Presenting the ISOLATOR Series

The **ISOLATOR** combines the newest innovations in fume hood design with accepted architectural practices to achieve the most unique approach to fume containment in the world. Many of our standard features cannot be found on other fume hoods. The **ISOLATOR**'s most outstanding attribute is safety.

Safety from Fumes

ANSI/ASHRAE 110–1995, the current fume hood test, evaluates the containment of fume hoods under three conditions:

- 1. Zero movement (relatively static conditions)
- 2. Rapid sash movement
- 3. Perimeter containment around the airfoil, sash stop and side posts



Our bold new method of construction has redefined the word "containment".

Safety from Fire

One of the most feared accidents that can occur inside a fume hood is an uncontrolled fire. The **ISOLATOR** has a full metal superstructure and a steel top to afford an extra layer of protection against the collapse of the fume hood interior during a fire plus a tempered glass sash and viewpass that resists thermal cracking up to 2500 Fahrenheit higher than safety glass.

Safety from Sash Failure

A typical sash and counterweight system uses galvanized steel or stainless steel cables to connect the sash to the counterweight. If these cables fray, snap or pull loose from their connecting points, the elevated sash and counterweight could come crashing down. A fume hood sash may weigh up to 150 pounds. The **ISOLATOR** sash system is chain driven not cable driven. This counterbalancing system has been tested to 1,000,000 cycles without failure. It carries a **lifetime guarantee**.

Aside from these significant safety features, the **ISOLATOR** also is a very user-friendly safety device with the following features:

Fingertip sash operation – the rugged chain driven counterweight system has the smoothest operating sash in the industry.

Viewpass system – a dual purpose panel that allows the same bypass function as the traditional louvered metal panel. Events inside the fume hood can be monitored all the way from the worktop to the roof via the smoked glass transparent panel.

Aerodynamic sash handle – sash handle style that aids in the containment of fumes during rapid sash movement.

Stainless steel top and bottom airfoils are standard – The bottom fume hood airfoil in particular has always been subject to scratching and corrosion. In the **ISOLATOR**, top and bottom airfoils are type 304 stainless steel as standard for increased chemical resistivity. Also standard are large cord pass-through at both airfoils ends.

Fume Hood – Overview

How the ISOLATOR is Different

Metal Superstructure

The **ISOLATOR** liner and baffle system is attached to a galvanized steel pan structure to ensure the most stable, fire resistant and easy-to-service fume hood superstructure in the world. Other manufacturers of fume hoods use frames or L-angles to join liner panels together. In most of these framing systems, the liner itself becomes a key load-bearing element of the fume hood superstructure. Any fire or other stressful event inside the fume hood that weakens a framed liner system can lead to an actual implosion of the containment cavity with resulting disastrous consequences.

Since the basic design begins with full metal pans as a superstructure, