by allowing the hood operator a clear view to the entire interior of the hood without bending down or placing their head inside the hood. The Vision Panel option may be used in conjunction with the Sight-Tight Grille option.



Tissue Screen – Option 6



The optional Tissue Screen protects the back baffle area just above the safety slot on both bench and walk-in fume hoods. Fabricated of perforated stainless steel, the screen blocks tissue and other light material from being swept up behind the upper baffle and into the exhaust system.

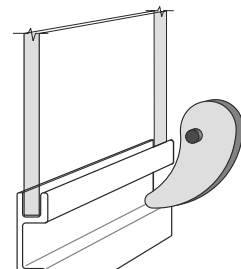
Stainless Collar – Option 7



A Stainless Steel Duct Collar may be specified on any Supreme Air fume hood instead of the standard polyethylene collar. (Type 316 Stainless Steel)

Note: H20 Isotope Bench Hoods, H25 Perchloric Acid Bench Hoods, and all other stainless steel lined hoods are furnished standard with stainless steel collars.

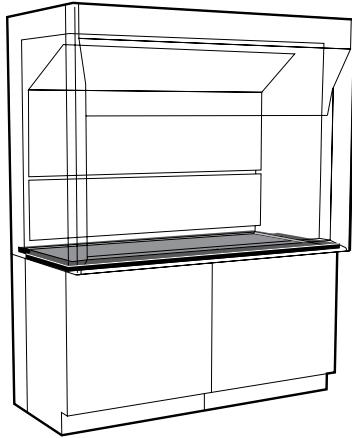
Gravity Sash Stop – Option 8



As an energy conservation or safety measure, a Sash Stop may be added to any hood with a vertically rising sash. It may be mounted at any distance above the lower deflector vane to keep the sash from rising past that point. When needed the stop may be pivoted out of the way. Contact your Kewaunee representative for CFM data at various sized openings.

Supreme Air Fume Hood Worksurfaces

Work Top for Bench Hoods and Distillation Hoods



Supreme Air Bench Hoods and Distillation Hoods require a Work Top that may be either Kemresin or Stainless Steel. Only Isotope and Perchloric Acid hoods have the Work Top as part of their standard part number. Work Tops for all other bench hoods must be specified separately. Work Tops are dished $\frac{3}{8}$ " to retain spillage and

incorporate a 6" wide safety rim at the front. They may include cutouts for cupsinks, sinks, steam baths, hot plates fixtures, vent pipes or other apparatus as specified. Kemresin Tops are furnished with a cupsink cutout only; Stainless Steel Tops include an integrally welded cupsink as listed below.

| Worktops for H05 – H07 H10 – H70 Bench H-36 Distillation Fume Hoods | Overall | Kemresin | Type 304 Stainless Steel | Type 316 Stainless Steel |
|--|-----------------------|-------------------|-----------------------------|-----------------------------|
| | Hood Length | | | |
| | 4'-0" / 48" | 019243-48R | 019244-48S | 019244-48L |
| | 5'-0" / 60" | 019243-60R | 019244-60S | 019244-60L |
| | 6'-0" / 72" | 019243-72R | 019244-72S | 019244-72L |
| | 8'-0" / 96" | 019243-96R | 019244-96S | 019244-96L |
| | 10'-0" / 120" | 019243-20R | 019244-20S | 019244-20L |
| | 12'-0" / 144" | 019243-44R | 019244-44S | 019244-44L |
| | Standard | 0491 (3" x 6") | 0950 (5" Dia.) | 0951 (5" Dia.) |
| | Cupsink Cutout | Cupsink Cutout | St. Steel Cupsink | St. Steel Cupsink |
| | Location | Left Rear | Left Rear | Left Rear |

| Worktops for H08 – H09 ADA Bench Fume Hoods | Overall | Kemresin | Type 304 Stainless Steel | Type 316 Stainless Steel |
|---|-----------------------|-------------------|-----------------------------|-----------------------------|
| | Hood Length | | | |
| | 4'-0" / 48" | 020126-48R | 020127-48S | 020127-48L |
| | 5'-0" / 60" | 020126-60R | 020127-60S | 020127-60L |
| | 6'-0" / 72" | 020126-72R | 020127-72S | 020127-72L |
| | Standard | 0491 (3" x 6") | 0950 (5" Dia.) | 0950 (5" Dia.) |
| | Cupsink Cutout | Cupsink Cutout | St. Steel Cupsink | St. Steel Cupsink |
| | Location | Left Front | Left Front | Left Front |

| Worktops for H50 Dynamic Barrier Bench Fume Hoods | Overall | Kemresin | Type 304 Stainless Steel | Type 316 Stainless Steel |
|---|-----------------------|-------------------|-----------------------------|-----------------------------|
| | Hood Length | | | |
| | 4'-0" / 48" | 020009-48R | 020010-48S | 020010-48L |
| | 5'-0" / 60" | 020009-60R | 020010-60S | 020010-60L |
| | 6'-0" / 72" | 020009-72R | 020010-72S | 020010-72L |
| | 8'-0" / 96" | 020009-96R | 020010-96S | 020010-96L |
| | 10'-0" / 120" | 020009-20R | 020010-20S | 020010-20L |
| | 12'-0" / 144" | 020009-44R | 020010-44S | 020010-44L |
| | Standard | 0491 (3" x 6") | 0950 (5" Dia.) | 0950 (5" Dia.) |
| | Cupsink Cutout | Cupsink Cutout | St. Steel Cupsink | St. Steel Cupsink |
| | Location | Left Rear | Left Rear | Left Rear |

| Worktops for HOPEC Style Bench FumeHoods | Overall | Kemresin | Type 304 Stainless Steel | Type 316 Stainless Steel |
|--|-----------------------|-------------------|-----------------------------|-----------------------------|
| | Hood Length | | | |
| | 4'-0" / 48" | 020128-48R | 020129-48S | 020129-48L |
| | 5'-0" / 60" | 020128-60R | 020129-60S | 020129-60L |
| | 6'-0" / 72" | 020128-72R | 020129-72S | 020129-72L |
| | 8'-0" / 96" | 020128-96R | 020129-96S | 020129-96L |
| | Standard | 0491 (3" x 6") | 0950 (5" Dia.) | 0950 (5" Dia.) |
| | Cupsink Cutout | Cupsink Cutout | St. Steel Cupsink | St. Steel Cupsink |
| | Location | Left Rear | Left Rear | Left Rear |

Kemresin Color Option

Kemresin Worksurfaces may be specified in one of four colors:

- BK** = Black
- GR** = Grey
- PT** = Putty
- SL** = Slate

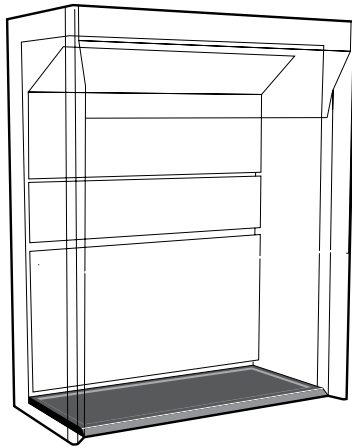
Place the letter code at the end of the part number to specify the color.

Example: 019243-48RBK for Black

If no color is specified, worksurface will be furnished in Black

Supreme Air Fume Hood Worksurfaces

Optional Work Floor for Walk-In Hoods



Supreme Air Walk-In Fume Hoods may be fitted with an Optional Work Floor for added protection to the laboratory floor. Available in either Kemresin or stainless steel, the Work Floor is fabricated with a beveled front safety rim to retain spills

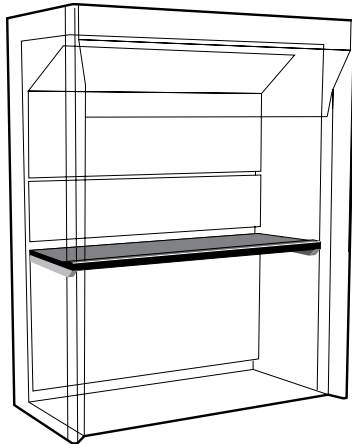
and facilitate rolling carts into the hood.

Work Floors may include cutouts for drain outlets or other apparatus when specified.

| Worktops for H30 - H32 & H52 Walk-in Fume Hoods with Vertical Rising Sash | Overall Hood Length | Kemresin | Type 304 Stainless Steel |
|--|---------------------|-------------------|--------------------------|
| | 4'-0" / 48" | 019250-48R | 019251-48S |
| 5'-0" / 60" | 019250-60R | 019251-60S | |
| 6'-0" / 72" | 019250-72R | 019251-72S | |
| 8'-0" / 96" | 019250-96R | 019251-96S | |
| Standard Cutout/Cupsink Location | None | None | |

| Worktops for H34 Walk-in Fume Hoods with Horizontal Sash | Overall Hood Length | Kemresin | Type 304 Stainless Steel |
|---|---------------------|-------------------|--------------------------|
| | 6'-0" / 72" | 019248-72R | 019249-72S |
| 8'-0" / 96" | 019248-96R | 019249-96S | |
| 10'-0" / 120" | 019248-20R | 019249-20S | |
| Standard Cutout/Cupsink Location | None | None | |

Optional Removable Work Shelf for Walk-In and Distillation Hoods



Supreme Air Walk-In and Distillation Fume Hoods may be fitted with a removable Work Shelf mounted at 36⁵/₁₆" above the floor. Available in either Kemresin or stainless steel, the Work Shelf is provided with a front safety rim to minimize spills.

when clearance is required at the front of the hood.

Work Shelves may include cutouts when specified but should not include cupsinks or drains, as the shelf is removable.

Work Shelves are available either 18" or 24" deep. 18" deep shelves may be used in conjunction with distillation racks, or

Fume hoods with Removable Work Shelves must be specified with Option 9 to include the shelf support.

| 18" Deep Optional Work Shelf for Walk-in & Distillation Fume Hoods | Overall Hood Length | Kemresin | Type 304 Stainless Steel |
|---|---------------------|-------------------|--------------------------|
| | 4'-0" / 48" | 019241-48R | 019242-48S |
| 5'-0" / 60" | 019241-60R | 019242-60S | |
| 6'-0" / 72" | 019241-72R | 019242-72S | |
| Standard Cutout/Cupsink Location | None | None | |

| 24" Deep Optional Work Shelf for Walk-in & Distillation Fume Hoods | Overall Hood Length | Kemresin | Type 304 Stainless Steel |
|---|---------------------|-------------------|--------------------------|
| | 4'-0" / 48" | 020130-48R | 020131-48S |
| 5'-0" / 60" | 020130-60R | 020131-60S | |
| 6'-0" / 72" | 020130-72R | 020131-72S | |
| Standard Cutout/Cupsink Location | None | None | |

Kemresin Color Option

Kemresin Worksurfaces may be specified in one of four colors:

- BK** = Black
- GR** = Grey
- PT** = Putty
- SL** = Slate

Place the letter code at the end of the part number to specify the color.

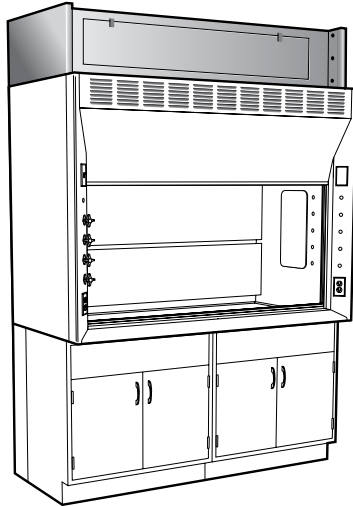
Example: 019243-48RBK for Black

If no color is specified, worksurface will be furnished in Black

Contact Factory for Work Shelves for Hoods over 72" long.

Hood Enclosures, Trim & Finished Backs

Fume Hood Ceiling Enclosures



Fume Hood Ceiling Enclosures are designed to fill the space between the top of the hood and the ceiling to provide a finished appearance. They are available in three sizes: 9¼" High for ceilings 8 foot and lower, and 13" or 21¼" high, for ceilings up to 9 feet high. The

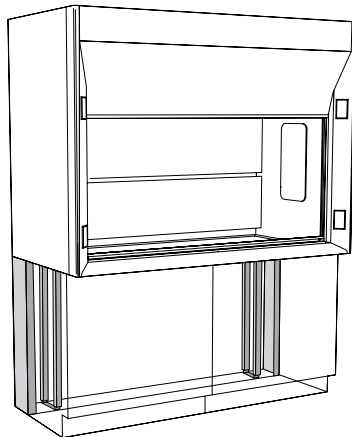
13" and 21¼" enclosures are provided with an Access Panel in the front for easy access to the light fixture. The front panel is mounted behind the sash to allow the hood by-pass to remain open to the room.

Supreme Air Enclosures

| 9¼" High w/o Access | 13" High w/Access | 21¼" High w/Access |
|------------------------|----------------------|-----------------------|
| 019012-10 | 020451-48 | 020452-48 |
| 019013-10 | 020451-60 | 020452-60 |
| 019014-10 | 020451-72 | 020452-72 |
| 019015-10 | 020451-96 | 020452-96 |
| 019016-10 | 020451-20 | 020452-20 |
| 019018-10 | 020451-44 | 020452-44 |

Supreme Air Enclosure Finished Backs

| 9¼" High | 13" High | 21¼" High |
|--------------------|--------------------|--------------------|
| 030201-0948 | 030201-1348 | 030201-2148 |
| 030201-0960 | 030201-1360 | 030201-2160 |
| 030201-0972 | 030201-1372 | 030201-2172 |
| 030201-0996 | 030201-1396 | 030201-2196 |



Base Cabinet Rear Filler

To close opening between wall and rear of fume hood base cabinet.

Steel Rear Filler

BRSM370008-0000
BRSM340008-0000

Height
35¾"
33"

Wood Rear Filler

X-WP0836-00_0

36"

Kemstruts

Floor mounted support to provide stability to rear overhang of fume hood tops and provides mounting struts for plumbing and electrical service lines. Adjustable in height and 7⅞" deep to fit 8" deep plumbing chase.

Kemstrut

K12-3608-0A
K12-3308-0A

Height

36"
33"

Fume Hood Finished Backs

Fume Hood Finished Backs are designed to enclose the back of the fume hood when it is exposed to view.

| Supreme Air Bench Fume Hood 54" High | Supreme Air Walk-In Fume Hood 90" High | Dynamic Barrier Bench Fume Hood 54" High | Dynamic Barrier Walk-In Fume Hood 90" High | |
|--|--|--|--|-------|
| 019973 | 019977 | 020608-48 | 020609-48 | 48" L |
| 019974 | 019978 | 020608-60 | 020609-60 | 60" L |
| 019975 | 019979 | 020608-72 | 020609-72 | 72" L |
| | | | | 84" L |
| 019976 | 019980 | 020608-96 | 020609-96 | 96" L |

Pre-Wired and Pre-Piped

Specifications:

Pre-Wired — All Supreme Air Fume Hoods may be Pre-Wired at the factory. Pre-Wired hoods are wired using flexible metallic conduit to a single junction box located at the top of the hood for a single point connection at the job site. UL listing is available on standard pre-wired configurations. Contact Kewaunee's Engineering Department for non-standard electrical requirements.

Option H must be selected for fume hoods to be UL 61010A-1 listed.

Pre-Piped — In addition all Supreme Air Fume Hoods may Pre-Piped at the factory when pre-piped fittings are selected. Piping is routed to the rear of the hood, in the side of the hood that the fittings are mounted. (If fittings are mounted in both ends, there are two connection points.) Piping may be routed either to the top or bottom of the

hood as specified.

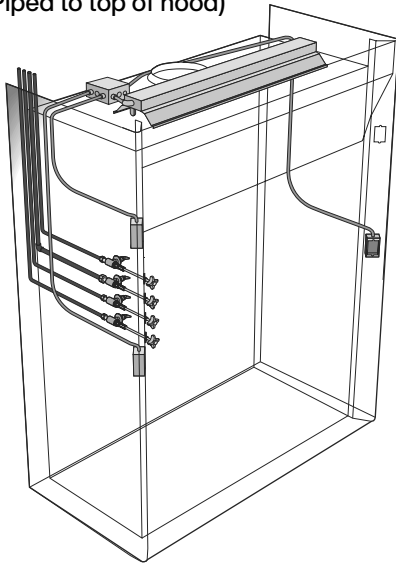
Standard 3/8" Piping Materials

| | | |
|----------|---|--------------------------|
| Water | — | Hard Drawn Type L Copper |
| Gas | — | Black Steel |
| Vacuum | — | Hard Drawn Type L Copper |
| Air | — | Hard Drawn Type L Copper |
| DI Water | — | PVC |
| Other | — | Hard Drawn Type L Copper |

(Copper connections made with lead free solder, black steel connections are threaded)

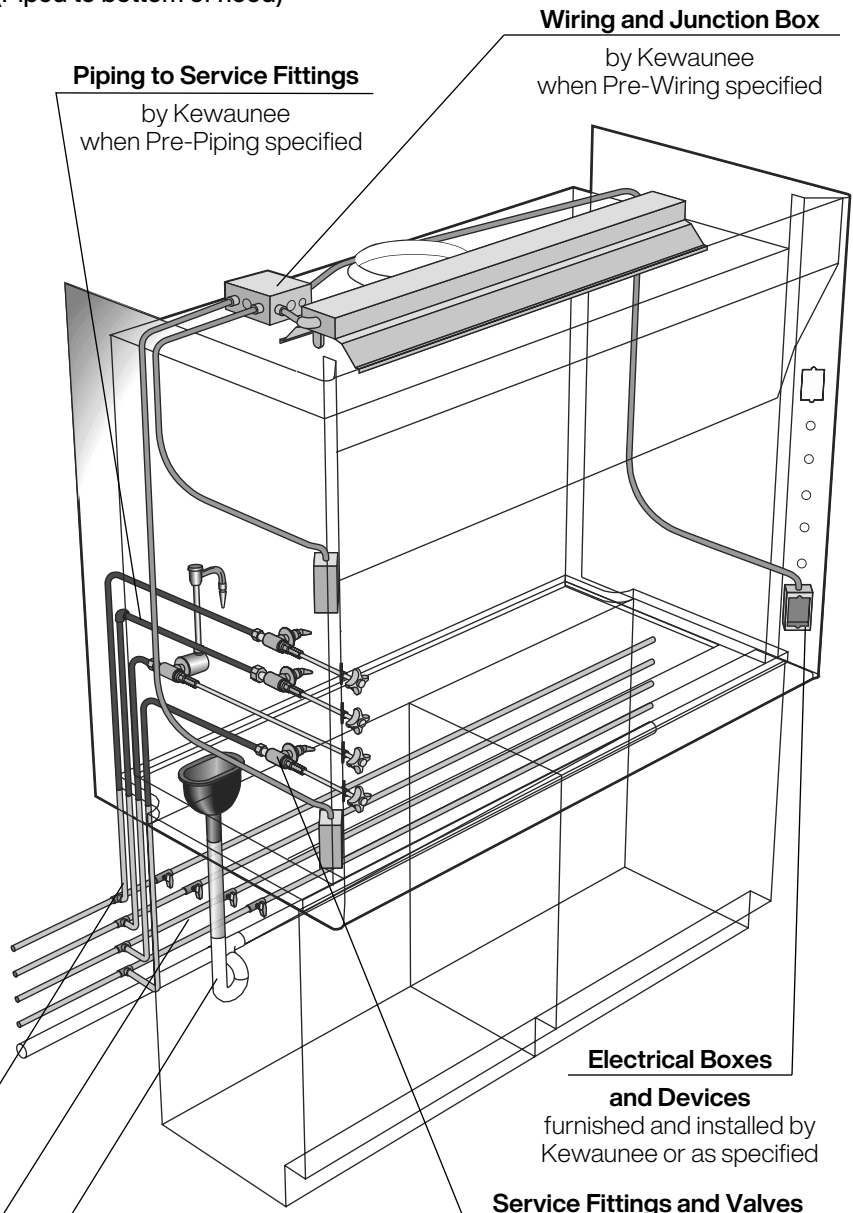
Typical Walk-In Hood

(Piped to top of hood)



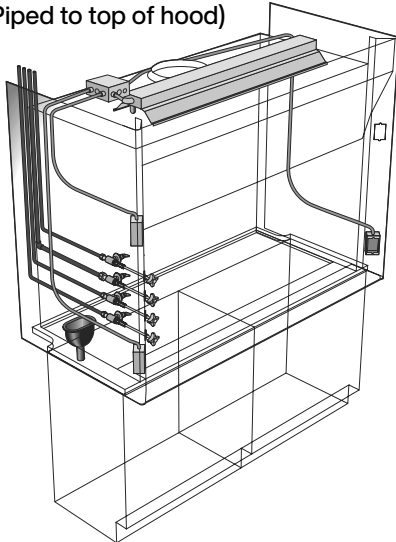
Typical Fume Hood with Plumbing & Wiring Connections

(Piped to bottom of hood)



Typical Bench Hood

(Piped to top of hood)



Final Connection

supplied and connected by others

Supply Lines with shut-off valves

supplied and connected by others

Waste Line - Trap - Tailpiece

supplied and installed by others

Service Fittings and Valves

furnished and installed by Kewaunee or as specified (typical for both sides of hood)

Sinks and Cupsinks

Cupsinks



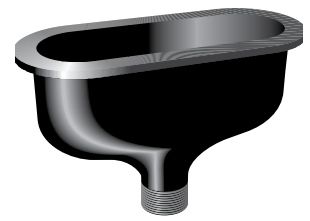
0499-BP Black Poly
0499-GP Grey Poly
0499-SP Slate Poly
Complete with integral strainer, 12" horizontal tail-piece, and 90° elbow with 1/2" IPS male straight thread outlet. Cupsink inside dimension, 5 1/2" x 3 1/2". (Overall height is 7", tailpiece and elbow not illustrated)



0490-BE Black Epoxy
0490-GE Grey Epoxy
0490-PE Putty Epoxy
0490-SE Slate Epoxy
Complete with removable strainer. 6" x 3" inside dimension. 1/2" IPS male straight thread outlet. (Overall height is 7 1/2")

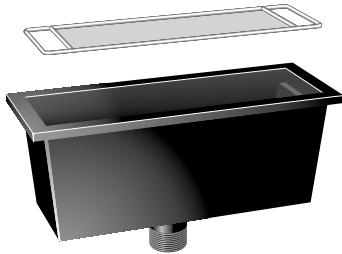


0491-BP Black Poly
0491-GP Grey Poly
Complete with removable strainer. 6" x 3" inside dimension. 1/2" IPS male straight thread outlet. (Overall height is 8 1/2")



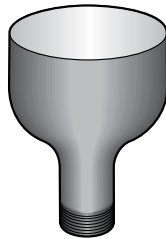
0492-BP Black Poly
Complete with removable strainer. 9" x 3" inside dimension. 1/2" IPS male straight thread outlet. (Overall height is 7")

Rectangular Cupsink



0493-BE Black Epoxy
0493-GE Grey Epoxy
0493-PE Putty Epoxy
0493-SE Slate Epoxy
Complete with gasket and removable type 316 stainless steel wire screen. 13 3/8" x 4 1/8" x 5 1/4" I.D. 1/2" IPS male straight thread outlet. (Overall height is 8")

Stainless Steel Cupsinks



0950-00 Stainless Steel
Made of type 304 stainless steel and has integral cross bars. 5" I.D. 1/2" IPS male straight thread outlet. Designed to be welded into stainless steel tops.

0951-00 Stainless Steel
Same as 0950-00 except made of type 316 stainless steel.

Side Mounted Cupsink



0476-BP Black Poly
Molded of black polyolefin resins. Complete with 90° union elbow. Designed to be mounted in a vertical panel not over 1/4" thick. 6" x 3" inside dimension. 1/2" IPS male straight thread outlet.

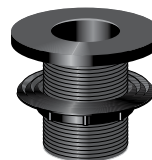
Epoxy Resin Tub Sinks



Tub sinks are one piece molded of modified epoxy resins and cured at high temperatures for maximum chemical, impact, and thermal shock resistance. All inside corners are covered and the bottom is pitched to the drain cutout. All dimensions are inside.

| Cat. No. | L | H | W |
|----------------|-----|----------|--------|
| 1000-00 | 14" | 6" | 10" |
| 1001-00 | 16" | 7" | 8" |
| 1003-00 | 18" | 11 3/16" | 15" |
| 1005-00 | 25" | 10" | 15" |
| 1006-00 | 18" | 8" | 15" |
| 1007-00 | 24" | 8" | 16" |
| 1011-00 | 18" | 6" | 6 1/2" |
| 1021-00 | 16" | 7 1/2" | 16" |

Sink Outlet



0482-BP Black Poly
0482-GP Grey Poly
Complete with locknut. 1/2" IPS male straight thread outlet. For use with epoxy resin tub sinks and troughs.

Sink Overflow



0494BP-04 4" High
0494BP-06 6" High
0494BP-08 8" High
0494BP-10 10" High
Sink Overflows are designed to be used with 0482-BP sink outlets. 1/2" diameter.

Fume Hood Service Fittings

Specifications:

All Supreme Air Fume Hood Fittings include brass valve with replaceable seat, Nylon color-coded panel flange with angle serrated hose connector, or gooseneck with sepia bronze finish, plastic color-coded four arm handle, and tank nipple, locknut, and washer. Standard fittings also include remote control rod assembly and black plastic angle flange. They may be used on either side of the hood in any location. (They can not be used on Isotope or Perchloric Acid hoods.) Gooseneck fittings are available with either long or short rod handles for either front or rear fixture locations.

Fitting Part Number Options:

Part Numbers shown below indicate the fittings will be installed in the hood at the factory. If the fittings are to be Pre-Piped, the **-I** at the end of the part number must be replaced by **-P**. If the fittings need to be shipped loose, omit the **-I** from the part number.

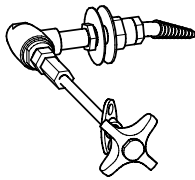
Fittings for services not listed may be specified by replacing the service indicator letter at the end of the part number with a **0** and specifying the service required.

See page 52 for pre-piping option.

Service Fitting Color Codes:

| | |
|-----------------------|-------------|
| Air | Orange |
| Cold Water | Dark Green |
| Distilled Water | White |
| Gas | Dark Blue |
| Hot Water | Red |
| Hydrogen | Pink |
| Nitrogen | Brown |
| Oxygen | Light Green |
| Special Gases | Light Blue |
| Steam | Black |
| Vacuum | Yellow |

Remote Control Needle Valve Fittings

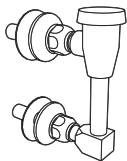


Panel Flange with Angle Serrated Hose Connector

- W-0860-3A-I** Air
- W-0860-3G-I** Gas
- W-0860-3N-I** Nitrogen
- W-0860-3V-I** Vacuum
- W-0861-3S-I *** Steam
- W-0861-3W-I** Cold Water
- W-0862-3D-I** Distilled Water

12 1/2" Long Handle

* Sepia bronze flange and connector



Vacuum Breaker Assembly

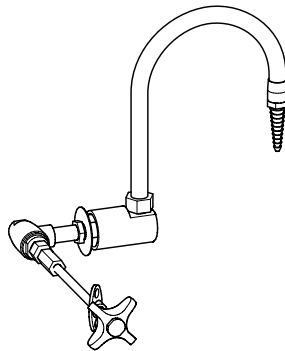
for elevated mounting in top front panel of fume hood

H0112-P Assembly
3/8" I.P.S inlet and outlet, includes brass nipples, locknuts, and washers.

Vacuum Breaker (not pictured)

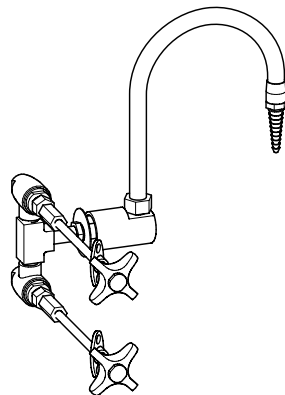
for elevated mounting in side wall of fume hood

W-0539-00-I Vacuum Breaker only
3/8" I.P.S inlet and outlet



Water Valve Gooseneck

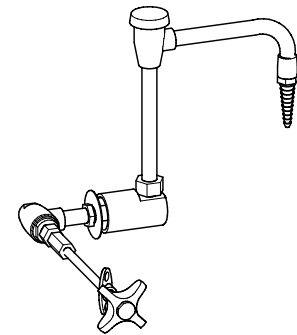
- W-0864-3W-I** 27 3/4" Long Handle
- W-0864-3WA-I** 12 1/2" Long Handle



Mixing Valve Gooseneck

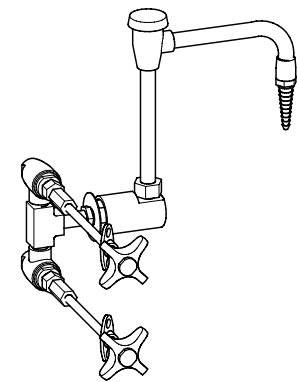
- W-0868-3W-I** 27 3/4" Long Handle
- W-0868-3WA-I** 12 1/2" Long Handle

(occupies two fitting holes)



Water Valve Gooseneck with Vacuum Breaker

- W-0864-3WV-I** 27 3/4" Long Handle
- W-0864-3WVA-I** 12 1/2" Long Handle



Mixing Valve Gooseneck with Vacuum Breaker

- W-0868-3WV-I** 27 3/4" Long Handle
- W-0868-3WVA-I** 12 1/2" Long Handle

(occupies two fitting holes)

Fume Hood Service Fittings

Specifications:

Supreme Air Fume Hood Ball Valve Fittings include brass valve, Nylon color-coded panel flange with angle serrated hose connector, or gooseneck with sepia bronze finish, chrome-plated lever handle with on-off label, and tank nipple, locknut, and washer. Fittings also include remote control rod assembly and black plastic angle flange. They must be ordered for either right or left hand mounting. (They can not be used on Isotope or Perchloric Acid hoods.) Gooseneck fittings are available with either long or short rod handles for either front or rear fixture locations.

Fitting Part Number Options:

Part Numbers shown below indicate the fittings will be installed in the hood at the factory. If the fittings are to be Pre-Piped, the **-I** at the end of the part number must be replaced by **-P**. If the fittings need to be shipped loose, omit the **-I** from the part number.

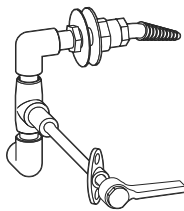
Fittings for services not listed may be specified by replacing the service indicator letter at the end of the part number with a **0** and specifying the service required.

See page 52 for pre-piping option.

Service Fitting Color Codes:

| | |
|-----------------------|-------------|
| Air | Orange |
| Cold Water | Dark Green |
| Distilled Water | White |
| Gas | Dark Blue |
| Hot Water | Red |
| Hydrogen | Pink |
| Nitrogen | Brown |
| Oxygen | Light Green |
| Special Gases | Light Blue |
| Steam | Black |
| Vacuum | Yellow |

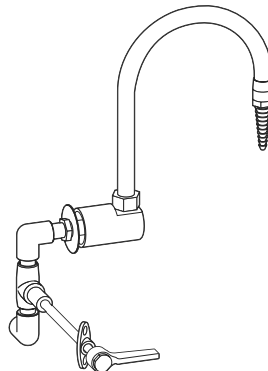
Remote Control Ball Valve Fittings — Left Hand Mounting



Panel Flange with Angle Serrated Hose Connector

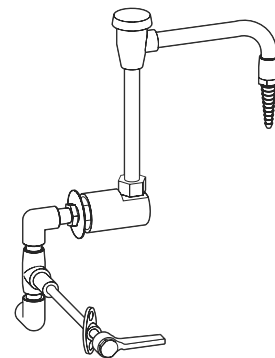
- W-4285-L-3A-I** Air
- W-4285-L-3G-I** Gas
- W-4285-L-3N-I** Nitrogen
- W-4285-L-3V-I** Vacuum
- W-4285-L-3W-I** Cold Water

12½" Long Handle



Water Valve Gooseneck

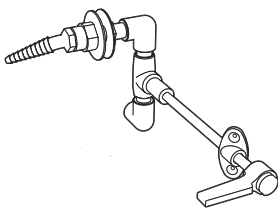
- W-4285-L-3GW-I** 27¾" L. Handle
- W-4285-L-3GWA-I** 12½" L. Handle



Water Valve Gooseneck with Vacuum Breaker

- W-4285-L-3GVW-I** 27¾" L. Handle
- W-4285-L-3GVWA-I** 12½" L. Handle

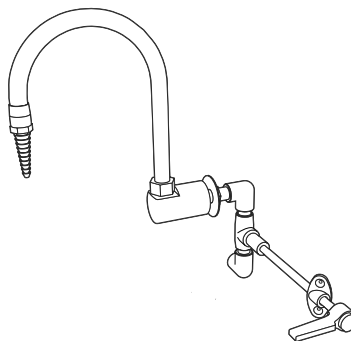
Remote Control Ball Valve Fittings — Right Hand Mounting



Panel Flange with Angle Serrated Hose Connector

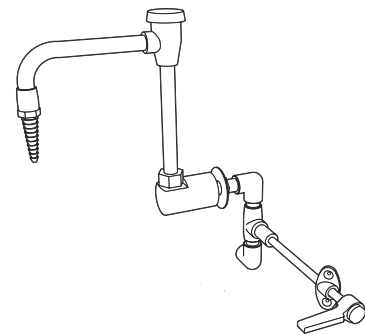
- W-4285-R-3A-I** Air
- W-4285-R-3G-I** Gas
- W-4285-R-3N-I** Nitrogen
- W-4285-R-3V-I** Vacuum
- W-4285-R-3W-I** Cold Water

12½" Long Handle



Water Valve Gooseneck

- W-4285-R-3GW-I** 27¾" L. Handle
- W-4285-R-3GWA-I** 12½" L. Handle



Water Valve Gooseneck with Vacuum Breaker

- W-4285-R-3GVW-I** 27¾" L. Handle
- W-4285-R-3GVWA-I** 12½" L. Handle

Fume Hood Service Fittings

Specifications:

Front Load Remote Control Fittings are ideal for hoods where space is tight or high levels of maintenance are expected, as they can be accessed from outside the hood at the front. They are used standard on Isotope and Perchloric Acid hoods, but may be specified as an option on all hoods by adding **Option G**. They must be ordered for use on either the left or right side of the hood. Front Load Fittings include brass valve with replaceable seat, Nylon color-coded panel flange with angle serrated hose connector, or gooseneck with sepia bronze finish, plastic color-coded four

arm handle, and tank nipple, locknut, and washer. They include the piping from the valve to the panel flange or gooseneck tank nipple when they are installed in the hood at the factory.

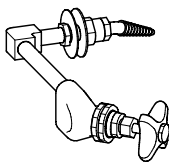
Fitting Part Number Options:

Part Numbers shown below indicate the fittings will be installed in the hood at the factory. If the fittings are to be Pre-Piped, the **-I** at the end of the part number must be replaced by **-P**. If the fittings need to be shipped loose, omit the **-I** from the part number.

Fittings for services not listed may be specified by replacing the service indicator letters at the end of the part number with a **O** and specifying the service required.

See page 52 for pre-piping option.

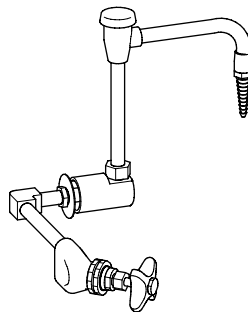
Front Load Remote Control Needle Valve Fittings — Left Hand Mounting



Nylon Panel Flange with Angle Hose Connector

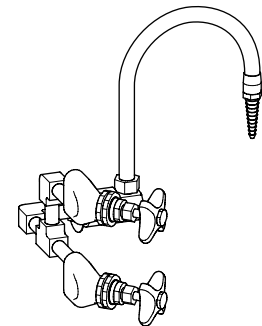
| | |
|------------------------|-----------------|
| W-0739-L-AIR-I | Air |
| W-0739-L-GAS-I | Gas |
| W-0739-L-NIT-I | Nitrogen |
| W-0739-L-VAC-I | Vacuum |
| W-0739-L-STM-I* | Steam |
| W-0739-L-CW-I | Cold Water |
| W-0739-L-FD-I | Distilled Water |

* Sepia bronze flange and hose tip



Water Valve Gooseneck

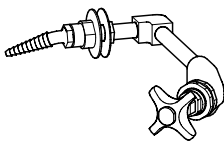
| | |
|-------------------------|--------------------------------|
| W-0740-L-CW-I | Cold Water |
| W-0740-L-CW-VB-I | Cold Water with Vacuum Breaker |



Mixing Valve Gooseneck

| | |
|--------------------------|-------------------------------|
| W-0740-L-HCW-I | H&C Water |
| W-0740-L-HCW-VB-I | H&C Water with Vacuum Breaker |

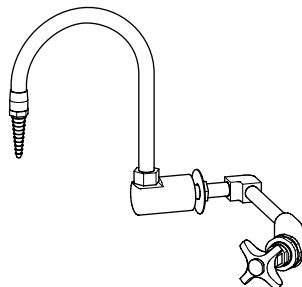
Front Load Remote Control Needle Valve Fittings — Right Hand Mounting



Nylon Panel Flange with Angle Hose Connector

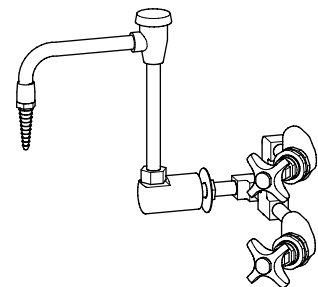
| | |
|------------------------|-----------------|
| W-0739-R-AIR-I | Air |
| W-0739-R-GAS-I | Gas |
| W-0739-R-NIT-I | Nitrogen |
| W-0739-R-VAC-I | Vacuum |
| W-0739-R-STM-I* | Steam |
| W-0739-R-CW-I | Cold Water |
| W-0739-R-FD-I | Distilled Water |

* Sepia bronze flange and hose tip



Water Valve Gooseneck

| | |
|-------------------------|--------------------------------|
| W-0740-R-CW-I | Cold Water |
| W-0740-R-CW-VB-I | Cold Water with Vacuum Breaker |



Mixing Valve Gooseneck

| | |
|--------------------------|-------------------------------|
| W-0740-R-HCW-I | H&C Water |
| W-0740-R-HCW-VB-I | H&C Water with Vacuum Breaker |

Fume Hood Electrical Fixtures

Specifications:

All Electrical Fixtures except the fan switch are complete with 2 1/2" deep steel electrical box, stainless steel face plate, and a 3-wire polarized grounding device, ivory in color. The fan switch is furnished with a specially sized 2" deep cast aluminum electrical box, stainless steel face plate, and motor rated starter switch, grey in color. Single gang receptacles and switches may be mounted in the fume hood vertical

fascia. Double gang fittings and the Powerstat variable power controller must be mounted in the base cabinet below.

Fixture Part Number Options:

Part Numbers shown below indicate the fittings will be installed in the hood at the factory. If the fixtures are to be Pre-Wired, the **-I** at the end of the part number must be replaced by **-P** and the

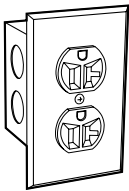
H-Option added to the hood.

If the fixtures need to be shipped loose, omit the **-I** from the part number.

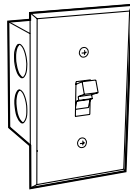
Option H must be selected for fume hoods to be UL 61010A-1 listed.

See page 52 for pre-wiring option.

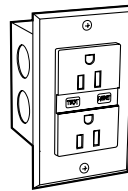
Electrical Fixtures for mounting in Supreme Air Fume Hoods and Base Cabinets



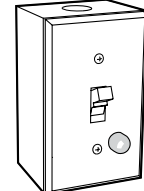
0581-1V-I 120 volt AC, specification grade, 20 amp, single duplex, receptacle.



0655-1V-I Toggle Switch single pole, 120/240 volt AC, 20 amp.



0656-1V-I *120 Volt GFI specification grade, 20 amp, ground fault protected, single duplex receptacle.



0695-1S-I Fan Switch Motor rated starter switch with pilot light mounted in a single gang receptacle box complete with face plate, 120 volt pilot light, and double pole toggle switch with thermal overload protection for up to 1 HP single phase, 60 hertz 120/240 volt AC motors. (Thermal unit not provided)

0582-1V-I 240 volt AC, specification grade, 20 amp, single duplex, receptacle.

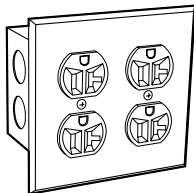
(not pictured)

0593-1V-I Combination Toggle Switch/Receptacle specification grade, receptacle, 20 amp; single pole, 20 amp. 120/240 VAC, switch.

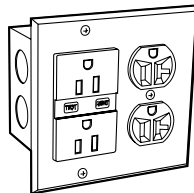
(not pictured)

* Note: One ground fault interrupter will protect all outlets on the same circuit.

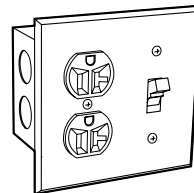
Electrical Fixtures for mounting in Base Cabinets (will not fit in fume hood)



0581-6V-I 120 volt AC, specification grade, 20 amp, double duplex, receptacle.



0657-6V-I *120 volt GFI specification grade, 20 amp, ground fault protected, double duplex receptacle.



0589-6V-I 120 volt AC with Toggle Switch specification grade, 20 amp, double duplex, receptacle and single pole, 120/240 volt AC, 20 amp toggle switch.

0582-6V-I 240 volt AC, specification grade, 20 amp, double duplex, receptacle.

(not pictured)

* Note: One ground fault interrupter will protect all outlets on the same circuit.

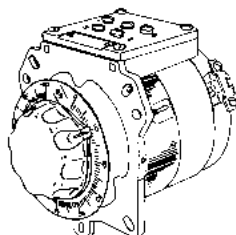
Variable Power Controllers

0767-00 Powerstat Variable Power Controller

Ratings:

Input: 120 VAC
50/60 hertz, single phase
Output: 0-120 VAC
or 0-140 VAC
Max. Load: 10 amp.

Requires separate on/off control.



0767-03 Powermite Solid State Variable Power Controller

Ratings:

Input: 120 VAC
Output: 10-105 VAC
Max. Load: 600W, 5A

Includes controller, outlet and fuse mounted in a special jumbo handy box with stainless steel face plate. (Device is not UL Listed)



Fume Hood Alarms & Safety Devices

Air Alert 600 Fume Hood Monitor – Option M

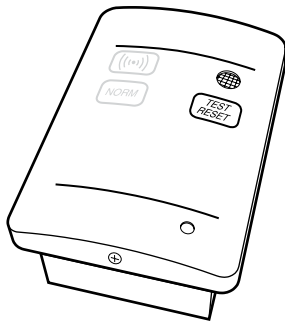


X-018718 Air Alert 600 Fume Hood Monitor consists of a thermistor sensor mounted on the fume hood interior wall and connected to fume hood containment cavity by a sensor port. A tube to the fume hood fascia completes monitored air path. The monitor measures and records the fume hood face velocity and sounds an alarm when the airflow falls below safe levels. Green, amber, and red LEDs signal safe, marginal, and low face velocity conditions. Alarm and lights are augmented by a digital liquid crystal readout and a visual one-hour "Event Timeline" that records

alarm occurrences and their length for a continually updated one-hour time interval. Mounted on the hood fascia, the control monitor also contains "enter", "+", and "-" buttons that offers the hood user a variety of alarm features. Alarm setpoints, metric or classical units, alarm delay intervals, nighttime setback, and muting options are all programmable. The Air Alert 600 operates on 9-30 volts AC or DC and comes complete with an adapter that can be plugged into any 120 VAC receptacle.

Contact Kewaunee factory when using Air Alert 600 on existing horizontal sash or combination sash fume hood.

Air Alert 300 Face Velocity Airflow Alarm – Option W and Option Z



Option W Air Alert 300 Airflow Alarm mounted on right-hand fascia below blank face plate replacing uppermost fixture hole.

Option Z Air Alert 300 Airflow Alarm mounted on right-hand fascia replacing blank face plate.

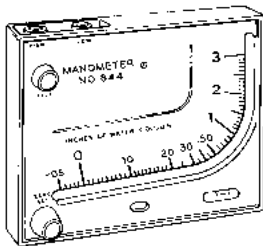
X-018528-S Air Alert 300/AirGard 200 consists of a thermistor sensor mounted through the end wall of the hood, and a control monitor that gives both a visual and audible alarm. The alarm monitors the fume hood face velocity and sounds an alarm when the airflow falls below safe levels. A glowing green light signals when conditions are

again safe. The control monitor, which is mounted on the hood fascia, also contains a test/reset button that allows the hood user to verify alarm readiness.

The Air Alert 300 operates on a 9 volt DC circuit and comes complete with an adapter that can be plugged into any 120 VAC receptacle.

Air Alert 300 not recommended for use with Auxiliary Air Fume Hoods

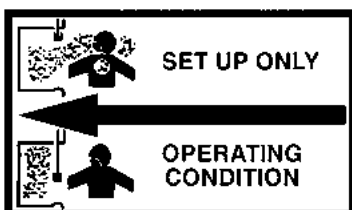
Inclined Manometer



0844-00 Inclined Manometer Housed in a molded plastic case, it is excellent for general purpose work, including measurement of air filter resistance, fume hood static pressures, and other pressure differentials.

Complete with 8 feet of flexible double column plastic tubing, two 1/8" N.P.T. connector fittings with nuts, two mounting screws, 3/4 oz. bottle of indicating fluid and complete instructions.

Sash Label

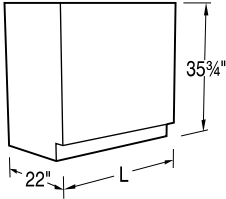


Half-Size
Actual Label 2 1/2" x 4"

F-4803-00 Sash Open Safety Label Designed to be used with Gravity Sash Stop, but may be used on any hood to indicate proper sash position for safe fume hood operation. Ideal for use when fans are sized for less than full sash open operation. Label is printed in black on clear vinyl.

Fume Hood Base Cabinets

DIMENSIONAL VIEW



Specifications

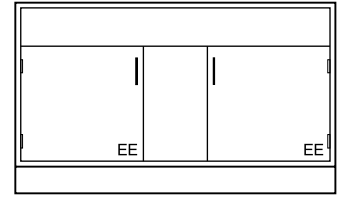
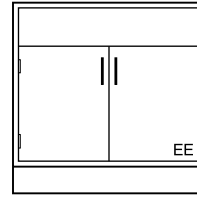
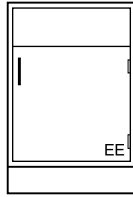
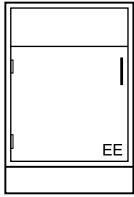
Standing Height Steel Fume Hood Base Cabinets are 35³/₄" high and 22" deep; Wood Fume Hood Base Cabinets are 34³/₄" high and a nominal 22" deep. ADA Height Steel Fume Hood Base Cabinets are 33" high and 22" deep; ADA Height Wood Fume Hood Base Cabinets are 32³/₄" high and nominal 22" deep. Lengths as shown.

Cabinet Style Option:

Specify cabinet door and hardware style when ordering by replacing blanks in last four digits of catalog number with style numbers.

See the Research Collection Steel and Signature Series Wood Catalogs for available styles and details.

Standing Height Fume Hood Base Cabinets



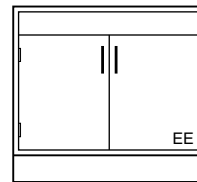
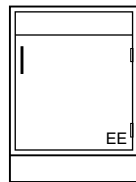
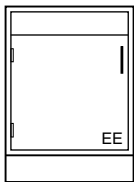
Steel Cabinets (35³/₄" High)

| | | | | | | | |
|-------------|------|-------------|------|-------------|------|-------------|------|
| G08M372212L | 12"L | G08M372212- | 12"L | G08M372230- | 30"L | G08M372260- | 60"L |
| G08M372215L | 15"L | G08M372215- | 15"L | G08M372236- | 36"L | | |
| G08M372218L | 18"L | G08M372218- | 18"L | G08M372248- | 48"L | | |
| G08M372224L | 24"L | G08M372224- | 24"L | | | | |

Wood Cabinets (34¹/₂" High)

| | | | | | | | |
|-------------|------|-------------|------|-------------|------|-------------|------|
| G08W362212L | 12"L | G08W362212- | 12"L | G08W362230- | 30"L | G08W362260- | 60"L |
| G08W362215L | 15"L | G08W362215- | 15"L | G08W362236- | 36"L | | |
| G08W362218L | 18"L | G08W362218- | 18"L | G08W362248- | 48"L | | |
| G08W362224L | 24"L | G08W362224- | 24"L | | | | |

ADA Height Fume Hood Base Cabinets



Steel Cabinets (33" High)

| | | | | | |
|-------------|------|-------------|------|-------------|------|
| G08M342212L | 12"L | G08M342212- | 12"L | G08M342230- | 30"L |
| G08M342215L | 15"L | G08M342215- | 15"L | G08M342236- | 36"L |
| G08M342218L | 18"L | G08M342218- | 18"L | G08M342242- | 42"L |
| G08M342224L | 24"L | G08M342224- | 24"L | G08M342248- | 48"L |

Wood Cabinets (32¹/₂" High)

| | | | | | |
|-------------|------|-------------|------|-------------|------|
| G08W342212L | 12"L | G08W342212- | 12"L | G08W342230- | 30"L |
| G08W342215L | 15"L | G08W342215- | 15"L | G08W342236- | 36"L |
| G08W342218L | 18"L | G08W342218- | 18"L | G08W342242- | 42"L |
| G08W342224L | 24"L | G08W342224- | 24"L | G08W342248- | 48"L |

Solvent Storage Fume Hood Base Cabinets

Specifications

Solvent Storage Cabinets are specifically designed for the storage of flammable and combustible liquids. Both steel and wood cabinets meet UFC, OSHA and NFPA No. 30-1993 construction standards. Steel cabinets are FM approved, Wood cabinets are UL listed.

A 2" deep, steel, liquid-tight pan covers the entire bottom to contain liquid leaks and spills. A second pan is provided as a

full depth adjustable shelf.

Two diametrically opposed vents with spark screens are provided in the back for cases when ventilation is required.

The steel cabinet is all 18 gauge steel, double panel construction with self-closing doors, synchronized so that both doors will always fully close. The right hand door is equipped with a three-point latching system that automatically

engages the cabinet frame. Each door is equipped with a fusible-link hold-open feature that ensures the doors close should the temperature outside the cabinet exceed 165°F. Steel cabinets are provided with a grounding screw at the rear.

All Solvent Storage Cabinets are labeled: CAUTION FLAMMABLE – KEEP FIRE AWAY in English, Spanish, and French.

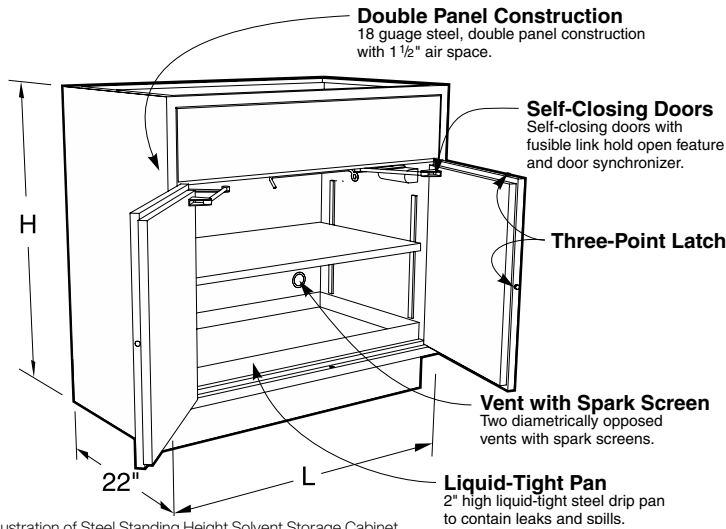
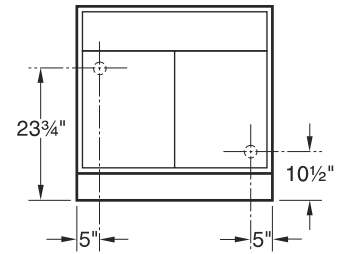


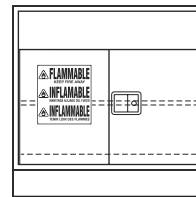
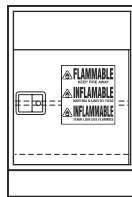
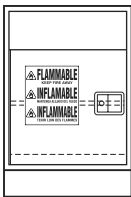
Illustration of Steel Standing Height Solvent Storage Cabinet

Vent Locations



Steel Solvent Cabinets
Vent outlets 2" dia. Female NPT
Wood Solvent Cabinets
Vent outlets 1 1/2" dia. Male NPT

Standing Height Solvent Storage Fume Hood Cabinets



| Steel Cabinets | (35 ³ / ₄ " High) | Capacity | Capacity |
|---|---|-----------------|-----------------|
| G68M372224L_204 | 24"L | G68M372224-_204 | 24"L 12 gal |
| <i>Steel Solvent Storage Cabinets are available in Style 02 and 12 only</i> | | | |
| G68M372230-_204 | 30"L | 12 gal | G68M372230-_204 |
| G68M372236-_204 | 36"L | 15 gal | G68M372236-_204 |
| G68M372248-_204 | 48"L | 20 gal | G68M372248-_204 |

| Wood Cabinets | (35" High) | Capacity | Capacity |
|--|------------|-----------------|-----------------|
| G68W362224L_0_0 | 24"L | G68W362224-_0_0 | 24"L 12 gal |
| <i>Wood Solvent Storage Cabinets are available in Style 1 and 5 only</i> | | | |
| G68W362230-_0_0 | 30"L | 12 gal | G68W362230-_0_0 |
| G68W362236-_0_0 | 36"L | 15 gal | G68W362236-_0_0 |
| G68W362248-_0_0 | 48"L | 20 gal | G68W362248-_0_0 |

ADA Height Solvent Storage Fume Hood Cabinets

| Steel Cabinets | (33" High) | Capacity | Capacity |
|---|------------|-----------------|-----------------|
| G68M342224L_204 | 24"L | G68M342224-_204 | 24"L 12 gal |
| <i>Steel Solvent Storage Cabinets are available in Style 02 and 12 only</i> | | | |
| G68M342230-_204 | 30"L | 12 gal | G68M342230-_204 |
| G68M342236-_204 | 36"L | 15 gal | G68M342236-_204 |
| G68M342248-_204 | 48"L | 20 gal | G68M342248-_204 |

| Wood Cabinets | (32 ¹ / ₂ " High) | Capacity | Capacity |
|--|---|-----------------|-----------------|
| G68W342224L_0_0 | 24"L | G68W342224-_0_0 | 24"L 12 gal |
| <i>Wood Solvent Storage Cabinets are available in Style 1 and 5 only</i> | | | |
| G68W342230-_0_0 | 30"L | 12 gal | G68W342230-_0_0 |
| G68W342236-_0_0 | 36"L | 15 gal | G68W342236-_0_0 |
| G68W342248-_0_0 | 48"L | 20 gal | G68W342248-_0_0 |

Acid Storage Fume Hood Base Cabinets

Specifications

Acid Storage Fume Hood Base Cabinets are specifically designed for the storage of corrosive chemicals. They are available in either steel or wood. These cabinets are lined with a molded one piece linear low density polyethylene tub with covered corners and a 1" lip at the bottom front. The cabinet doors are

lined with 1/8" sheet polyethylene and the doors are latched using a nylon roller catch. Each cabinet is furnished with a PVC vent pipe for venting to the fume hood above. (Requires a 2" hole in the hood worksurface.)

Optional Removable Half-Depth Shelf

| Part No. | |
|---------------|-----------------------|
| 019624 | Shelf for 24" cabinet |
| 019625 | Shelf for 30" cabinet |
| 019626 | Shelf for 36" cabinet |
| 019627 | Shelf for 48" cabinet |

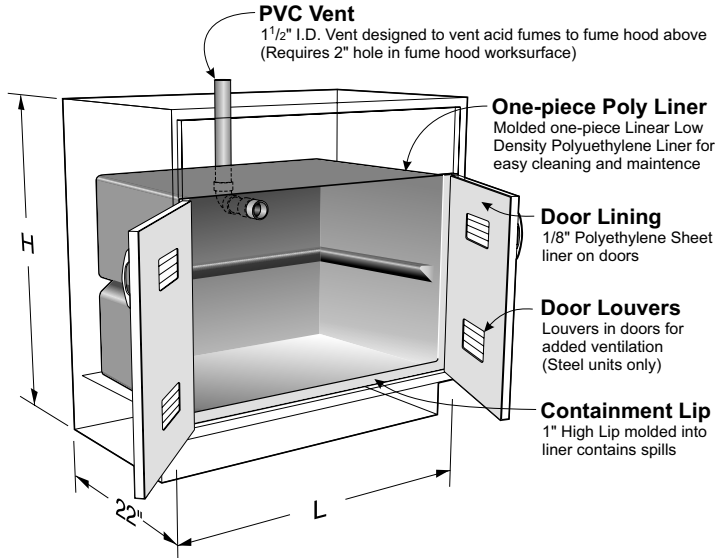
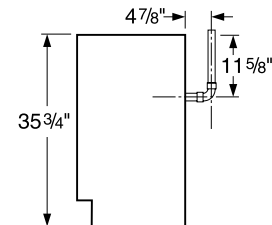


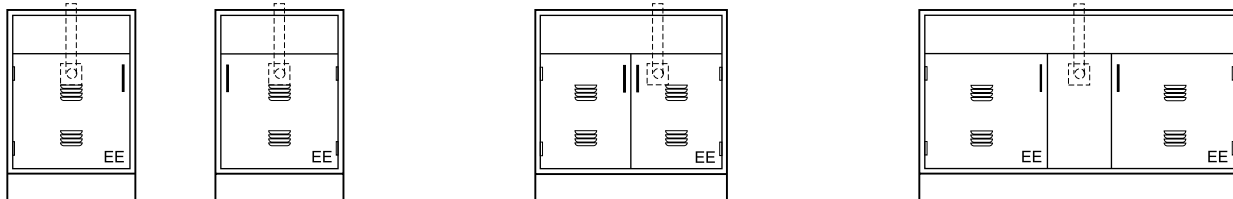
Illustration of Steel Standing Height Acid Storage Cabinet

Vent Location



| | |
|-------------|--------------------------|
| 24" Cabinet | - on Center |
| 30" Cabinet | - 7 5/8" Right of Center |
| 36" Cabinet | - 5" Right of Center |
| 48" Cabinet | - 5" Right of Center |
| 60" Cabinet | - on Center |

Standing Height Acid Storage Fume Hood Cabinets



Steel Cabinets (35 3/4" High)

G80M372224L ___ 24"L Left Hand

G80M372230- ___ 30"L

G80M372260- ___ 60"L

G80M372224- ___ 24"L Right Hand

G80M372236- ___ 36"L

G80M372248- ___ 48"L

Wood Cabinets (35" High)

G80W362224L ___ 24"L Left Hand

G80W362230- ___ 30"L

G80W362260- ___ 60"L

G80W362224- ___ 24"L Right Hand

G80W362236- ___ 36"L

G80W362248- ___ 48"L

ADA Height Acid Storage Fume Hood Cabinets

Steel Cabinets (33" High)

G80M342224L ___ 24"L Left Hand

G80M342230- ___ 30"L

G80M342224- ___ 24"L Right Hand

G80M342236- ___ 36"L

G80M342248- ___ 48"L

Wood Cabinets (32 1/2" High)

G80W342224L ___ 24"L Left Hand

G80W342230- ___ 30"L

G80W342224- ___ 24"L Right Hand

G80W342236- ___ 36"L

G80W342248- ___ 48"L

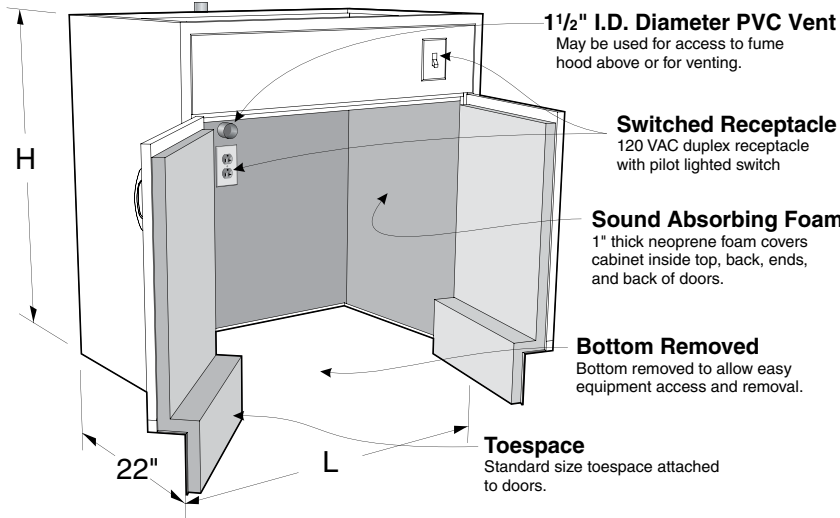
Vacuum Pump Storage Base Cabinets

Specifications

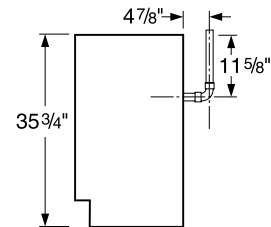
Vacuum Pump Storage Fume Hood Cabinets are designed without a bottom to allow vacuum pumps and other equipment to be rolled in or out of the cabinets. The interior is lined with 1" thick neoprene foam for sound deadening and easy cleaning. Each

cabinet is furnished with a 120 VAC, 20 amp, duplex receptacle mounted on the inside cabinet back and a pilot lighted toggle switch mounted in the top front rail. (Wiring is not included.) Cabinets are also furnished with a 1 1/2" diameter PVC vent pipe for venting or access to the

hood above. (Requires a 2" hole in the hood worksurface.) The toespace rail is attached to the door to allow total access to the cabinet. Cabinet inside clearance at the floor is 16 1/2" front-to-back, 27" high, and 3" less than the overall cabinet length.

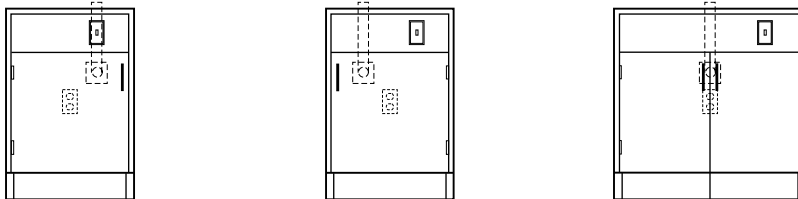


Vent Location



- 24" Cabinet - 5" off Center
- 30" Cabinet - on Center
- 36" Cabinet - on Center
- 48" Cabinet - on Center

Standing Height Vacuum Pump Storage Fume Hood Cabinets



Steel Cabinets (35 3/4" High)

| | | | | | |
|-------------|------|-------------|------|-------------|------|
| G35M372224L | 24"L | G35M372224- | 24"L | G35M372230- | 30"L |
| | | | | G35M372236- | 36"L |
| | | | | G35M372248- | 48"L |

Wood Cabinets (35" High)

| | | | | | |
|-------------|------|-------------|------|-------------|------|
| G35W362224L | 24"L | G35W362224- | 24"L | G35W362230- | 30"L |
| | | | | G35W362236- | 36"L |
| | | | | G35W362248- | 48"L |

ADA Height Vacuum Storage Fume Hood Cabinets

Steel Cabinets (33" High)

| | | | | | |
|-------------|------|-------------|------|-------------|------|
| G35M342224L | 24"L | G35M342224- | 24"L | G35M342230- | 30"L |
| | | | | G35M342236- | 36"L |
| | | | | G35M342248- | 48"L |

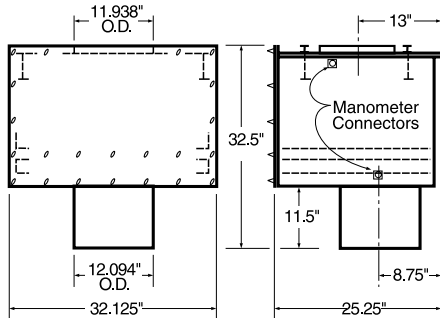
Wood Cabinets (32 1/2" High)

| | | | | | |
|-------------|------|-------------|------|-------------|------|
| G35W342224L | 24"L | G35W342224- | 24"L | G35W342230- | 30"L |
| | | | | G35W342236- | 36"L |
| | | | | G35W342248- | 48"L |

Fume Hood Filters & Canopy Hoods

Filter Housings and Filters

Filter Housing

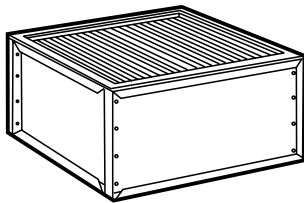


Filter Housings with Filters are designed to entrap and retain airborne contamination (usually radioactive) at their source or origin, rather than permitting them to circulate further through the exhaust duct and into the atmosphere. These filter housings are designed for use with one 2" thick pre-filter, and one 11½" thick high efficiency or charcoal filter. The housings are available in either painted, cold rolled steel or stainless steel and with an optional manometer connection.

| | | |
|--------------------|------------------|------------------------|
| Painted CRS | St. Steel | |
| X-016869 | X-016868 | Filter Housing |
| X-016870 | X-016871 | w/Manometer Connection |

Filters must be ordered separately.

High Efficiency Filter

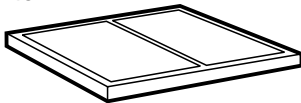


The high efficiency (HEPA absolute type) filter, has an efficiency of 99.7% for particles in the size range of 0.3 to 0.5 microns. The charcoal absorber filter, is designed for high efficiency removal of gaseous radioactive material. Both filters as well as the pre-filter are standard replaceable filters.

| | | |
|----------------|------------------------|------------------|
| 0864-00 | High Efficiency Filter | 11½" x 24" x 30" |
| 0855-00 | Charcoal Absorber | 11½" x 24" x 30" |

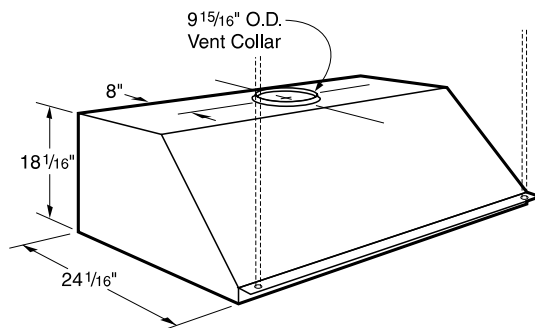
When High Efficiency Filters are used, exhaust fans should be sized for 3" or more static pressure to allow for dirt loading of the filters.

Pre-Filter



| | | |
|----------------|------------|----------------|
| 0863-00 | Pre-Filter | 2" x 24" x 30" |
|----------------|------------|----------------|

Canopy Hoods



Canopy Hoods are useful for conducting heat out of laboratories, and can be mounted over tables where hot plates or other heat generating apparatus is located. They are fabricated of cold rolled steel, phosphate coated with a baked chemical resistant, synthetic resin finish, or of type 304 stainless steel. They are available 3 feet, 4 feet, 5 feet, 6 feet and 8 feet long. The painted steel canopies are available with or without a lining of ¼" thick Kemglass. Each canopy hood is furnished with a 9¹⁵/₁₆" O.D. vent collar. (8 foot canopies are furnished with two duct collars, 48" on center.) (½" diameter support rods to the ceiling are not included.)

| | | |
|--------------------------|----------------------------|------|
| Unlined Painted Steel | Unlined Stainless Steel | |
| 2B-2818-30-M | 2B-2818-30-S | 36"L |
| 2B-2818-40-M | 2B-2818-40-S | 48"L |
| 2B-2818-50-M | 2B-2818-50-S | 60"L |
| 2B-2818-60-M | 2B-2818-60-S | 72"L |
| 2B-2818-80-M | 2B-2818-80-S | 96"L |

TruView® Teaching Hoods

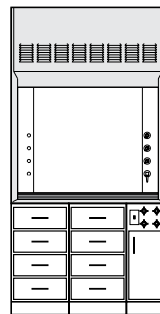


Features:

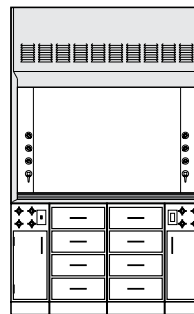
- Available in 4-foot, 5-foot, and 6-foot lengths, either single-sided for use against walls, or double-sided for use in center of laboratory.
- Glass end-walls and center baffles provide unobstructed view through hood.
- Uni-baffle design allows both halves of the double-sided hood to function independently as a complete fume hood.
- Sash-stops provided at 18" for economical hood operation.
- Designed for use as a stand-alone hood or in assemblies of multiple hoods sharing common endwalls.
- Frameless sash with full-length handle for neat, clean appearance and streamline air flow.
- Flush-sill design allows easy access and excellent airflow.
- Designed and tested to meet ASHRAE 110-1995 standards.

Typical Standing Height Configurations

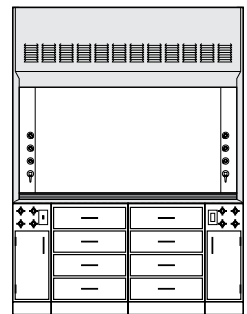
4'-0"



5'-0"

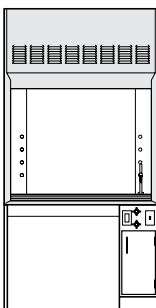


6'-0"

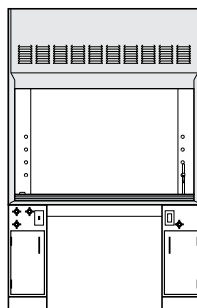


Typical ADA Height Configurations

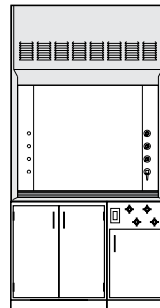
4'-0"



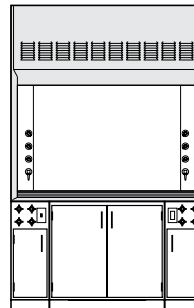
5'-0"



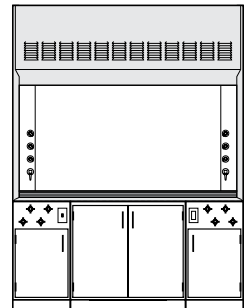
4'-0"



5'-0"



6'-0"

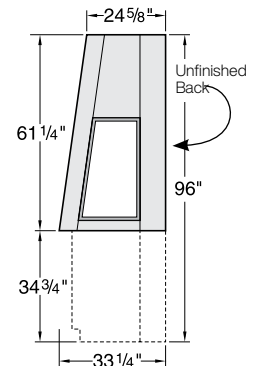
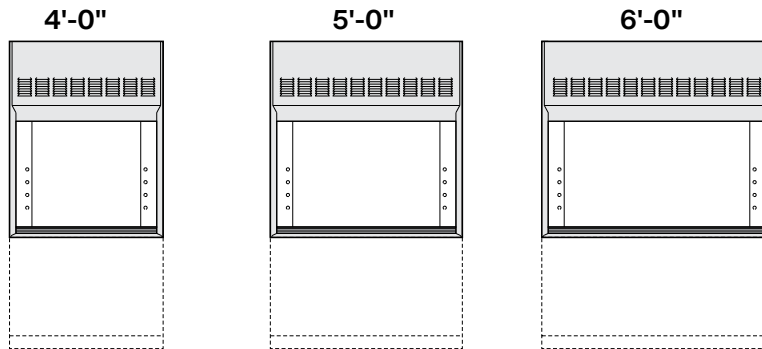


TruView® Teaching Hoods

Ordering Instructions:

1. Select Teaching Hood superstructure. When planning a multiple-hood assembly, select both a Right End and Left End hood, and as many Middle hoods as needed to finish the assembly.
2. Select a Hood Work Top for each hood. Work Tops are only available in Black dished Kemresin.
3. Select the required number of cupsinks for each hood.
 - 1 for 48" Single-sided
 - 2 for 48" Double-sided
 - 2 for 60" and 72" Single-sided
 - 4 for 60" and 72" Double-sided
4. Select Service Fittings and Electrical Fixtures. Each hood can accept up to four service fittings at each cupsink location. Hoods ship with removable plug buttons in service fitting holes.
5. Select base cabinets to fill the area below hood. Sink cabinet is needed on right end of 48" hoods and both ends of 60" and 72" hoods to house cupsink and service fittings.
6. Select Filler Panels as required.

Single-sided Hood Superstructure



Furnished with White Kemglass Back and Rear Baffles

Stand Alone
Left End
Right End
Middle

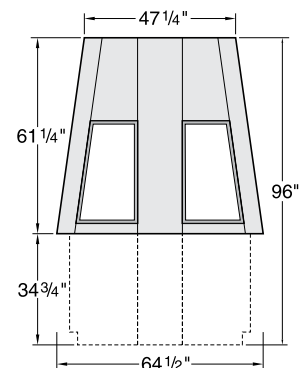
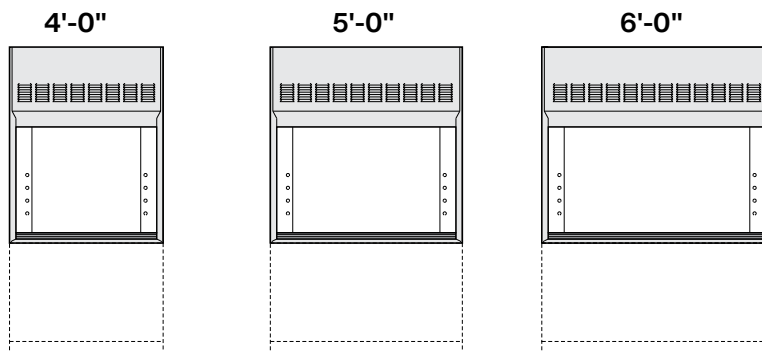
T90M3048-SA
T90M3048-LE
T90M3048-RE
T90M3048-AD

T90M3060-SA
T90M3060-LE
T90M3060-RE
T90M3060-AD

T90M3072-SA
T90M3072-LE
T90M3072-RE
T90M3072-AD

| Overall Hood Length | Duct Collar Dimensions | Sash Opening Sq. Ft. * | Total CFM and Static Pressure | | | |
|---------------------|------------------------|------------------------|-------------------------------|-----------------|---------|-----------------|
| | | | 80 FPM | Static Pressure | 100 FPM | Static Pressure |
| 4'-0" / 48" | 5" x 20" | 5.5 | 440 | 0.10 | 550 | 0.15 |
| 5'-0" / 60" | 5" x 25" | 7.0 | 560 | 0.10 | 700 | 0.15 |
| 6'-0" / 72" | 5" x 30" | 8.5 | 680 | 0.10 | 850 | 0.15 |

Double-sided Hood Superstructure



Furnished with Clear Safety Glass Center Baffles

Stand Alone
Left End
Right End
Middle

T90M6048-SA
T90M6048-LE
T90M6048-RE
T90M6048-AD

T90M6060-SA
T90M6060-LE
T90M6060-RE
T90M6060-AD

T90M6072-SA
T90M6072-LE
T90M6072-RE
T90M6072-AD

| Overall Hood Length | Duct Collar Dimensions | Sash Opening Sq. Ft. * | Total CFM and Static Pressure | | | |
|---------------------|------------------------|------------------------|-------------------------------|-----------------|---------|-----------------|
| | | | 80 FPM | Static Pressure | 100 FPM | Static Pressure |
| 4'-0" / 48" | 9" x 20" | 11.0 | 880 | 0.10 | 1100 | 0.20 |
| 5'-0" / 60" | 9" x 25" | 14.0 | 1120 | 0.15 | 1400 | 0.20 |
| 6'-0" / 72" | 9" x 30" | 17.0 | 1360 | 0.15 | 1700 | 0.20 |

* Based on 18" high sash opening

TruView® Teaching Hoods Accessories

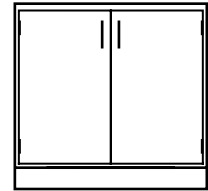
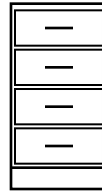
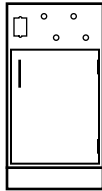
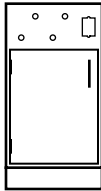
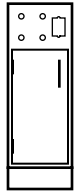
Cabinet Style Option:

To specify door and pull style when ordering, replacing blank in last digit of catalog number with style number.

Kewaunee wood base cabinets are available in four door and drawer head styles. See the Signature® Wood Catalog for available styles as well as the complete wood cabinet offering

The TruView Teaching Hood may also be installed on steel cabinetry. See The Reserch Collection® catalog for Kewaunee's complete line of steel laboratory furniture.

Wood Standing Height Base Cabinets 34³/₄" high



G10W362212L_____ 12"L
G10W362218L_____ 18"L
without fixture cutouts
G00W362212L_____ 12"L
G00W362218L_____ 18"L

G10W362212-_____ 12"L
G10W362218-_____ 18"L
without fixture cutouts
G00W362212-_____ 12"L
G00W362218-_____ 18"L

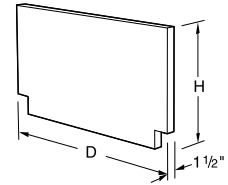
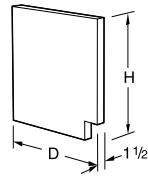
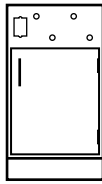
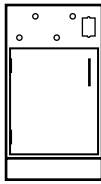
D30W362218-_0__ 18"L
D30W362224-_0__ 24"L

C03W362230-_____ 30"L
C03W362236-_____ 36"L

Wood ADA Height Base Cabinets

32³/₄" high

Pedestal Legs



G10W342212L_____ 12"L
G10W342218L_____ 18"L
without fixture cutouts
G00W342212L_____ 12"L
G00W342218L_____ 18"L

G10W342212-_____ 12"L
G10W342218-_____ 18"L
without fixture cutouts
G00W342212-_____ 12"L
G00W342218-_____ 18"L

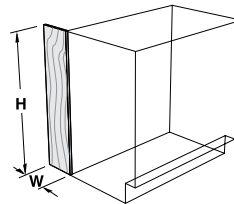
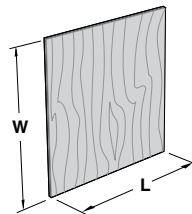
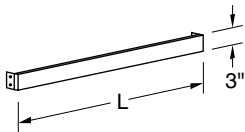
A25W3034-00_0 32³/₄" H
A25W3036-00_0 34³/₄" H
Pedestal Legs are 1/2" thick and 29³/₄" deep. They may be used instead of base cabinets to support the hood. They should be used with a Knee Space Panel and Apron Rail for stability.

A26W5934-00_0 32³/₄" H
A26W5936-00_0 34³/₄" H
Pedestal Legs are 1/2" thick and 58¹/₂" deep. They may be used instead of base cabinets to support the hood. They should be used with a Knee Space Panel and Apron Rail for stability.

Apron Rails

Knee Space Panels

Filler Panels



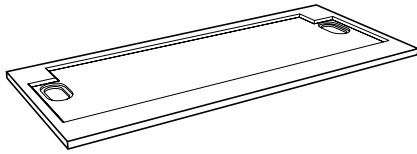
A00W0330-00_0 30"L
A00W0336-00_0 36"L
Apron Rail 3/4" thick, 3" high, can be cut to length in field. Furnished with angles for attachment to adjacent units or pedestal legs.

X-WK3036-00_0 30" L
X-WK3636-00_0 36" L
1/2" thick plywood, 36" wide
Designed to be field-cut to exact width and length required. Furnished with two cleats

X-WP0836-00_0 8" W x 36" H
X-WP1436-00_0 14" W x 36" H
Fabricated from 3/4" thick hardwood plywood with edges cut square for flush installation.

TruView® Teaching Hoods Accessories

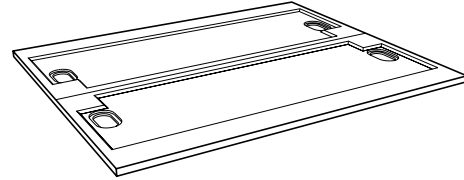
Single-sided Hood Work Tops



Black Kemresin
T90R3048-BK 48"L
T90R3060-BK 60"L
T90R3072-BK 72"L

Six foot and five foot tops are furnished with two cupsink cutouts, one each on the left and the right. Four foot tops are furnished with only one, on the right.

Double-sided Hood Work Tops



Black Kemresin
T90R6048-BK 48"L
T90R6060-BK 60"L
T90R6072-BK 72"L

Six foot and five foot tops are furnished with four cupsink cutouts, two on each side, one on the left and one on the right. Four foot tops are furnished with only two, on the right of each side. (ships in two sections)

Cupsinks



0490-BE Black Epoxy

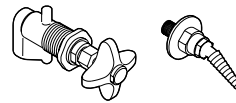
Complete with removable strainer. 6"x 3" inside dimension. 1½" IPS male straight thread outlet. (Overall height is 8")



0491-BP Black Poly

Complete with removable strainer. 6"x 3" inside dimension. 1½" IPS male straight thread outlet. (Overall height is 8")

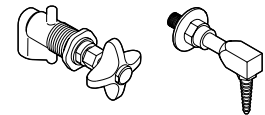
Service Fittings



W-0744-A Air
W-0744-G Gas
W-0744-V Vacuum
fittings ship loose

Front-load remote control service valves mount in top rail of sink base cabinet. Air, Gas, and Vacuum valves are furnished with color-coded, angled, nylon hose connector.

Water Fittings

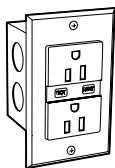


W-0744-W Water

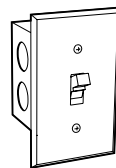
fittings ship loose

Front load remote control water valves mount in top rail of sink base cabinet. Water valves are furnished with color-coded epoxy-coated brass hose tip.

Electrical Fixtures

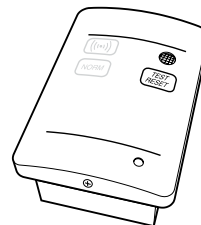


0656-1V Receptacle
 120 volt, GFI, specification grade, 20 amp, ground fault protected, single duplex receptacle with electric box and stainless steel face plate.



0655-1V Light Switch
 single pole, 120/240 volt AC, 20 amp. with electric box and stainless steel face plate.

Air Alert 300 Face Velocity Airflow Alarm



X-018528-S Air Alert 300 AirGard 200 consists of a thermistor sensor mounted through the end wall of the hood, and a control monitor that gives both a visual and audible alarm. The alarm monitors the fume hood face velocity and sounds an alarm when the airflow falls below safe levels. A glowing green light signals when conditions are again safe. The control monitor also contains a test/reset button that allows the hood user to verify alarm readiness.

Double-sided TruView hoods require two alarms, one for each sash opening.

Demonstration & Teaching Hoods

Duo-Vision Demonstration Hood

Double-sided teaching and demonstration hood



Features:

- Dual working sashes with glass end panels for excellent visibility into hood.
- Available with solid end panels.
- Available with one sash in fixed closed position for higher access control.
- Furnished with 12" diameter sink with water faucet and service fitting.
- Furnished with 3-way light switch, blower switch with warning light and gfi duplex receptacles.
- Available with or without base cabinet, work top, fittings and fixtures.

T95G4860-_____ Glass End Panels
T95G4860S_____ Glass End Panels/One Sash Fixed
T95G4860X_____ Solid End Panels

DIMENSIONS:

Overall: 84" H x 32" D x 60" L
 (light fixtures add 5 1/2" to overall height)
 (additional 10" of height for sash clearance)
Hood: 48" H x 30" D x 58" L
Interior: 40" H x 25" D x 53" L
Base Cabinet: 34 3/4" H x 30" D x 59" L
Work Top: 1 1/4" H x 32" D x 60" L

MATERIALS:

Hood Exterior: Cold Rolled Steel
Hood Lining: Glass & Kemglass
Base Cabinet: Hardwood Veneer – Specify Style
Suggested Cabinet: G84W363059 (Double Sided)
Work Top: Dished Black Kemresin

Sink: (1) **1038-00** 12" Dia Kemresin
 (1) **0482-BP** 1 1/2" IPS Sink Outlet
Electric Fixtures: (2) **0656-1V** 120 VAC GFI Duplex Receptacle
 (1) **0695-1S** Blower Switch with Warning Light
 (2) **0591-1V** 3-way Light Switch
 (2) T-8 Florescent Light Fixture
 (tubes not included)
 (1) **0733-01** Blower Warning Light
Fittings: (1) **W-0337-0V** Water VB Gooseneck
 (1) **W-0260-00** Single Outlet Service Fittings

No service piping, electrical conduit, ducting or exhaust fan included.

Options:

Glass End Panels
T95G4860-F_____ Without Fixtures & Fittings
T95G4860-T_____ Without Top, Sink Fixtures & Fittings
T95G4860-_____ Hood Only
 Glass End Panels & One Sash Fixed
T95G4860SF_____ Without Fixtures & Fittings
T95G4860ST_____ Without Top, Sink Fixtures & Fittings
T95G4860S_____ Hood Only
 Solid End Panels
T95G4860XF_____ Without Fixtures & Fittings
T95G4860XT_____ Without Top, Sink Fixtures & Fittings
T95G4860X_____ Hood Only

NOTE: For hood to contain fumes, both sashes can not be open at the same time.

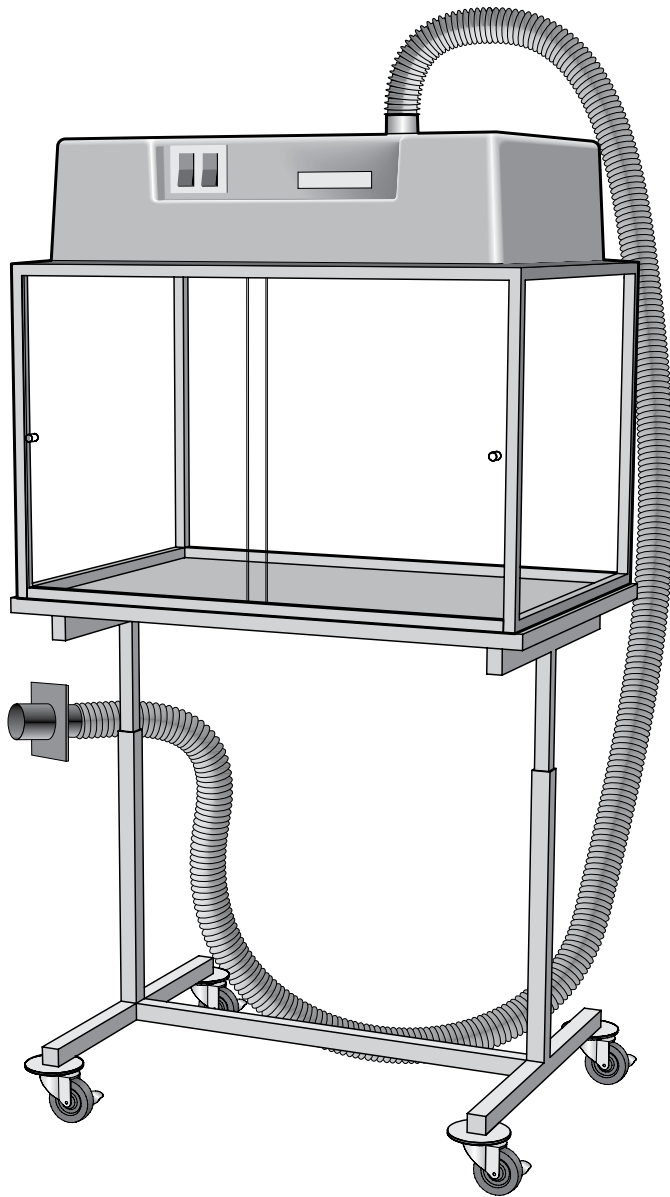
Sash Opening: 53" x 30" *
 Duct Collar: 12" Dia

Recommended
 Face Velocity: 80 feet/minute
 Exhaust Volume: 940 cfm @ 80 fpm face velocity
 Static Pressure: 0.30" @ 940 cfm

* based on only one sash open at a time.

Demonstration & Teaching Hoods

Hemco Portable Demonstration Hood



F-5335-00 Portable Demonstration Hood

DIMENSIONS:

Overall: 30" H x 24" D x 35" L

Interior: 22" H x 24" D x 33½" L

Mobile Base: Adjustable Height from 28½"–38½"

MATERIALS:

Hood Exterior: Clear Acrylic & Anodized Aluminum

Top Enclosure: Chemical Resistant Fiberglass

Worksurface: Chemical Resistant Fiberglass

INCLUDES:

Motor/Blower: Integral, 120 VAC, 100 cfm

Light: Vapor Proof

Switches: (1) Light, (1) Blower

Cord: 8 feet, three wire

Vent Outlet: PVC

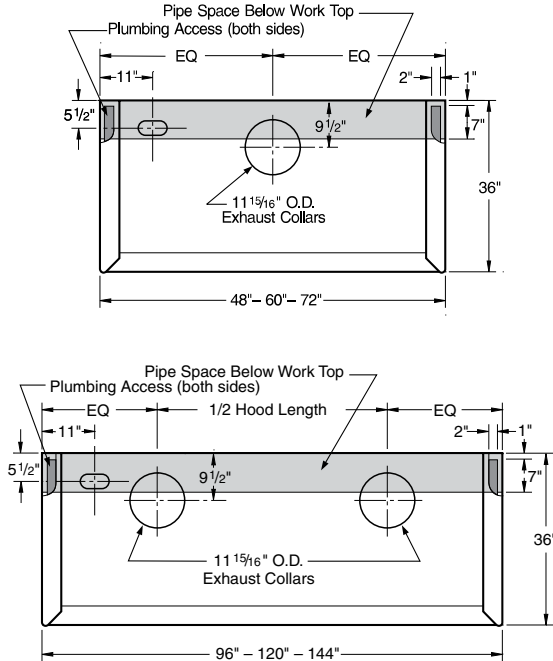
Ducting: 12 feet, 3" diameter Flexible PVC

Duct Connection: Polyglass Quick Connect

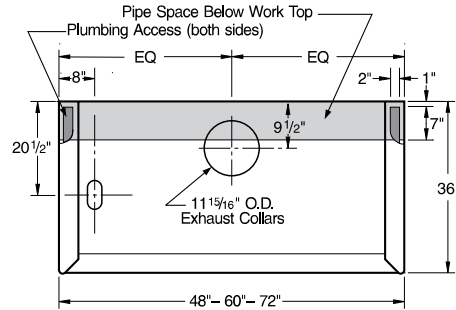
Supreme Air Fume Hood Technical Data

Bench Hood – Rough-In Information

Rough-In for H05–H07–H10–H70 Bench Hoods

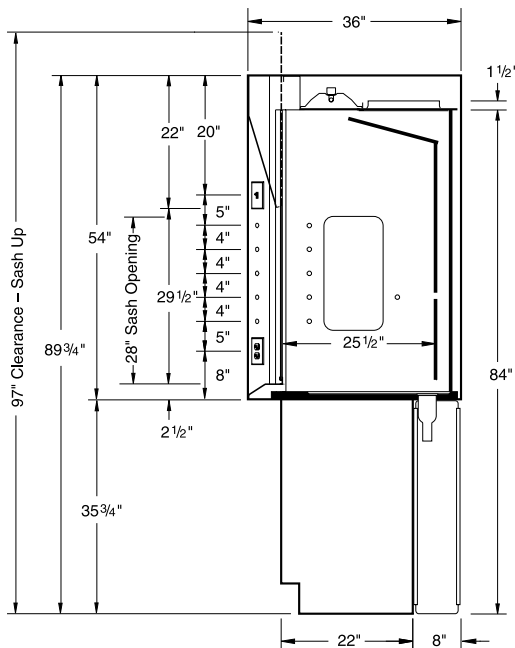


Rough-In for H08 & H09 ADA Bench Hood

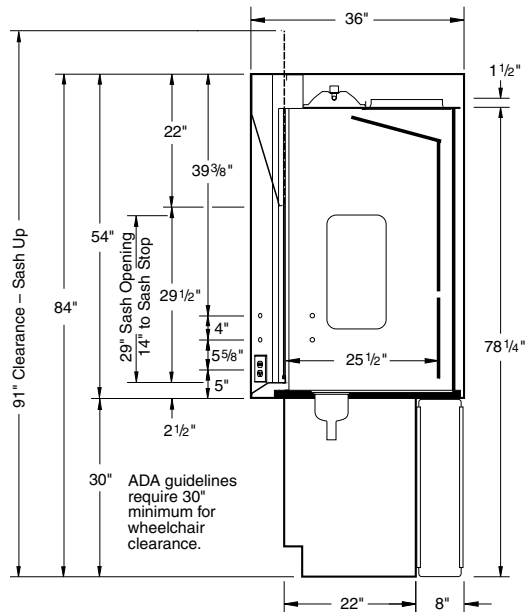


Bench Hood – Dimensional Information

Vertical Section H05 & H07 Bench Hoods



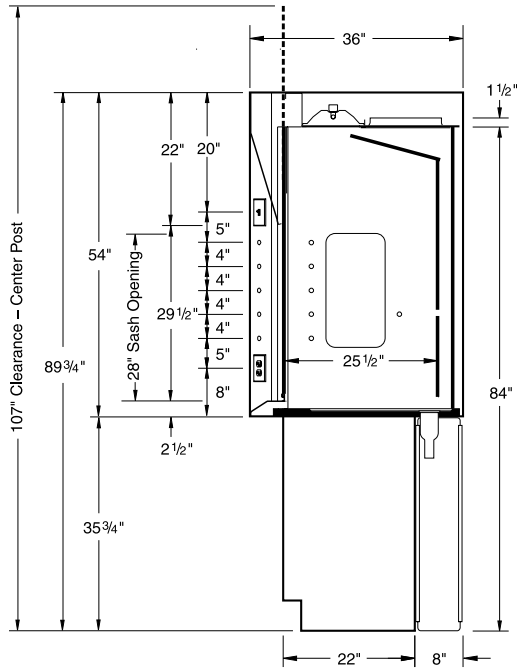
Vertical Section H08 & H09 ADA Bench Hood



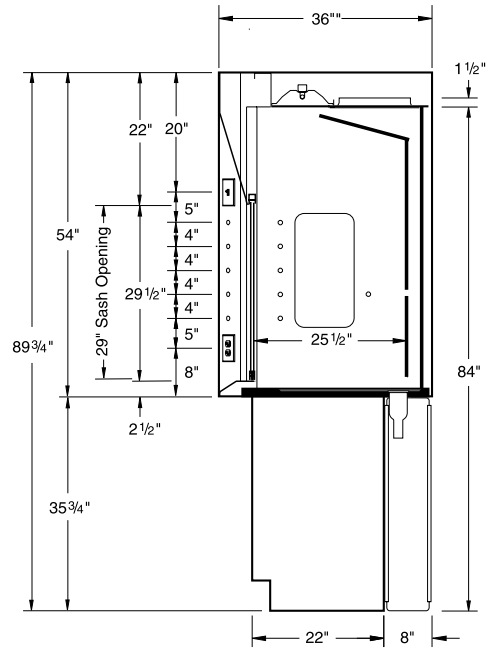
Supreme Air Fume Hood Technical Data

Bench Hood – Dimensional Information

**Vertical Section
H10 Split Sash Bench Hood**



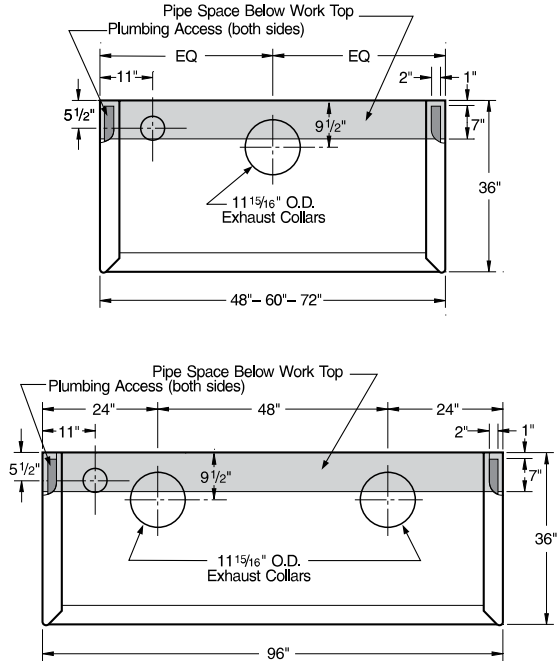
**Vertical Section
H70 Horizontal Sash Bench Hood**



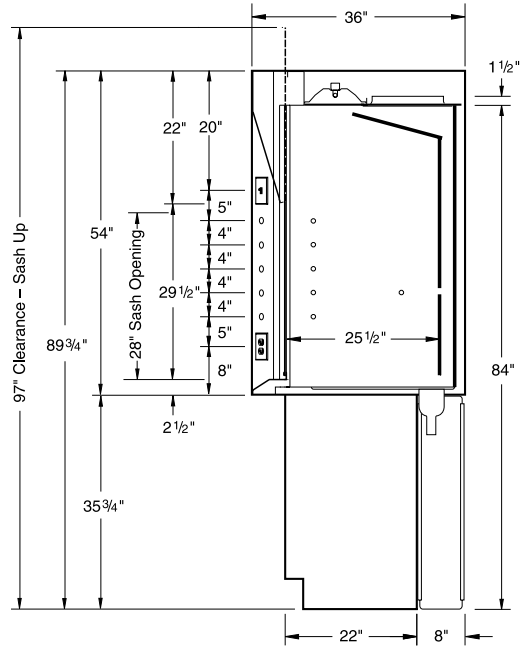
Supreme Air Fume Hood Technical Data

Isotope Hood – Rough-In & Dimensional Information

Rough-In for H20 Isotope Bench Hood

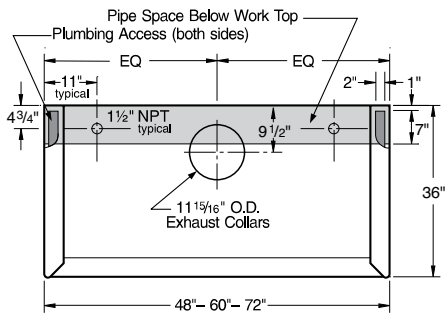


**Vertical Section
H20 Isotope Bench Hood**

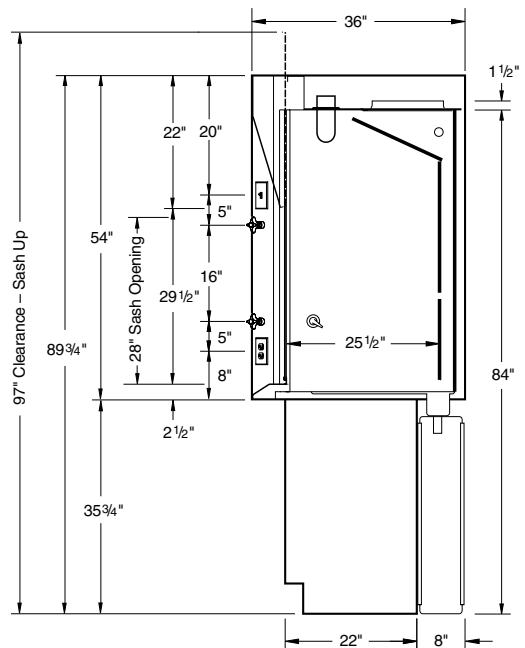


Perchloric Acid Hood – Rough-In & Dimensional Information

Rough-In for H25 Perchloric Acid Hood



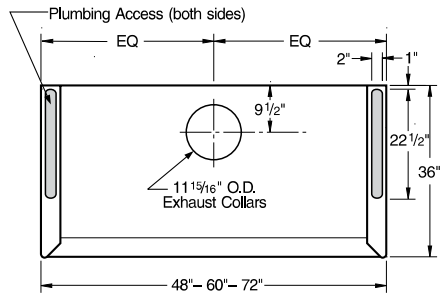
**Vertical Section
H25 Perchloric Acid Bench Hood**



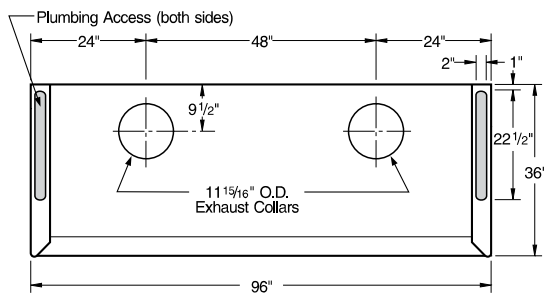
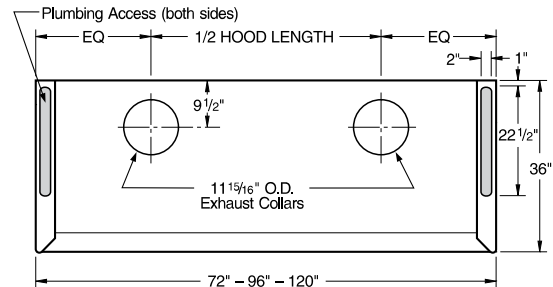
Supreme Air Fume Hood Technical Data

Walk-In Hood - Rough-In Information

Rough-In for H30 & H32 Vertical Sash Walk-In Hoods

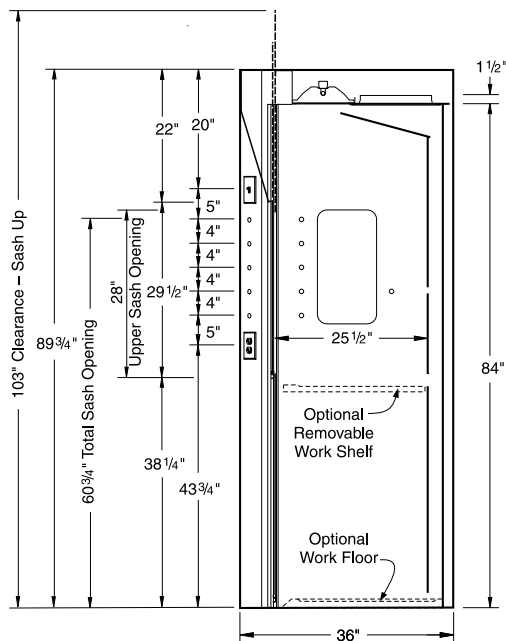


Rough-In for H34 Horizontal Sash Walk-In Hood

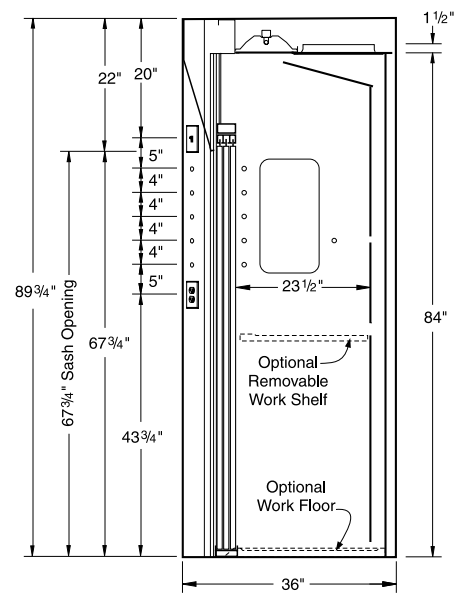


Walk-In Hood - Dimensional Information

Vertical Section H30 & H32 Vertical Sash Walk-In Hoods



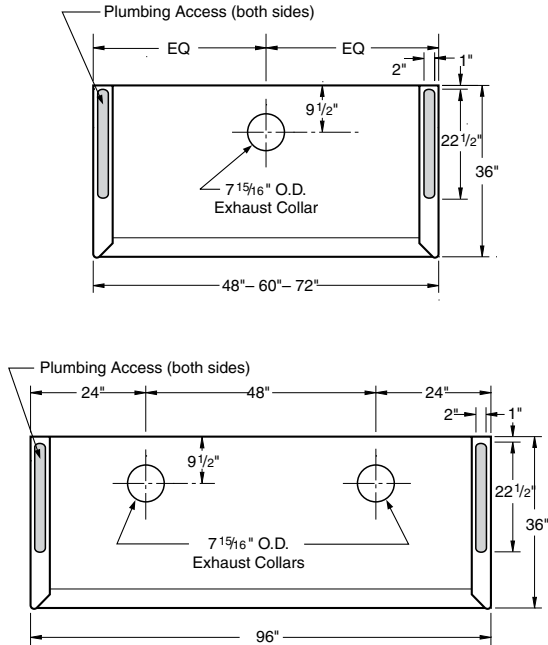
Vertical Section H34 Horizontal Sash Walk-In Hood



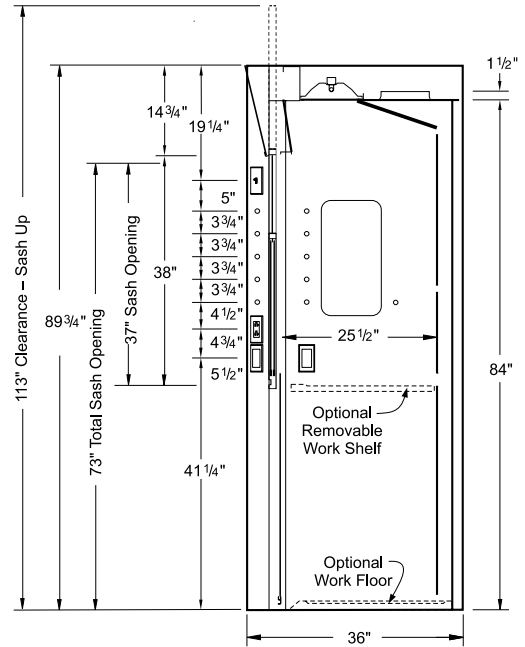
Supreme Air Fume Hood Technical Data

Dynamic Barrier Walk-In – Rough-In & Dimensional Information

Rough-In for H52 Dynamic Barrier Walk-In Hood

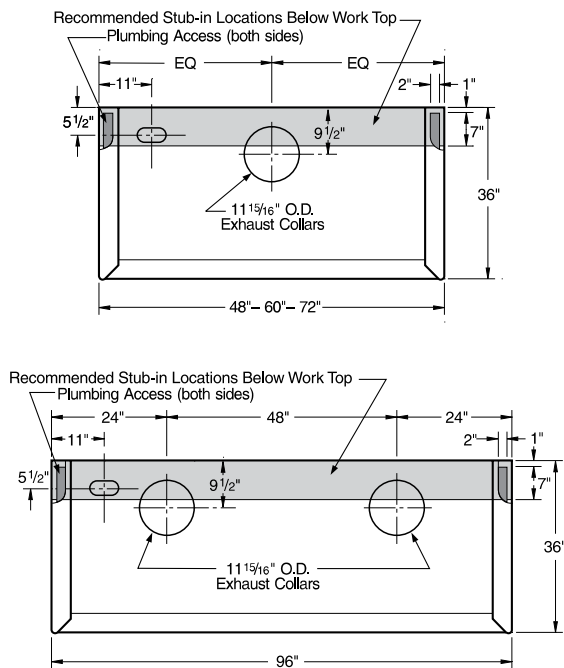


Vertical Section H52 Dynamic Barrier Walk-In Hood

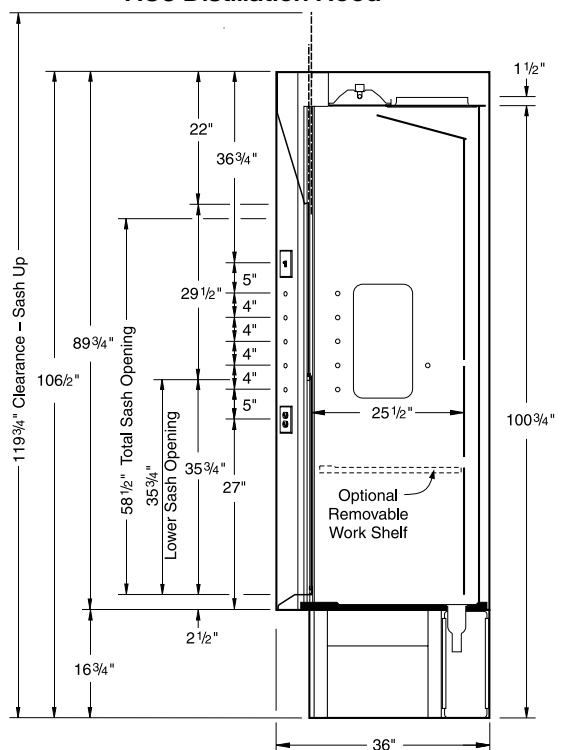


Distillation Hood – Rough-In & Dimensional Information

Rough-In for H36 Distillation Hood



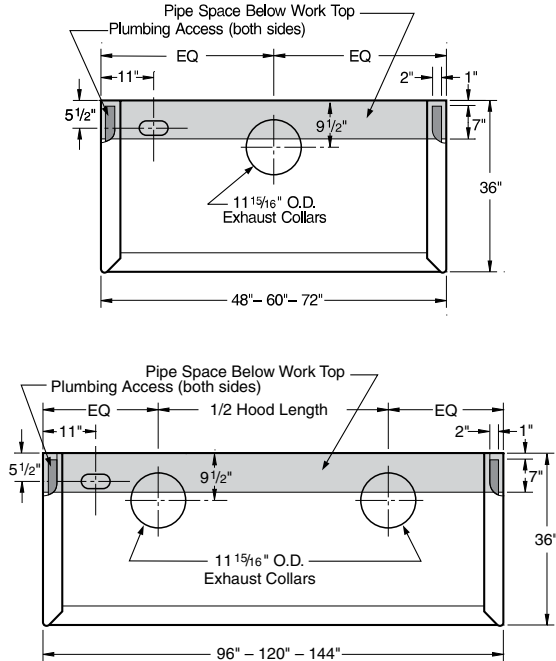
Vertical Section H36 Distillation Hood



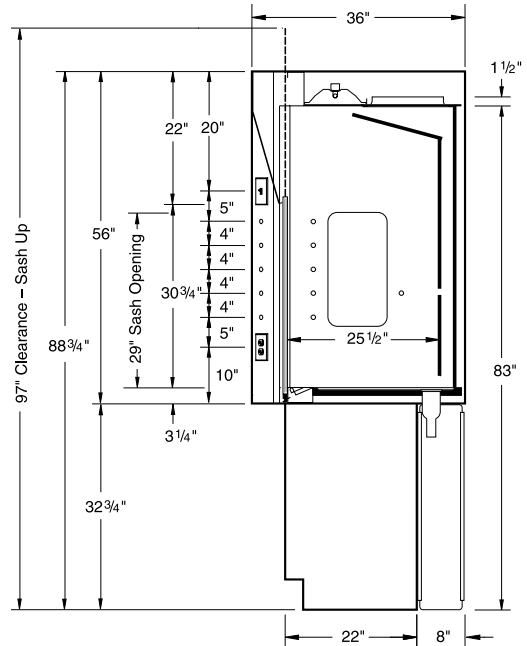
Supreme Air Fume Hood Technical Data

HOPEC Bench Hood - Rough-In & Dimensional Information

Rough-In for HOP Bench Hoods

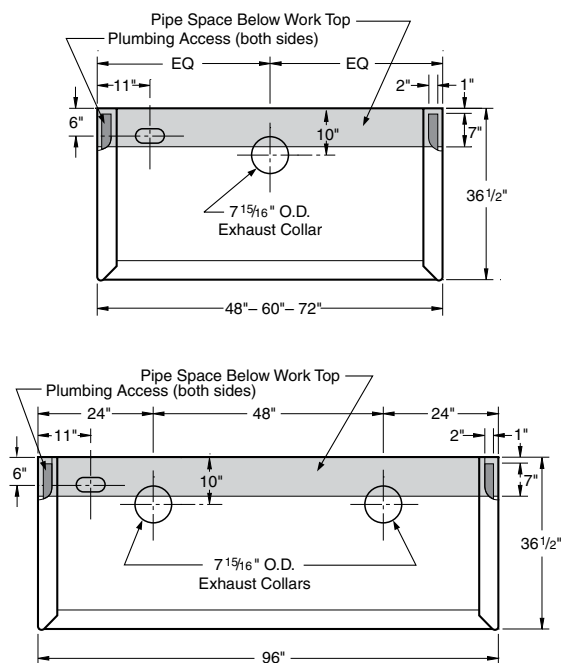


**Vertical Section
HOP Bench Hoods**

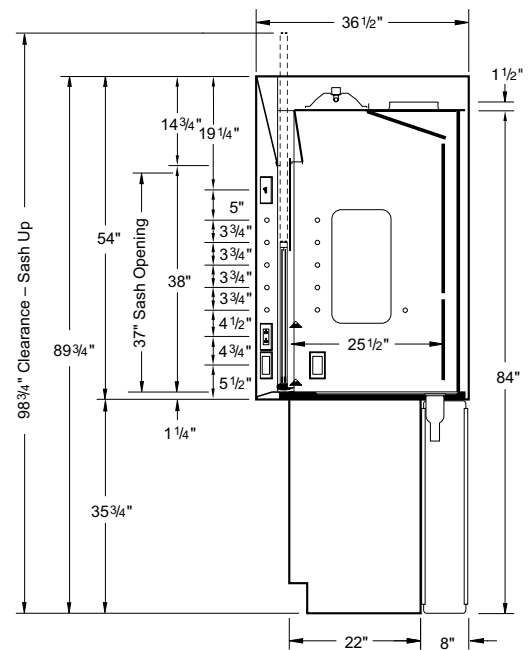


Dynamic Barrier Bench Hood - Rough-In & Dimensional Information

Rough-In for H50 Dynamic Barrier Bench Hood



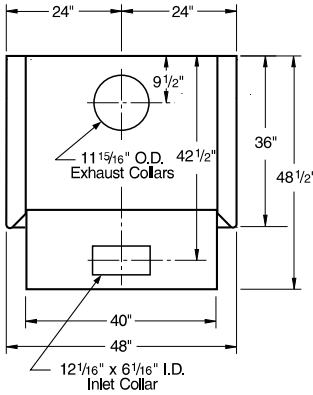
**Vertical Section
H50 Dynamic Barrier Bench Hood**



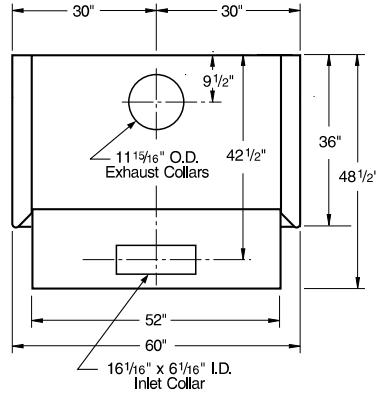
Supreme Air Fume Hood Technical Data

Auxiliary Air Chamber - Rough-In & Dimensional Information

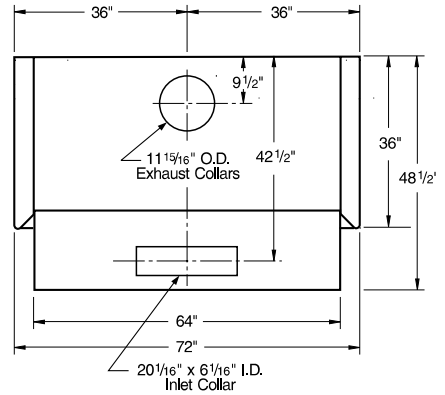
4'-0" - 48"



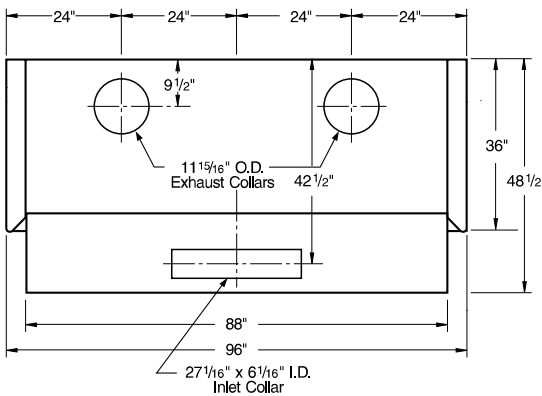
5'-0" - 60"



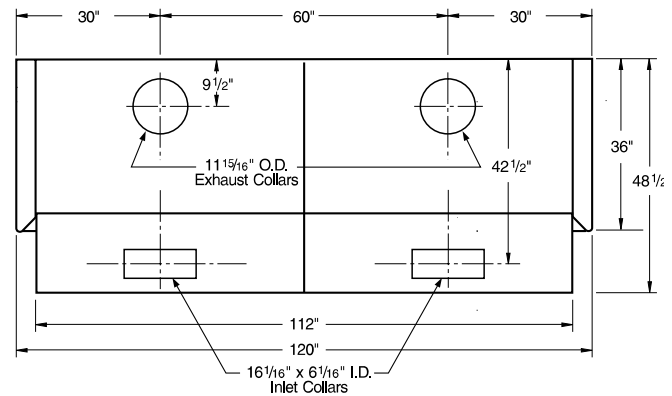
6'-0" - 72"



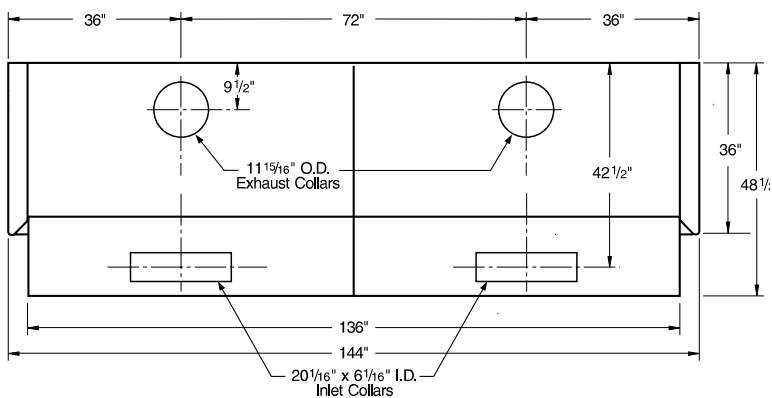
8'-0" - 96"



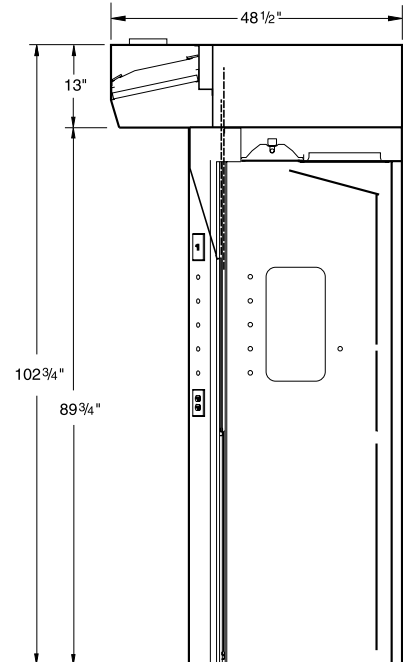
10'-0" - 120"



12'-0" - 144"

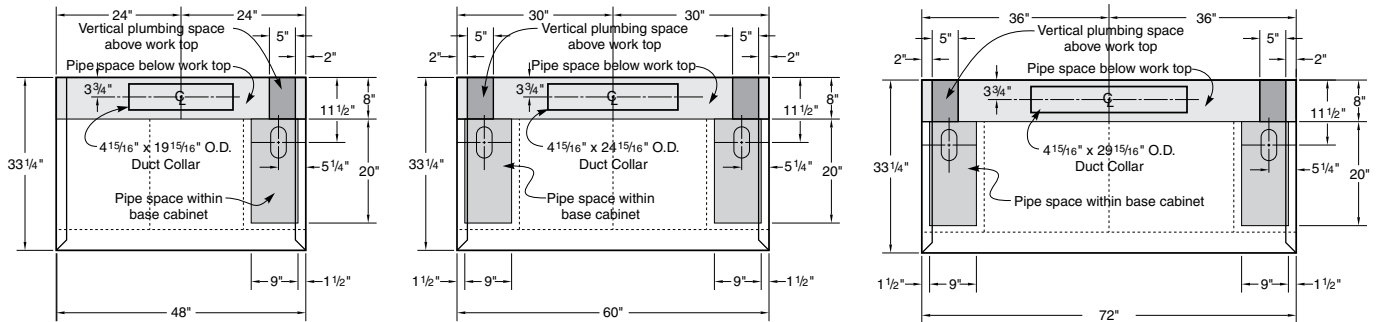


Vertical Section

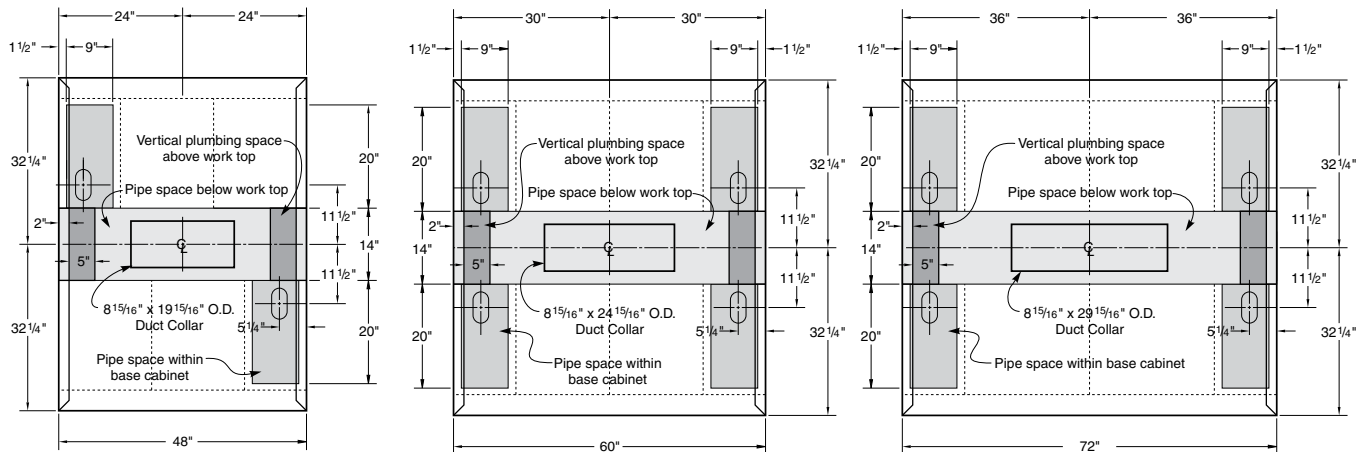


TruView® Teaching Hoods Technical Data

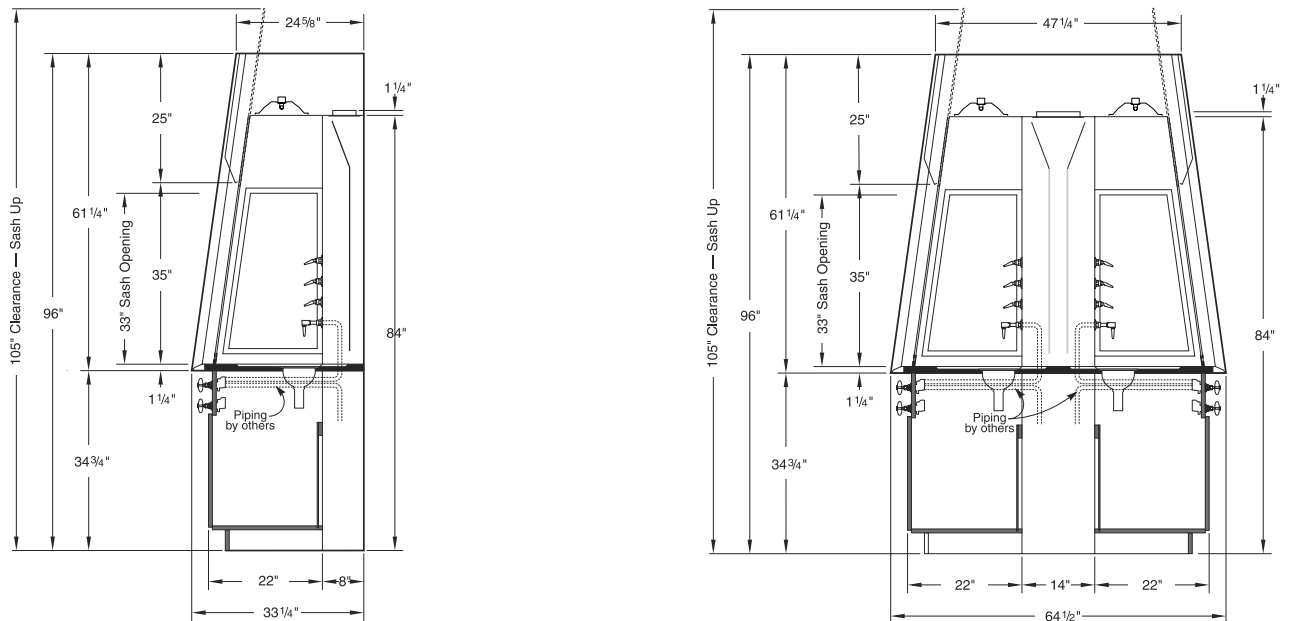
Single-sided Hood Rough-In Information



Double-sided Hood Rough-In Information



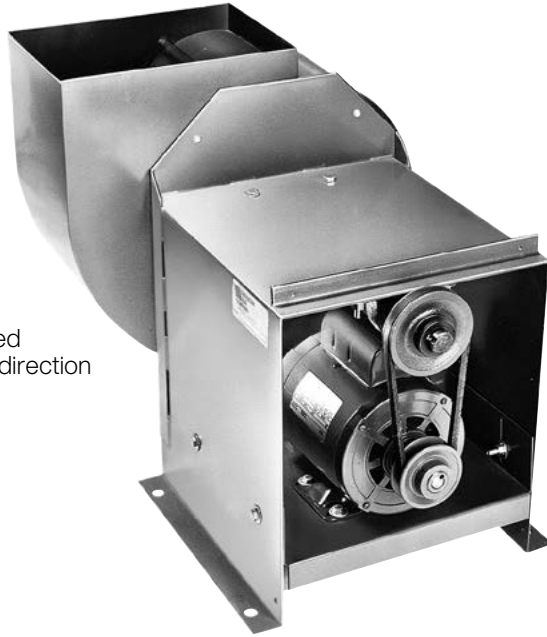
Dimensional Information



ADA height base units subtracts 2" from cabinet height, overall height, and sash clearance, steel base cabinets add 1".

General Fan Information

Centrifugal Fans are air moving devices in which the air flow is perpendicular to the shaft on which the impeller wheel is mounted. The impeller wheel is mounted in a scroll-type housing, which is required to develop the rated pressures. All fans offered in this catalog use impeller wheels with forward inclined blades with respect to the direction of rotation.



Rear view of fan with weather cover removed

Forward Inclined Blade Fans have small, curved blades with the tips inclined in the direction of rotation.



Front view of fan with weather cover in place

All fans have rubber mounted, dynamically balanced impeller wheels. The rugged, welded housings and integrated weather covers have a chemical resistant, synthetic resin finish. V-belts are oil resistant and static conductive. Fans are rated in accordance with AMCA. Vibration isolators are provided with all fans.

Fans are shipped in the vertical upblast

discharge position, with clockwise rotation as illustrated. However, when specified, they can be factory assembled and shipped in any of seven (7) other clockwise rotation discharge positions.

Catalog Number Explanation

HFS-1310-T1

Fan Type

HFS = Hood Fan Steel Housing

Inlet Size

09 = 9"
10 = 10"
13 = 13 1/4"
14 = 14 1/2"

Motor Phase - Voltage

1 = Single-Phase - 115/208-230 VAC
3 = Three-Phase - 208-230/460 VAC

Motor Type

T = Totally Enclosed

Motor Horsepower

02 = 1/4 HP 05 = 1/2 HP 10 = 1 HP 20 = 2 HP
03 = 1/3 HP 07 = 3/4 HP 15 = 1 1/2 HP

* Fans with explosion proof motors include spark-proof housing and impeller wheel construction.

General Fan Information

Exhaust System Recommendations

1. Mount exhaust fans on the roof so that the ducting leading to the fan inlet is under negative static pressure. If exhaust fans are mounted inside the building, all ducting connected to the fan outlet will be under positive static pressure, and if any leaks should develop in the portion of the duct inside the building, hazardous and/or toxic fumes can be forced out of the duct into that area of the building.
2. To obtain the lowest practical noise level in the exhaust system, we suggest the following measures when there is no conflict with other requirements of the system:
 - a. Use vibration isolators for mounting the exhaust fan assembly.
 - b. Select an exhaust fan that will deliver the desired CFM and static pressure with the lowest practical impeller wheel RPM. If possible, use a duct size large enough to keep duct velocities under 1800 FPM velocity.
 - c. Use a flexible connection at the fan inlet to isolate mechanical transmission of noise via the ducting between the hood and the exhaust fan.
 - d. Design the exhaust duct system with the fewest possible elbows or other fittings. Use radius type elbows and avoid square elbows. Use gradual, tapered transitions where transitions are necessary, and avoid abrupt changes in configuration or cross sectional area.
3. When ordering an exhaust fan, specify the orientation of discharge desired. Vertical upblast discharge is most common and will be supplied unless otherwise specified.
4. Fans used for hood exhaust at altitudes above 1000 ft. may require a correction factor to provide the desired CFM and static pressure. Consult the factory for additional information relating to your specific application.

How To Select a Fume Hood Exhaust Fan using the Fan Recommendation Charts

1. Find the hood type and size in the charts on the next two pages and note the recommended duct size.
2. Determine the length of the duct from the top of the fume hood to the location of fan where it will be mounted. Be sure to include all horizontal runs as well as vertical runs.
3. Determine the number of 90 degree elbows required.
4. Refer to Chart A to determine the equivalent length of straight duct resistance for each elbow.

Note, the values in Chart A are based on elbows with a turning radius of 1.5 times the duct diameter. Elbows with a smaller turning radius should not be used as they have larger static pressure losses and create more noise.
5. Multiply the equivalent straight duct length from Chart A by the number of elbows used and add it to the overall duct length to determine the equivalent length of duct for the system.
6. Use that length (rounded up the the next larger size) to find the recommended fan from the chart.
7. Select the required motor type to finish the catalog number.

T1 = Totally enclosed–Single-phase
T3 = Totally enclosed–Three-phase

Chart A

| Duct Size | Equivalent Straight Duct Resistance |
|-----------|-------------------------------------|
| 8" | 15 feet |
| 10" | 20 feet |
| 12" | 25 feet |
| 14" | 30 feet |
| 16" | 36 feet |
| 18" | 41 feet |
| 20" | 46 feet |

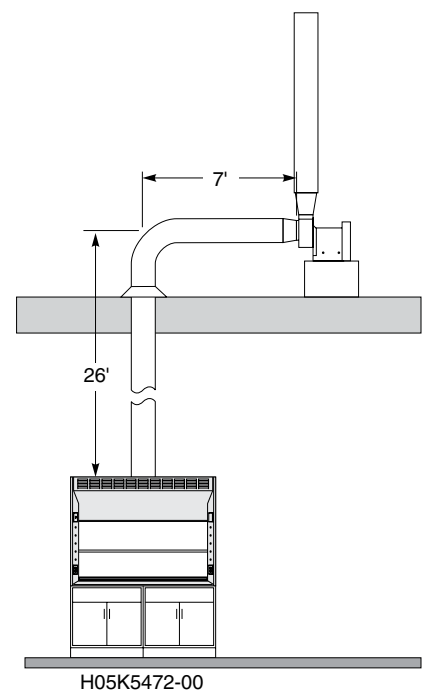
Example:

The recommended fan with a Totally enclosed, Single-phase motor for the hood and duct system shown in the sketch to the right would be as follows:

1. Recommended duct size = **12"**
2. Length of duct 26' + 7' = **33'**
3. Number of elbows = **1**
4. 1 elbow x 25' = **25'**
5. Straight duct 33'
Elbow equivalent +25' = **58'**
6. Recommended fan for 6 foot H05 Fume Hood and equivalent of 75' of duct
7. with Totally enclosed – Single-Phase motor

HFS-1007

HFS-1007-T1



Fan Recommendation Charts

| | | Equivalent Length in Straight Duct | | 25 Feet | | 50 Feet | | 75 Feet | | 100 Feet | | 150 Feet | |
|---|------|---------------------------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|--|
| Hood Size | CFM | Duct Size | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number | |
| H05 General Purpose Bench Hood | | | | | | | | | | | | | |
| 4 ft | 810 | 12" | 1/4 | HFS-0902 | 3/8 | HFS-0902 | 3/8 | HFS-0902 | 3/8 | HFS-0902 | 1/2 | HFS-0903 | |
| 5 ft | 1050 | 12" | 3/8 | HFS-0903 | 1/2 | HFS-0905 | 1/2 | HFS-0905 | 5/8 | HFS-0905 | 3/4 | HFS-0905 | |
| 6 ft | 1290 | 12" | 1/2 | HFS-1007 | 5/8 | HFS-1007 | 3/4 | HFS-1007 | 3/4 | HFS-1007 | 1 | HFS-1007 | |
| 8 ft | 1770 | 14" | 1/2 | HFS-1310 | 1/2 | HFS-1310 | 5/8 | HFS-1310 | 5/8 | HFS-1310 | 7/8 | HFS-1310 | |
| H07 Combination Sash Bench Hood | | | | | | | | | | | | | |
| 4 ft | 480 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | |
| 5 ft | 630 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | |
| 6 ft | 780 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | |
| 8 ft | 1090 | 12" | 1/4" | HFS-0903 | 3/8" | HFS-0903 | 1/2" | HFS-0905 | 1/2" | HFS-0905 | 5/8" | HFS-0905 | |
| H08 ADA Bench Hood | | | | | | | | | | | | | |
| 4 ft | 610 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | |
| 5 ft | 790 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | |
| 6 ft | 980 | 12" | 3/8" | HFS-0903 | 3/8" | HFS-0903 | 1/2" | HFS-0905 | 1/2" | HFS-0905 | 5/8" | HFS-0905 | |
| H09 ADA Combination Sash Bench Hood | | | | | | | | | | | | | |
| 4 ft | 480 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | |
| 5 ft | 630 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | |
| 6 ft | 780 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | |
| H10 Split Sash Bench Hood | | | | | | | | | | | | | |
| 8 ft | 1770 | 14" | 1/2" | HFS-1310 | 1/2" | HFS-1310 | 5/8" | HFS-1310 | 5/8" | HFS-1310 | 7/8" | HFS-1310 | |
| 10 ft | 2260 | 16" | 1/2" | HFS-1310 | 5/8" | HFS-1310 | 5/8" | HFS-1310 | 5/8" | HFS-1310 | 3/4" | HFS-1310 | |
| 12 ft | 2740 | 16" | 5/8" | HFS-1315 | 3/4" | HFS-1315 | 7/8" | HFS-1315 | 7/8" | HFS-1315 | 1 1/8" | HFS-1315 | |
| H20 Isotope Bench Hood | | | | | | | | | | | | | |
| 4 ft | 980 | 12" | 3/8" | HFS-0903 | 1/2" | HFS-0905 | 1/2" | HFS-0905 | 1/2" | HFS-0905 | 5/8" | HFS-0905 | |
| 5 ft | 1260 | 12" | 1/2" | HFS-1007 | 5/8" | HFS-1007 | 3/4" | HFS-1007 | 3/4" | HFS-1007 | 1" | HFS-1007 | |
| 6 ft | 1550 | 12" | 3/4" | HFS-1310 | 7/8" | HFS-1310 | 1 1/8" | HFS-1310 | 1 1/8" | HFS-1310 | 1 3/8" | ** | |
| 8 ft | 2130 | 14" | 5/8" | HFS-1310 | 3/4" | HFS-1310 | 1" | HFS-1315 | 1" | HFS-1315 | 1 1/8" | HFS-1315 | |
| H25 Perchloric Acid Bench Hood | | | | | | | | | | | | | |
| 4 ft | 980 | 12" | 3/8" | *** | 1/2" | *** | 1/2" | *** | 1/2" | *** | 5/8" | *** | |
| 5 ft | 1260 | 12" | 1/2" | *** | 5/8" | *** | 3/4" | *** | 3/4" | *** | 1" | *** | |
| 6 ft | 1550 | 12" | 3/4" | *** | 7/8" | *** | 1 1/8" | *** | 1 1/8" | *** | 1 3/8" | *** | |
| H50 Dynamic Barrier – Ultra Low Constant Volume Hood | | | | | | | | | | | | | |
| 4 ft | 225 | 8" | 1/8" | HFS-0905* | 1/8" | HFS-0905* | 1/8" | HFS-0905* | 1/8" | HFS-0905* | 1/4" | HFS-0905* | |
| 5 ft | 280 | 8" | 1/8" | HFS-0905* | 1/8" | HFS-0905* | 1/4" | HFS-0905* | 1/4" | HFS-0905* | 1/4" | HFS-0905* | |
| 6 ft | 350 | 8" | 1/4" | HFS-0905* | 1/4" | HFS-0905* | 1/4" | HFS-0905* | 3/8" | HFS-0905* | 1/2" | HFS-0905* | |
| 8 ft | 485 | 8" | 1/4" | HFS-0905* | 3/8" | HFS-0905* | 3/8" | HFS-0905* | 5/8" | HFS-0905* | 3/4" | HFS-0905* | |
| HOP HOPEC General Purpose Bench Hood | | | | | | | | | | | | | |
| 4 ft | 400 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | |
| 5 ft | 540 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0905 | 1/4" | HFS-0902 | |
| 6 ft | 680 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | |
| 8 ft | 950 | 14" | 1/4" | HFS-0903 | 3/8" | HFS-0903 | 1/2" | HFS-0903 | 1/2" | HFS-0903 | 5/8" | HFS-0905 | |

* Use a duct air by-pass at fan to increase the amount of air handled by fan.

** Standard fan not available, consult your Kewaunee sales representative.

*** Requires a Perchloric Acid exhaust fan, consult your Kewaunee sales representative.

Fan Recommendation Charts

| Equivalent Length in Straight Duct | | | 25 Feet | | 50 Feet | | 75 Feet | | 100 Feet | | 150 Feet | |
|---|------|-----------|------------|------------------|------------|------------------|------------|------------------|------------|------------------|------------|------------------|
| Hood Size | CFM | Duct Size | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number | Total S.P. | Fan Model Number |
| H70 Horizontal Sash Bench Hood | | | | | | | | | | | | |
| 4 ft | 520 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 |
| 5 ft | 680 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 |
| 6 ft | 850 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 1/2" | HFS-0903 |
| 8 ft | 1180 | 12" | 3/8" | HFS-0905 | 3/8" | HFS-0905 | 1/2" | HFS-0905 | 5/8" | HFS-0905 | 3/4" | HFS-0905 |
| H30 General Purpose Walk-in Hood | | | | | | | | | | | | |
| 4 ft | 810 | 12" | 1/4" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 1/2" | HFS-0903 |
| 5 ft | 1050 | 12" | 3/8" | HFS-0903 | 1/2" | HFS-0905 | 1/2" | HFS-0905 | 5/8" | HFS-0905 | 3/4" | HFS-0905 |
| 6 ft | 1290 | 12" | 1/2" | HFS-1007 | 5/8" | HFS-1007 | 3/4" | HFS-1007 | 3/4" | HFS-1007 | 1" | HFS-1007 |
| 8 ft | 1770 | 14" | 1/2" | HFS-1310 | 1/2" | HFS-1310 | 5/8" | HFS-1310 | 5/8" | HFS-1310 | 7/8" | HFS-1310 |
| H32 Combination Sash Walk-in Hood | | | | | | | | | | | | |
| 4 ft | 480 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 |
| 5 ft | 630 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 |
| 6 ft | 780 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 | 3/8" | HFS-0902 |
| 8 ft | 1090 | 12" | 1/4" | HFS-0903 | 3/8" | HFS-0903 | 1/2" | HFS-0905 | 1/2" | HFS-0905 | 5/8" | HFS-0905 |
| H34 Horizontal Sash Walk-in Hood | | | | | | | | | | | | |
| 6 ft | 2210 | 16" | 5/8" | HFS-1310 | 3/4" | HFS-1310 | 3/4" | HFS-1310 | 7/8" | HFS-1310 | 7/8" | HFS-1310 |
| 8 ft | 3070 | 18" | 7/8" | HFS-1420 | 7/8" | HFS-1420 | 7/8" | HFS-1420 | 1" | HFS-1420 | 1 1/8" | HFS-1420 |
| 10 ft | 3930 | 20" | 1 1/4" | ** | 1 1/4" | ** | 1 1/4" | ** | 1 3/8" | ** | 1 1/2" | ** |
| H36 Distillation Hood | | | | | | | | | | | | |
| 4 ft | 1160 | 12" | 1/2" | HFS-0905 | 5/8" | HFS-0905 | 3/4" | HFS-0905 | 3/4" | HFS-0905 | 7/8" | HFS-1007 |
| 5 ft | 1510 | 12" | 3/4" | HFS-1310 | 7/8" | HFS-1310 | 1" | HFS-1310 | 1 1/8" | HFS-1310 | 1 3/8" | ** |
| 6 ft | 1860 | 12" | 1" | HFS-1310 | 1 1/4" | HFS-1315 | 1 3/8" | HFS-1315 | 1 5/8" | HFS-1315 | 1 7/8" | ** |
| 8 ft | 2550 | 16" | 3/4" | HFS-1315 | 3/4" | HFS-1315 | 7/8" | HFS-1315 | 7/8" | HFS-1315 | 1 1/8" | HFS-1315 |
| H52 Dynamic Barrier – Ultra Low Constant Volume Walk-in Hood | | | | | | | | | | | | |
| 4 ft | 300 | 8" | 1/8" | HFS-0905* | 1/4" | HFS-0905* | 1/4" | HFS-0905* | 1/4" | HFS-0905* | 1/4" | HFS-0905* |
| 5 ft | 400 | 8" | 1/4" | HFS-0905* | 3/8" | HFS-0905* | 3/8" | HFS-0905* | 1/2" | HFS-0905* | 5/8" | HFS-0905* |
| 6 ft | 500 | 8" | 3/8" | HFS-0905* | 1/2" | HFS-0905* | 1/2" | HFS-0905* | 5/8" | HFS-0905* | 7/8" | HFS-0905* |
| 8 ft | 675 | 10" | 1/4" | HFS-0902* | 3/8" | HFS-0902* | 3/8" | HFS-0902* | 1/2" | HFS-0902* | 5/8" | HFS-0903* |
| T90 Single-sided TruView Hood | | | | | | | | | | | | |
| 4 ft | 550 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 |
| 5 ft | 700 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 |
| 6 ft | 850 | 12" | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 1/4" | HFS-0902 | 3/8" | HFS-0902 |
| T90 Double-sided TruView Hood | | | | | | | | | | | | |
| 4 ft | 1100 | 12" | 1/4" | HFS-0903 | 3/8" | HFS-0905 | 3/8" | HFS-0905 | 1/2" | HFS-0905 | 5/8" | HFS-0905 |
| 5 ft | 1400 | 12" | 1/4" | HFS-1007 | 3/8" | HFS-1007 | 1/2" | HFS-1007 | 5/8" | HFS-1007 | 3/4" | HFS-1007 |
| 6 ft | 1700 | 14" | 1/4" | HFS-1310 | 3/8" | HFS-1310 | 3/8" | HFS-1310 | 1/2" | HFS-1310 | 5/8" | HFS-1310 |

* Use a duct air by-pass at fan to increase the amount of air handled by fan.

** Standard fan not available, consult your Kewaunee sales representative.

General Fan Information

How To Select V-Belt Drive Fans (when not using the Fan Recommendation Charts)

1. Select the size fan desired from the CFM-Static Pressure charts on the next several pages, and sizing instructions below.
2. Select the type of motor desired to suit the operating conditions:
T1= Totally enclosed-Single-phase
T3= Totally enclosed-Three- phase
3. V-belt drive fans are provided with adjustable pitch motor sheaves to cover the RPM range indicated for each fan. If the desired RPM and/or CFM-Static Pressure is not indicated, the fan will be shipped with the adjustable motor sheave set to the midpoint of the RPM range.

Sizing a Fan

To determine the size of a fan required for a fume hood system, both the air volume flow rate and the system static pressure must be determined. The air volume flow rate at various face velocities, in cubic feet per minute (CFM), is shown on the specification page for each style and size of fume hood. The system static pressure must be calculated based on the air volume flow rate, static pressure, and duct configuration.

Below is a simplified method of calculating the system static pressure which gives sufficient accuracy for the small fan systems used for one or two laboratory fume hoods. This method ignores the effect poor inlet conditions can have on fan performance. This effect can be minimized by using at least five (5) feet of straight duct at the inlet of the fan and having a gradual transition to the fan inlet.

1. Determine Duct Size

The duct size used should be at least as large as the duct collar on the fume hood. (12" on all Supreme Air Fume Hoods.) For quiet operation, a duct velocity of less than 1800 feet per minute should be used. Duct velocities for various duct sizes and air volume flow rates are given in Table 1.

2. Determine Hood Static Pressure

The hood static pressure can be found listed next to the air volume flow rates on the specification page for each style fume hood.

3. Calculated Loss in Straight Duct

The length of straight duct should be known to within ten (10) feet of the actual length. Small inaccuracies in

the length of duct do not affect the results. The static pressure loss per hundred feet of straight duct is given in Table 2. The static pressure loss in the straight duct is equal to the length of straight duct in feet, multiplied by the value obtained from Table 2, divided by 100.

4. Calculated Loss in Elbow

The exact number of elbows needs to be determined as it has a significant effect on the results. Table 3 gives the static pressure loss per elbow. The values in Table 3 are based on elbows with a turning radius of 1.5 times the duct diameter. Elbows of smaller turning radius should not be used as they have larger static pressure losses and create more noise. The static pressure loss in the elbows is equal to the number of elbows multiplied by the value obtained from Table 3.

5. Calculate Loss in "Y"

Table 4 gives the static pressure loss for a "Y" connection used on hoods with two duct collars or duct systems serving two fume hoods. The values in Table 4 are based on "Y"s with included angles of 90 degrees. "Y"s with larger included angles and "T"s should not be used as they have larger pressure losses and create more noise.

6. Calculate Total Static Pressure

The total system static pressure is the sum of the fume hood static pressure, the static pressure loss due to friction in the straight duct, and the static pressure losses due to change in direction and turbulence in the elbows and "Y"s. Add the values obtained in steps 2 through 5 to calculate the total

system static pressure.

Table 1

| CFM | Duct Velocity feet per minute | | | | |
|------|----------------------------------|------|------|------|------|
| | 10" | 12" | 14" | 16" | 18" |
| 400 | 733 | 509 | | | |
| 500 | 917 | 637 | 468 | | |
| 600 | 1100 | 764 | 561 | | |
| 700 | 1283 | 891 | 655 | 501 | |
| 800 | 1467 | 1019 | 748 | 573 | |
| 900 | 1650 | 1146 | 842 | 645 | 509 |
| 1000 | 1833 | 1273 | 935 | 716 | 566 |
| 1100 | 2017 | 1401 | 1029 | 788 | 622 |
| 1200 | 2200 | 1528 | 1123 | 859 | 679 |
| 1300 | 2384 | 1655 | 1216 | 931 | 736 |
| 1400 | 2567 | 1783 | 1310 | 1003 | 792 |
| 1500 | 2750 | 1910 | 1403 | 1074 | 849 |
| 1600 | 2934 | 2037 | 1497 | 1146 | 905 |
| 1700 | | 2165 | 1590 | 1218 | 962 |
| 1800 | | 2292 | 1684 | 1289 | 1019 |
| 1900 | | 2419 | 1777 | 1361 | 1075 |
| 2000 | | 2546 | 1871 | 1432 | 1132 |
| 2200 | | 2801 | 2058 | 1576 | 1245 |
| 2400 | | | 2245 | 1719 | 1358 |
| 2600 | | | 2432 | 1862 | 1471 |
| 2800 | | | 2619 | 2005 | 1584 |
| 3000 | | | 2806 | 2149 | 1698 |
| 3200 | | | 2993 | 2292 | 1811 |
| 3400 | | | | 2435 | 1924 |
| 3600 | | | | 2578 | 2037 |
| 3800 | | | | 2722 | 2150 |
| 4000 | | | | 2865 | 2264 |

 = Increased noise level

General Fan Information

Sizing a Fan (Continued)

Table 2

| Static Pressure Loss per 100 Ft. of Duct in Inches of Water | | | | | |
|---|------|------|------|------|------|
| CFM | 10" | 12" | 14" | 16" | 18" |
| 400 | 0.09 | 0.04 | | | |
| 500 | 0.14 | 0.06 | 0.03 | | |
| 600 | 0.20 | 0.08 | 0.04 | | |
| 700 | 0.27 | 0.11 | 0.05 | 0.03 | |
| 800 | 0.34 | 0.14 | 0.06 | 0.03 | |
| 900 | 0.43 | 0.17 | 0.08 | 0.04 | 0.02 |
| 1000 | 0.52 | 0.21 | 0.10 | 0.05 | 0.03 |
| 1100 | 0.63 | 0.25 | 0.12 | 0.06 | 0.03 |
| 1200 | 0.74 | 0.30 | 0.14 | 0.07 | 0.04 |
| 1300 | 0.86 | 0.34 | 0.16 | 0.08 | 0.04 |
| 1400 | 0.99 | 0.40 | 0.18 | 0.09 | 0.05 |
| 1500 | 1.13 | 0.45 | 0.21 | 0.11 | 0.06 |
| 1600 | 1.28 | 0.51 | 0.24 | 0.12 | 0.07 |
| 1700 | | 0.57 | 0.26 | 0.14 | 0.07 |
| 1800 | | 0.64 | 0.29 | 0.15 | 0.08 |
| 1900 | | 0.71 | 0.33 | 0.17 | 0.09 |
| 2000 | | 0.78 | 0.36 | 0.18 | 0.10 |
| 2200 | | 0.94 | 0.43 | 0.22 | 0.12 |
| 2400 | | | 0.51 | 0.26 | 0.14 |
| 2600 | | | 0.59 | 0.30 | 0.17 |
| 2800 | | | 0.68 | 0.35 | 0.19 |
| 3000 | | | 0.78 | 0.40 | 0.22 |
| 3200 | | | 0.88 | 0.45 | 0.25 |
| 3400 | | | | 0.50 | 0.28 |
| 3600 | | | | 0.56 | 0.31 |
| 3800 | | | | 0.62 | 0.35 |
| 4000 | | | | 0.69 | 0.38 |

= Increased noise level

Table 3

| Static Pressure Loss per 90 Degree Elbow* in Inches of Water | | | | | |
|--|------|------|------|------|------|
| CFM | 10" | 12" | 14" | 16" | 18" |
| 400 | 0.01 | 0.01 | | | |
| 500 | 0.02 | 0.01 | 0.01 | | |
| 600 | 0.03 | 0.01 | 0.01 | | |
| 700 | 0.04 | 0.02 | 0.01 | 0.01 | |
| 800 | 0.05 | 0.03 | 0.01 | 0.01 | |
| 900 | 0.07 | 0.03 | 0.02 | 0.01 | 0.01 |
| 1000 | 0.08 | 0.04 | 0.02 | 0.01 | 0.01 |
| 1100 | 0.10 | 0.05 | 0.03 | 0.02 | 0.01 |
| 1200 | 0.12 | 0.06 | 0.03 | 0.02 | 0.01 |
| 1300 | 0.14 | 0.07 | 0.04 | 0.02 | 0.01 |
| 1400 | 0.16 | 0.08 | 0.04 | 0.02 | 0.02 |
| 1500 | 0.18 | 0.09 | 0.05 | 0.03 | 0.02 |
| 1600 | 0.21 | 0.10 | 0.05 | 0.03 | 0.02 |
| 1700 | | 0.11 | 0.06 | 0.04 | 0.02 |
| 1800 | | 0.13 | 0.07 | 0.04 | 0.03 |
| 1900 | | 0.14 | 0.08 | 0.05 | 0.03 |
| 2000 | | 0.16 | 0.09 | 0.05 | 0.03 |
| 2200 | | 0.19 | 0.10 | 0.06 | 0.04 |
| 2400 | | | 0.12 | 0.07 | 0.04 |
| 2600 | | | 0.14 | 0.08 | 0.05 |
| 2800 | | | 0.17 | 0.10 | 0.06 |
| 3000 | | | 0.19 | 0.11 | 0.07 |
| 3200 | | | 0.22 | 0.13 | 0.08 |
| 3400 | | | | 0.14 | 0.09 |
| 3600 | | | | 0.16 | 0.10 |
| 3800 | | | | 0.18 | 0.11 |
| 4000 | | | | 0.20 | 0.12 |

*Loss for 45 degree elbows is 1/2 that for 90 degree elbows.

Table 4

| Static Pressure Loss for "Y" Fitting* in Inches of Water | | | | |
|--|------|------|------|------|
| CFM | 12" | 14" | 16" | 18" |
| 800 | 0.05 | 0.03 | 0.01 | |
| 900 | 0.07 | 0.03 | 0.01 | |
| 1000 | 0.09 | 0.04 | 0.02 | |
| 1100 | 0.10 | 0.05 | 0.02 | 0.01 |
| 1200 | 0.12 | 0.06 | 0.02 | 0.01 |
| 1300 | 0.14 | 0.07 | 0.03 | 0.02 |
| 1400 | 0.17 | 0.08 | 0.03 | 0.02 |
| 1500 | 0.19 | 0.09 | 0.04 | 0.02 |
| 1600 | 0.22 | 0.10 | 0.04 | 0.03 |
| 1700 | 0.25 | 0.11 | 0.05 | 0.03 |
| 1800 | 0.28 | 0.13 | 0.05 | 0.03 |
| 1900 | 0.31 | 0.14 | 0.06 | 0.04 |
| 2000 | 0.34 | 0.16 | 0.07 | 0.04 |
| 2200 | 0.41 | 0.19 | 0.08 | 0.05 |
| 2400 | | 0.23 | 0.10 | 0.06 |
| 2600 | | 0.26 | 0.11 | 0.07 |
| 2800 | | 0.31 | 0.13 | 0.08 |
| 3000 | | 0.35 | 0.15 | 0.09 |
| 3200 | | 0.40 | 0.17 | 0.10 |
| 3400 | | | 0.19 | 0.11 |
| 3600 | | | 0.21 | 0.13 |
| 3800 | | | 0.24 | 0.14 |
| 4000 | | | 0.27 | 0.16 |

* Based on two 12" diameter ducts joining to the duct size shown. The included angle of the two 12" ducts is 90 degrees.

V-Belt Drive Fan – Forward Inclined Blades

Wheel Diameter: 9^{3/16}"

Inlet: Size: 9" dia. O.D.
Area: 0.43 sq. ft. I.D.

Outlet: Size: 10^{3/4}" x 6^{1/2}" outside
Area: 0.468 sq. ft. inside

HFS-0902-T1 HFS-0902-T3 **1/4-Horse Power Motor**

| Wheel RPM | CFM@ 1/8" SP | CFM@ 1/4" SP | CFM@ 3/8" SP | CFM@ 1/2" SP | CFM@ 5/8" SP | CFM@ 3/4" SP | CFM@ 7/8" SP | CFM@ 1" SP | CFM@ 1 1/8" SP | CFM@ 1 1/4" SP | CFM@ 1 3/8" SP | CFM@ 1 1/2" SP |
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|----------------|----------------|----------------|----------------|
| 654 | 684 | 487 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 732 | 796 | 648 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 805 | 895 | 777 | 609 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 879 | 994 | 898 | 760 | 562 | --- | --- | --- | --- | --- | --- | --- | --- |
| 938 | 1074 | 986 | 869 | 720 | --- | --- | --- | --- | --- | --- | --- | --- |

HFS-0903-T1 HFS-0903-T3 **1/3-Horse Power Motor**

| | | | | | | | | | | | | |
|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| 805 | 895 | 777 | 609 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 879 | 994 | 898 | 760 | 562 | --- | --- | --- | --- | --- | --- | --- | --- |
| 938 | 1074 | 986 | 869 | 720 | --- | --- | --- | --- | --- | --- | --- | --- |
| 1017 | 1180 | 1101 | 1003 | 882 | 730 | --- | --- | --- | --- | --- | --- | --- |
| 1085 | * | * | 1114 | 1006 | 884 | 709 | --- | --- | --- | --- | --- | --- |
| 1134 | * | * | * | 1091 | 981 | 850 | --- | --- | --- | --- | --- | --- |

HFS-0905-T1 HFS-0905-T3 **1/2-Horse Power Motor**

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|
| 1017 | 1180 | 1101 | 1003 | 882 | 730 | --- | --- | --- | --- | --- | --- | --- |
| 1085 | 1269 | 1194 | 1114 | 1006 | 884 | 709 | --- | --- | --- | --- | --- | --- |
| 1134 | 1335 | 1260 | 1187 | 1091 | 981 | 850 | --- | --- | --- | --- | --- | --- |
| 1181 | * | 1323 | 1255 | 1169 | 1068 | 953 | 799 | --- | --- | --- | --- | --- |
| 1245 | * | * | 1347 | 1273 | 1181 | 1081 | 963 | 796 | --- | --- | --- | --- |
| 1301 | * | * | * | * | * | 1184 | 1081 | 971 | --- | --- | --- | --- |

Wheel Diameter: 10^{5/8}"

Inlet: Size: 10" dia. O.D.
Area: 0.53 sq. ft. I.D.

Outlet: Size: 11^{3/4}" x 8" outside
Area: 0.653 sq. ft. inside

HFS-1007-T1 HFS-1007-T3 **3/4-Horse Power Motor**

| Wheel RPM | CFM@ 1/8" SP | CFM@ 1/4" SP | CFM@ 3/8" SP | CFM@ 1/2" SP | CFM@ 5/8" SP | CFM@ 3/4" SP | CFM@ 7/8" SP | CFM@ 1" SP | CFM@ 1 1/8" SP | CFM@ 1 1/4" SP | CFM@ 1 3/8" SP | CFM@ 1 1/2" SP |
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|----------------|----------------|----------------|----------------|
| 805 | 1235 | 1195 | 1081 | 928 | --- | --- | --- | --- | --- | --- | --- | --- |
| 879 | 1354 | 1327 | 1252 | 1124 | 979 | --- | --- | --- | --- | --- | --- | --- |
| 938 | 1447 | 1424 | 1375 | 1267 | 1141 | 986 | --- | --- | --- | --- | --- | --- |
| 1017 | 1572 | 1553 | 1521 | 1450 | 1341 | 1222 | 1083 | --- | --- | --- | --- | --- |
| 1085 | 1680 | 1662 | 1639 | 1590 | 1503 | 1397 | 1284 | 1151 | --- | --- | --- | --- |
| 1134 | * | * | * | 1682 | 1615 | 1516 | 1413 | 1300 | 1149 | --- | --- | --- |

* Do not use at these static pressures. Will result in severe motor overload.

V-Belt Drive Fan – Forward Inclined Blades

Wheel Diameter: 12³/₁₆"

Inlet: Size: 13¹/₄" dia. O.D.
Area: 0.94 sq. ft. I.D.

Outlet: Size: 13¹/₄" x 9⁵/₈" outside
Area: 0.886 sq. ft. inside

HFS-1310-T1 HFS-1310-T3 1-Horse Power Motor

| Wheel RPM | CFM@ 1/8" SP | CFM@ 1/4" SP | CFM@ 3/8" SP | CFM@ 1/2" SP | CFM@ 5/8" SP | CFM@ 3/4" SP | CFM@ 7/8" SP | CFM@ 1" SP | CFM@ 1 1/8" SP | CFM@ 1 1/4" SP | CFM@ 1 3/8" SP | CFM@ 1 1/2" SP |
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|----------------|----------------|----------------|----------------|
| 654 | 1951 | 1739 | 1650 | 1441 | 985 | --- | --- | --- | --- | --- | --- | --- |
| 732 | 2217 | 2033 | 1891 | 1824 | 1616 | 1231 | --- | --- | --- | --- | --- | --- |
| 805 | 2463 | 2326 | 2147 | 2062 | 1991 | 1789 | 1462 | --- | --- | --- | --- | --- |
| 879 | 2718 | 2606 | 2416 | 2296 | 2239 | 2170 | 1987 | 1712 | --- | --- | --- | --- |
| 938 | * | * | * | 2508 | 2421 | 2375 | 2298 | 2115 | 1860 | 1525 | --- | --- |

HFS-1315-T1 HFS-1315-T3 1 1/2-Horse Power Motor

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 879 | 2718 | 2606 | 2416 | 2296 | 2239 | 2170 | 1987 | 1712 | --- | --- | --- | --- |
| 938 | 2920 | 2807 | 2657 | 2508 | 2421 | 2375 | 2298 | 2115 | 1860 | 1525 | --- | --- |
| 980 | 3066 | 2949 | 2822 | 2657 | 2557 | 2507 | 2456 | 2344 | 2155 | 1889 | --- | --- |
| 1030 | 3234 | 3117 | 3019 | 2854 | 2738 | 2657 | 2619 | 2564 | 2436 | 2252 | 2000 | 1693 |
| 1080 | * | * | * | 3056 | 2916 | 2823 | 2773 | 2732 | 2672 | 2535 | 2364 | 2120 |
| 1130 | * | * | * | * | * | * | * | 2889 | 2847 | 2784 | 2646 | 2486 |

Wheel Diameter: 13¹/₂"

Inlet: Size: 14¹/₂" dia. O.D.
Area: 1.13 sq. ft. I.D.

Outlet: Size: 14⁵/₈" x 10³/₄" outside
Area: 1.079 sq. ft. inside

HFS-1420-T1 HFS-1420-T3 2-Horse Power Motor

| Wheel RPM | CFM@ 1/8" SP | CFM@ 1/4" SP | CFM@ 3/8" SP | CFM@ 1/2" SP | CFM@ 5/8" SP | CFM@ 3/4" SP | CFM@ 7/8" SP | CFM@ 1" SP | CFM@ 1 1/8" SP | CFM@ 1 1/4" SP | CFM@ 1 3/8" SP | CFM@ 1 1/2" SP |
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|----------------|----------------|----------------|----------------|
| 765 | 3008 | 2869 | 2708 | 2573 | 2477 | 2347 | 2108 | 1665 | --- | --- | --- | --- |
| 807 | 3187 | 3057 | 2909 | 2768 | 2668 | 2569 | 2418 | 2158 | 1696 | --- | --- | --- |
| 861 | 3416 | 3297 | 3162 | 3017 | 2905 | 2823 | 2723 | 2583 | 2342 | 1942 | --- | --- |
| 905 | 3603 | 3492 | 3368 | 3232 | 3110 | 3012 | 2933 | 2828 | 2683 | 2446 | 2062 | --- |
| 950 | 3794 | 3686 | 3570 | 3444 | 3317 | 3214 | 3138 | 3087 | 2946 | 2798 | 2568 | 2206 |
| 1020 | * | * | * | * | * | * | 3440 | 3372 | 3298 | 3205 | 3089 | 2907 |

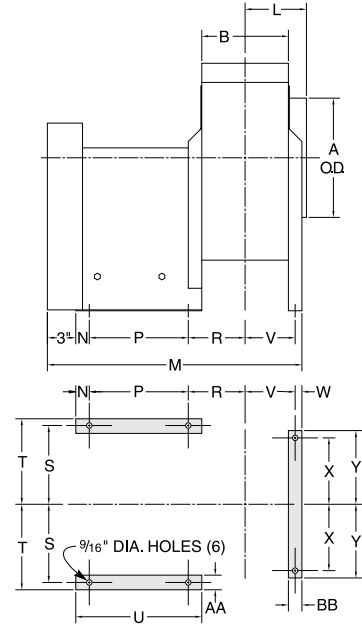
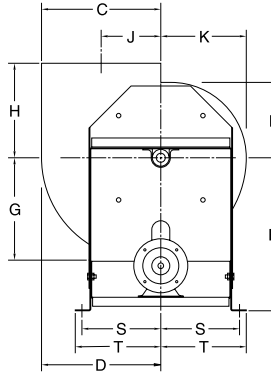
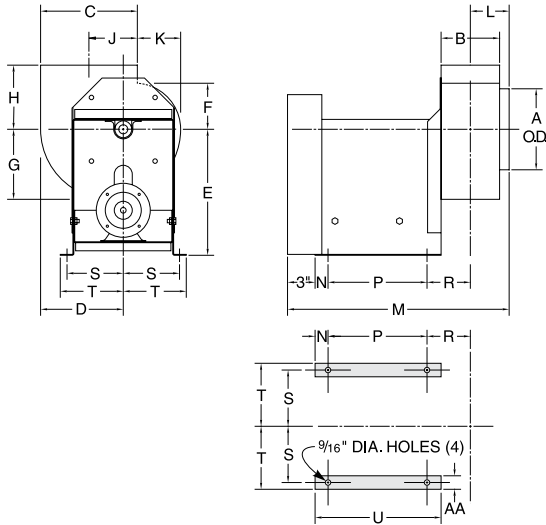
* Do not use at these static pressures. Will result in severe motor overload.

Fan Dimensions

Exhaust/Auxiliary Air Fan Dimensions

HFS-0902 HFS-0903 HFS-0905 HFS-1007

HFS-1310 HFS-1315 HFS-1415 HFS-1420



| | A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | T | U | V | W | X | Y | AA | BB |
|----------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|----|--------------------------------|--------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|----------------------------------|-------------------------------|----|---------------------------------|-------------------------------|---------------------------------|----|--------------------------------|---------------------------------|-------------------------------|---------------------------------|-------------------------------|-------------------------------|
| HFS-0902 | 9 | 6 ¹ / ₂ | 10 ³ / ₄ | 9 ³ / ₁₆ | 14 | 5 ¹ / ₈ | 7 ³ / ₄ | 6 ⁷ / ₈ | 3 ¹³ / ₁₆ | 6 ³ / ₈ | 4 ⁵ / ₁₆ | 24 ⁵ / ₈ | 1 ¹ / ₂ | 11 | 4 ¹³ / ₁₆ | 6 ¹ / ₄ | 7 | 14 | -- | -- | -- | -- | 1 ⁷ / ₈ | -- |
| HFS-0903 | 9 | 6 ¹ / ₂ | 10 ³ / ₄ | 9 ³ / ₁₆ | 14 | 5 ¹ / ₈ | 7 ³ / ₄ | 6 ⁷ / ₈ | 3 ¹³ / ₁₆ | 6 ³ / ₈ | 4 ⁵ / ₁₆ | 24 ⁵ / ₈ | 1 ¹ / ₂ | 11 | 4 ¹³ / ₁₆ | 6 ¹ / ₄ | 7 | 14 | -- | -- | -- | -- | 1 ⁷ / ₈ | -- |
| HFS-0905 | 9 | 6 ¹ / ₂ | 10 ³ / ₄ | 9 ³ / ₁₆ | 14 | 5 ¹ / ₈ | 7 ³ / ₄ | 6 ⁷ / ₈ | 3 ¹³ / ₁₆ | 6 ³ / ₈ | 4 ⁵ / ₁₆ | 24 ⁵ / ₈ | 1 ¹ / ₂ | 11 | 4 ¹³ / ₁₆ | 6 ¹ / ₄ | 7 | 14 | -- | -- | -- | -- | 1 ⁷ / ₈ | -- |
| HFS-1007 | 10 | 8 | 11 ³ / ₄ | 10 ¹¹ / ₁₆ | 14 | 6 ⁵ / ₁₆ | 9 ³ / ₁₆ | 8 ¹ / ₈ | 4 ¹³ / ₁₆ | 7 ¹¹ / ₁₆ | 5 ¹ / ₈ | 26 ⁷ / ₃₂ | 1 ¹ / ₂ | 11 | 5 ¹⁹ / ₃₂ | 7 ¹ / ₄ | 7 ¹³ / ₁₆ | 14 | -- | -- | -- | -- | 1 ¹ / ₂ | -- |
| HFS-1310 | 13 ¹ / ₄ | 9 ⁵ / ₈ | 13 ¹ / ₄ | 13 ¹ / ₄ | 17 | 8 ³ / ₈ | 11 ¹ / ₂ | 10 ¹ / ₂ | 6 ⁵ / ₈ | 9 ⁷ / ₈ | 6 ³ / ₈ | 28 ¹¹ / ₃₂ | 1 ¹ / ₂ | 11 | 6 ¹⁵ / ₃₂ | 8 ³ / ₄ | 9 ¹ / ₂ | 14 | 5 ⁵ / ₈ | 22 ² / ₃₂ | 7 ³ / ₈ | 8 ³ / ₁₆ | 1 ⁵ / ₈ | 1 ¹ / ₂ |
| HFS-1315 | 13 ¹ / ₄ | 9 ⁵ / ₈ | 13 ¹ / ₄ | 13 ¹ / ₄ | 17 | 8 ³ / ₈ | 11 ¹ / ₂ | 10 ¹ / ₂ | 6 ⁵ / ₈ | 9 ⁷ / ₈ | 6 ³ / ₈ | 28 ¹¹ / ₃₂ | 1 ¹ / ₂ | 11 | 6 ¹⁵ / ₃₂ | 8 ³ / ₄ | 9 ¹ / ₂ | 14 | 5 ⁵ / ₈ | 22 ² / ₃₂ | 7 ³ / ₈ | 8 ³ / ₁₆ | 1 ⁵ / ₈ | 1 ¹ / ₂ |
| HFS-1420 | 14 ¹ / ₂ | 10 ³ / ₄ | 14 ⁵ / ₈ | 14 ⁵ / ₈ | 17 | 9 ³ / ₈ | 12 ³ / ₄ | 11 ³ / ₈ | 7 ⁵ / ₁₆ | 11 | 7 | 29 ⁷ / ₁₆ | 1 ¹ / ₂ | 11 | 6 ¹⁵ / ₁₆ | 9 ³ / ₄ | 10 ¹ / ₂ | 14 | 6 ³ / ₁₆ | 13 ¹ / ₁₆ | 8 | 8 ¹³ / ₁₆ | 1 ⁵ / ₈ | 1 ¹ / ₂ |

Fan Accessories

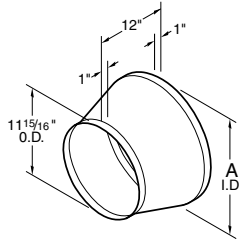
Fan Inlet and Outlet Adapters (Transition Sections)

Fan Inlet and Outlet Adapter (Transition Sections) are available for connection to all Kewaunee V-Belt drive fans. Inlet adapters are sized to connect to 12" dia. ducting from the fume hood on one side,

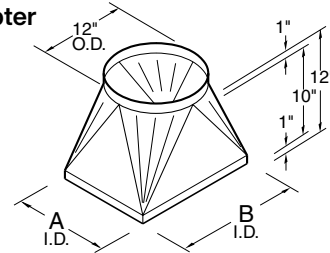
and the fan inlet on the other, making a rigid connection. Outlet adapters are available for connection to 12" dia. stackheads and are sized to fit over the top of the fan outlet. The transition

sections are fabricated of 20 gauge cold rolled steel, phosphate coated and have a baked chemical resistant, synthetic resin finish.

Inlet Adapter



Outlet Adapter



| Inlet Adapter | Fan Catalog Number | Dimension A |
|--------------------|--------------------|-----------------------------------|
| HIA-1209-00 | HFS-0902 | 9 ¹ / ₁₆ " |
| | HFS-0903 | |
| | HFS-0905 | |
| HIA-1210-00 | HFS-1007 | 10 ¹ / ₁₆ " |
| HIA-1213-00 | HFS-1310 | 13 ⁵ / ₁₆ " |
| | HFS-1315 | |
| HIA-1214-00 | HFS-1420 | 14 ⁹ / ₁₆ " |

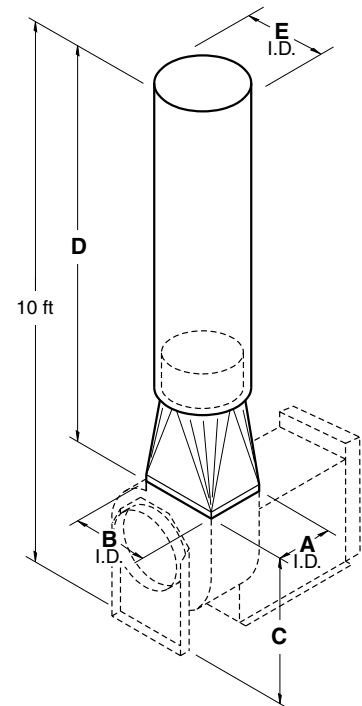
| Outlet Adapter | Fan Catalog Number | Dimensions | |
|--------------------|--------------------|------------------------------------|------------------------------------|
| | | A | B |
| HOA-0912-00 | HFS-0902 | 6 ⁹ / ₁₆ " | 10 ¹³ / ₁₆ " |
| | HFS-0903 | | |
| | HFS-0905 | | |
| HOA-1012-00 | HFS-1007 | 8 ¹ / ₁₆ " | 11 ¹³ / ₁₆ " |
| HOA-1312-00 | HFS-1310 | 9 ¹¹ / ₁₆ " | 13 ⁵ / ₁₆ " |
| | HFS-1315 | | |
| HOA-1412-00 | HFS-1420 | 10 ¹³ / ₁₆ " | 14 ¹¹ / ₁₆ " |

Vertical Exhaust Duct Stackhead Assembly

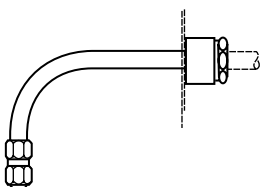
Vertical Exhaust Duct Stackhead Assemblies provide rain cap protection and reduce the possibility of cross contaminating building air and/or auxiliary air intakes by directing air upward instead of downward. These assemblies have the added advantage of little or no pressure loss through them.

Each assembly consists of a vertical discharge cap and transition section that fits over the rectangular exhaust fan outlet. The parts are fabricated of cold rolled steel, phosphate coated with baked chemical resistant, synthetic resin finish, or type 316 stainless steel.

| Cold Rolled Steel Stackhead | Stainless Steel Stackhead | Fan Catalog Number | Dimensions | | | | |
|-----------------------------|---------------------------|--------------------|------------------------------------|------------------------------------|----------------------------------|----------------------------------|-----|
| | | | A | B | C | D | E |
| HES-0909-00 | HES-0909-0S | HFS-0902 | 6 ⁹ / ₁₆ " | 10 ¹³ / ₁₆ " | 20 ⁷ / ₈ " | 99 ¹ / ₈ " | 9" |
| | | HFS-0903 | | | | | |
| | | HFS-0905 | | | | | |
| HES-1011-00 | HES-1011-0S | HFS-1007 | 8 ¹ / ₁₆ " | 11 ¹³ / ₁₆ " | 22 ¹ / ₈ " | 97 ⁷ / ₈ " | 11" |
| HES-1313-00 | HES-1313-0S | HFS-1310 | 9 ¹¹ / ₁₆ " | 13 ⁵ / ₁₆ " | 27 ¹ / ₂ " | 92 ¹ / ₂ " | 13" |
| | | HFS-1315 | | | | | |
| HES-1414-00 | HES-1414-0S | HFS-1420 | 10 ¹³ / ₁₆ " | 14 ¹¹ / ₁₆ " | 28 ³ / ₄ " | 91 ¹ / ₄ " | 14" |



Full-Jet Spray Nozzle Assembly



Designed for exhaust ducts on fume hood exhaust systems that need wash downs after use. Made of type 316 stainless steel, the assembly consists of a spray nozzle, piping to the centerline of the duct, and an exterior duct coupling. The nozzle is rated for 1.4 GPM at 20 psi.

0869-10 for 10" diameter Duct
0869-12 for 12" diameter Duct

Recommended Fume Hood Work Practices

A Safe, Healthy Work Environment

Most people think of a scientific laboratory as a clean, safe place to work. But for the people who work there every day, the typical laboratory—filled with flammable and toxic chemicals, harmful vapors, gases and corrosive acids—can be an extremely hazardous place.

By containing harmful contaminants and venting them out of the work area, laboratory fume hoods help create and maintain a safe, healthy environment for you—the laboratory worker—and your co-workers.

Your fume hood is designed to protect you by providing an enclosed work area that has an air barrier between you and the harmful materials you work with. Behind this protective air barrier,

the hood's directional air flow carries harmful contaminants away from you toward the rear of the hood. Also, the properly tuned hood and its exhaust system dilutes the contaminants with large volumes of air and safely exhausts them.

If anything interferes with the protective air barrier or the fume hood or disrupts the proper air flow, the hood's ability to protect you and your co-workers may be seriously reduced.

Since 1906, we at Kewaunee Scientific Corporation have been designing and building laboratory fume hoods to help keep laboratory work environments safe and healthy. Based on our knowledge and experience, we've outlined a

number of basic safety practices for you and your co-workers to follow when choosing, using and maintaining laboratory fume hoods. The following practices are based on the superior design found in Kewaunee Supreme Air hoods.

We urge you to familiarize yourself with the recommended fume hood work practices on these pages and, even more important, to make a habit of applying them every day. We think you'll agree—it's the best way to help ensure a safe, healthy work area for you and your co-workers.

The Right Fume Hood for the Job

If your laboratory fume hood is to properly protect you, it must be designed for the type of work you're doing.

For example, if you work with radioisotopes, carcinogens or other toxic materials for which decontamination is important, you should always use a hood with a non-absorbent lining that is

designed to be easily decontaminated.

If you work with large volumes of flammable substances, you may need a hood equipped with such features as a non-absorbent lining, explosion-proof lights and electrical receptacles, a fire-suppression system, and a spark-resistant exhaust fan.

If you use perchloric acid heated above ambient temperature then you need a hood and exhaust system specifically designed for this hazard.

To be sure your fume hood is the right one for the work you're doing, contact your local Kewaunee sales representative.

Checking Fume Hood Performance

To confirm that your fume hood exhaust system is working properly, you should equip the hood with an air flow monitor. Inspect both the monitor and the system periodically for malfunctions.

For some applications a pressure gauge (e.g. No. 844 Inclined Manometer) connected to the exhaust duct is sufficient. The safe pressure range should be marked on the gauge. When using more hazardous contaminants, a fume hood alarm such as the Kewaunee Air Alert 300 or Digital Face Velocity Alarms should be used. These alarms provide both a visual and audible warning when the exhaust flow becomes unsafe.

If your hood is equipped with a variable air volume controller (VAV) with alarm capabilities, then an additional alarm is not necessary.

You should have a qualified technician thoroughly test your fume hood before you use it the first time and at least once a year after that. You should also have

your hood tested after any modification to the laboratory ventilation system or other factors which may affect hood exhaust capability or room air flow patterns.

Kewaunee Supreme Air hoods are provided with one of three baffle configurations: fixed, internally adjustable, or internal single point adjustable.

On the fixed baffle configuration the size of the slots in the baffle are optimized to provide the best performance for general purpose use. On the adjustable baffle options the size of the slots in the baffle can be adjusted to provide control over the air flow patterns within the hood. In the internally adjustable baffles the size of the upper and lower slots is adjusted by moving baffle strips. In the internal remote adjustable baffle option, an adjustment knob rotates a damper behind the lower rear baffle to change the relative size of the slots.

In most uses of the hood, the

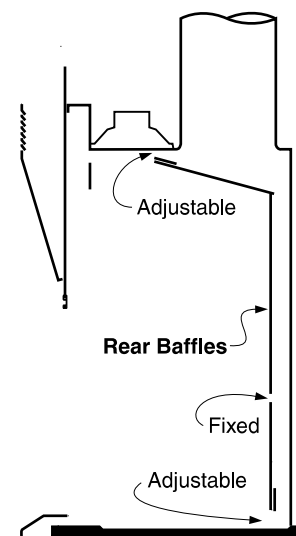


Figure 1. Rear Baffle Arrangements for Internally Adjustable Baffles

Recommended Work Practices (continued)

Checking Fume Hood Performance (continued)

contaminants quickly mix with air to form mixtures which have almost the same density as air. In these cases, baffle position **A (Figure 2)** gives the best performance as it provides good flow in both the lower and upper parts of the hood work area.

When a large hot plate is used in the hood, the heat will cause the contaminants to rise within the hood. Baffle position **B (Figure 2)** allows for more air to be exhausted from the upper part of the work area and gives the best containment in this instance.

If large volumes of very dense vapors are given off in the hood they will tend

to sink within the hood. In this case, the amount of air drawn through the lower work area should be increased by using baffle position **C (Figure 2)**.

Before setting up apparatus in the hood verify that the baffle setting is correct for the procedure to be performed.

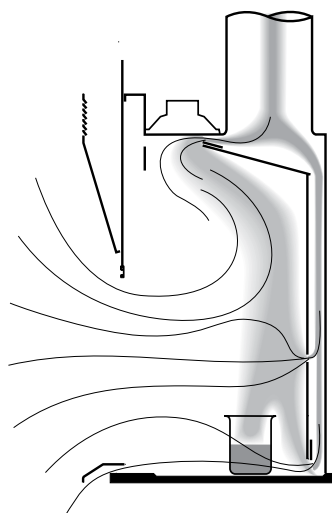
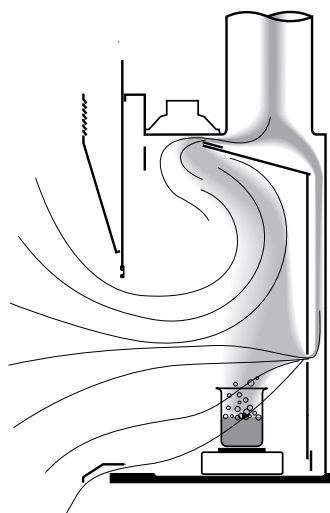
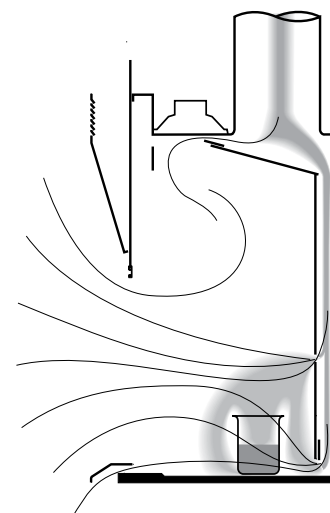


Figure 2
Position **A**
Slot Adjustment for Normal Operation



Position **B**
Slot Adjustment for Large Hot Plates



Position **C**
Slot Adjustment for Heavy Gases and Vapors

Maintaining the Protective Air Barrier for a Safe Work Area

When you stand in front of a laboratory fume hood, the air passing your body to enter the hood forms a zone of low air pressure directly in front of you which extends into the hood for about four inches. Since contaminants may enter this turbulent area from inside the hood, you should keep all hazardous materials at least six inches inside the hood, behind the protective air barrier. (See Figure 3.)

The farther behind the fume hood protective air barrier you place the source of contaminants, the greater the protection the hood provides you. Therefore, you should place the equipment and contaminants you're using as far back inside the hood as you can, being careful not to block the lower slot in the rear baffle. (See Figure 4.) You should never place apparatus so far back that you have to put your head into the hood while your procedure is generating contaminants.

Large containers or equipment such as

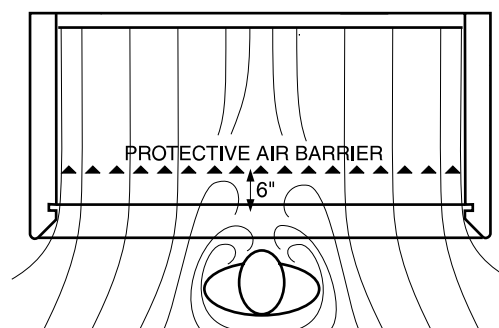


Figure 3
Formation of Protective Air Barrier

Recommended Work Practices (continued)

Maintaining the Protective Air Barrier for a Safe Work Area (continued)

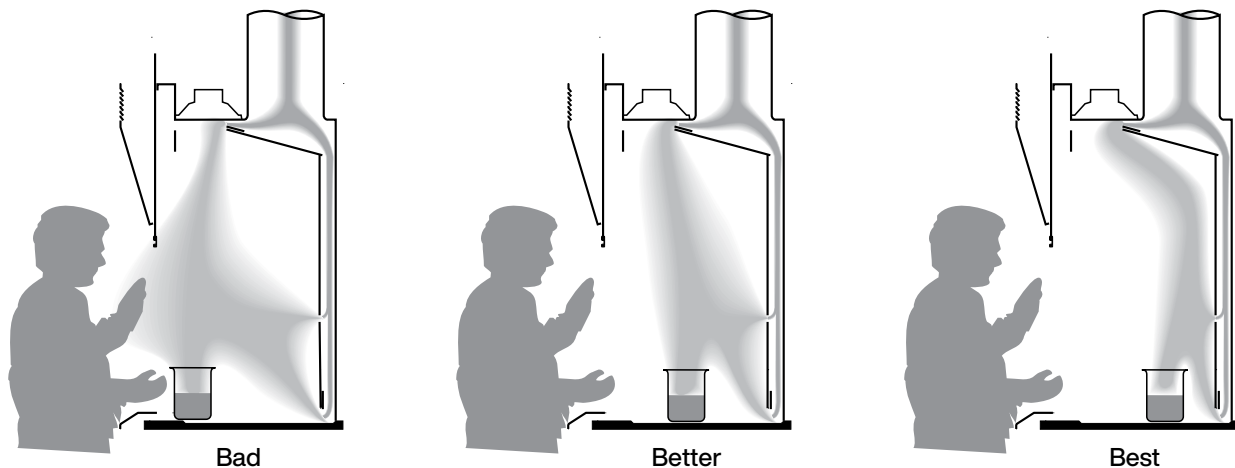


Figure 4 Effect of placement of contaminate source

furnaces, incubators and oil baths often interfere with air flow inside the fume hood by causing reverse flows and dead spots which may allow contaminants to escape from the hood. Putting large, bulky equipment you are using on legs will help reduce reverse air flows by allowing air to circulate beneath the equipment. (See Figure 5.)

The fume hood should not be used for storage of chemicals and apparatus. You should remove all but the containers and equipment you're actually using from the hood.

The air velocities used to provide containment in fume hoods are relatively low (in the range of 100 feet per minute) and the air flow patterns are easily disrupted. You should avoid making rapid movements while working at the hood or walking past the hood.

When you're working at your fume hood, you should always open the sash only as far as you need to for access to your work area.

The lowered sash increases the distance (**D** in Figure 6) between your breathing zone and the area where contaminants may escape. Also, the smaller hood face area makes the hood less susceptible to room drafts and other external air disturbances.

The sash also protects you by replacing part of the protective air barrier with a solid barrier against contaminants and splashing chemicals.

The lowered sash however, could create another problem because contaminants

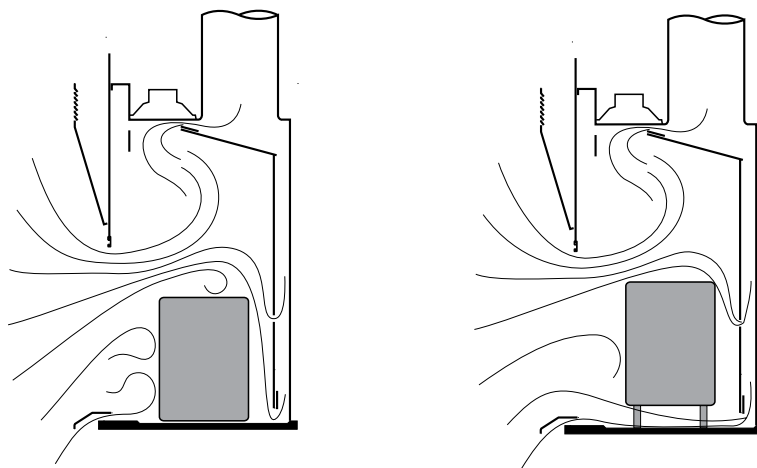


Figure 5 Effect of large equipment

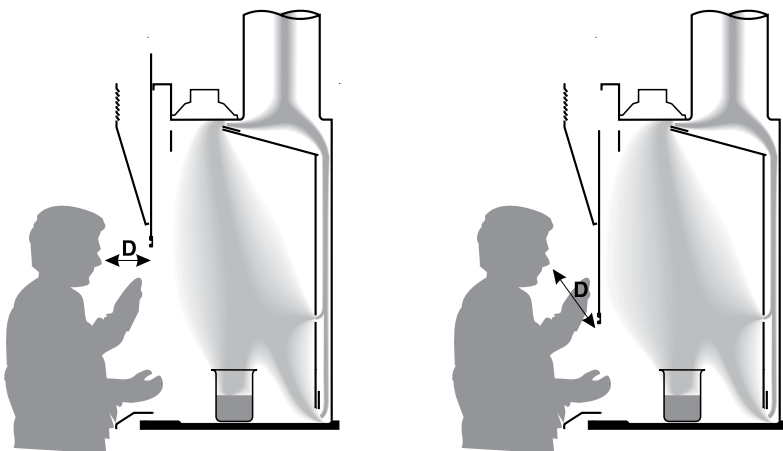


Figure 6 Effect of lowering the sash

Recommended Work Practices (continued)

Maintaining the Protective Air Barrier for a Safe Work Area (continued)

are present in the area behind the sash and may lead to increased corrosion of equipment in the hood. With a lowered sash, it is important for the operator to wear gloves when skin contact with airborne contaminants is objectionable.

If your hood has horizontal sashes, be sure they're all in place when you're working with contaminants inside the hood. Operating the hood with any of the sashes removed reduces the protection they provide by decreasing the velocity of the air entering the hood face. If you remove any hood sashes while setting up equipment, be sure to replace them before beginning the actual procedure.

If the hood has a sash stop with manual override to limit sash travel or is marked for a safe sash height, then the sash

should not be raised above this point while contaminants are being generated within the hood.

If you don't need continuous access to the equipment inside the fume hood, you should close the sash completely. (See **Figure 7.**) The closed sash will protect you from the flying debris of a small explosion or runaway reaction. It will eliminate the effects of room drafts or other adverse air currents.

You should note, however, that keeping the sash closed can lead to increased corrosion of equipment inside the hood because any contaminants will be dispersed throughout the hood interior.

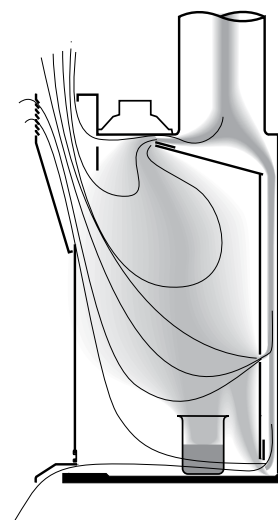


Figure 7 *Airflow through By-Pass with Sash Closed*

Fume Hood Safety Checklist

- The hood is the correct type for the work to be performed.
- The flow monitoring device indicates adequate air flow.
- The baffle setting is correct for the intended use.
- There are no unnecessary chemicals in the hood.
- All equipment is at least six inches behind the hood face.
- All procedures are performed with the laboratory worker's head remaining outside the hood.
- Equipment with large flat surfaces parallel to the hood face is placed on stands with legs.
- The sash is lowered to the minimum possible height.
- All safety equipment is close to the hood in case of fire or explosion.
- All laboratory workers are following the procedures outlined in this booklet, as well as any additional fume hood safety guidelines supplied by the hood manufacturer.

For More Information

We at Kewaunee Scientific hope these guidelines will be helpful to you as you choose, use and maintain your laboratory fume hood. If you have

questions we haven't answered in this section, please contact your local Kewaunee sales representative.

Glossary of Hood Terms and Definitions

| | | | |
|------------------------------------|---|-----------------------------------|---|
| Access opening | part of the fume hood or glove box through which work is performed - entrance. | Damper | device installed in duct to control air volume — can either be pneumatically, electrically, or manually operated. |
| ACGIH | American Conference of Government Industrial Hygienists. | Differential Pressure | difference in static pressure between two locations. |
| Air foil | curved or angular member at front of hood designed to reduce air turbulence. | Duct | round, square or rectangular tube used to enclose moving air. |
| Air volume | quantity of air normally expressed in cubic feet per minute (cfm). | Duct velocity | speed of air moving in duct (measured in FPM). |
| Arrangement No. 9 | fan configuration in which the motor is mounted outboard of the impeller shaft support frame. | Dynamic barrier by-pass | a louvered front-to-back by-pass system located above the top sash that introduces by-pass air behind the operating sash plane to provide a buffer zone between the contaminated hood interior and the hood operator. |
| Anemometer | instrument for measuring low air velocities. | Face | front opening of hood through which the user works. |
| ASHRAE | American Society of Heating, Refrigerating and Air Conditioning Engineers. | Face velocity | speed of air moving into fume hood at face opening usually expressed in units of feet per minute. |
| Auxiliary air | air delivered directly to fume hood to reduce room air consumption — sometimes called supply or supplemental air. | Fan | air moving device consisting of a motor, impeller and housing – sometimes called a blower. |
| Backward Inclined Blade Fan | fan with large flat blades with the tips inclined away from the direction of rotation. Most suitable for highly corrosive applications. Recommended for most hood exhaust applications. | Forward Inclined Blade Fan | fan with small, curved blades with the tips inclined in the direction of rotation. Best suited for less corrosive applications and auxiliary air supply. |
| Baffle | panel or panels located at rear of the hood interior which aid in distributing the flow pattern of air into and through the hood. | FPM | Feet per minute; measurement of air velocity. |
| By-pass hood | hood which contains a by-pass and, usually, air foils — also called a constant volume hood. | Fume hood | a ventilated, enclosed work space, with an open front, intended to capture, contain and exhaust airborne contaminants generated within it — also called a laboratory hood. |
| Centrifugal Fans | fan having a scroll-type housing and air flows perpendicular to the shaft on which the impeller wheel is mounted. | Included Angle | angle formed by and between two intersecting straight lines. |
| CFM | cubic feet per minute — unit of air volume measurement. | Kem-FP Coating | a fluoropolymer resin coating that exhibits outstanding chemical resistance. Is virtually unaffected by all commonly used corrosive chemicals. |
| Cross draft | a flow of air that blows into or across the hood face. | | |

Glossary of Hood Terms and Definitions

| | | | |
|-------------------------------------|--|----------------------------------|--|
| Liner | material used in the interior of the hood which is exposed to contaminants. | (End walls) | The area between the interior hood liner, and the exterior end panel. (4" nominal dimension) |
| Louvered panel | a panel with louvers to allow by-pass air to enter the hood when the sash is closed. | Smoke candle | device producing large quantities of smoke for testing hoods — also called smoke bomb. |
| Make-up air | free or available air needed to permit fume hood to develop face velocity. | Static pressure | air pressure exerted perpendicular to the direction of flow, usually expressed in units of inches of water. |
| Manometer | device used to measure air pressure differential — usually calibrated in inches of water. | Superstructure | part of hood assembly that excludes work top, base cabinets, auxiliary air chamber, and plumbing and electrical fixtures. |
| Negative Pressure | pressures lower than atmospheric pressure. (Less than one atmosphere.) | Supplemental (supply) air | air delivered directly to fume hood to reduce room air consumption — also called auxiliary air. |
| NFPA | National Fire Protection Association. | V-Belt Drive Fan | fan on which the motor is connected to the impeller wheel via, a v-belt, sheaves, and an impeller wheel shaft. Allows the impeller wheel speed to be varied by using an adjustable motor sheave. |
| Perchloric Acid | a colorless, syrupy hygroscopic liquid, HClO ₄ , used chiefly as a reagent in analytical chemistry. Explosively unstable when crystallize or when in contact with combustible materials at elevated temperatures. | Variable air volume (VAV) | type of fume hood that utilizes controller to maintain constant face velocity by adjusting blower motor speed or balance damper in response to changes in sash position. |
| Pitot tube | device for measuring velocity of air in a duct. | Velocity | speed of air — measured in feet per minute. |
| Positive pressure | pressures higher than atmospheric pressure. (More than one atmosphere.) | Walk-in hood | floor-mounted, full height hood designed to accommodate tall apparatus and permit roll-in of instruments and equipment. |
| Restricted by-pass fume hood | basic type of hood design with limited by-pass area. Commonly used in conjunction with "VAV" Variable Air Volume controls. | | |
| Safety shield | horizontal sliding transparent panel at face of hood which the user places in front of his body to protect himself from small explosions inside of hood. | | |
| Sash | movable panel set in hood face, usually transparent and can be either vertical rising or horizontal sliding. | | |
| Side walls | | | |

Typical Fume Hood Installations



Fume Hood Testing Facilities



Kewaunee's State-Of-The-Art
Fume Hood Testing Facility.
Statesville, North Carolina

Testing Protocols and Standards

ASHRAE 110 – 1995

ANSI / AIHA Z 9.5

EN 14175 – 3

(European Fume Hood Standard)

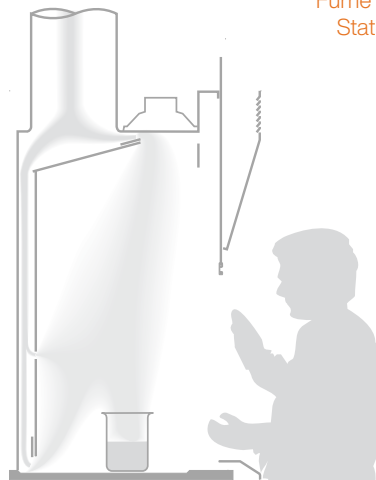
HAM (Human as Mannequin)

variant of **ASHRAE 110**

(USEPA & UCal-Davis)

Guffey, Flanagan, and Van Belle

(Aug 2001 AIHA Journal) “twister” test



Our state-of-the-art testing facility is capable of duplicating most laboratory environments. It allows us to perform the rigorous testing protocols necessary to ensure safe performance of custom designs.

SUPREME AIR

Laboratory Fume Hoods

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- Evolution® – Column Based Workstations
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- Kewaunee Matrix® – Educational Stations
- Research Collection® – Steel Casework
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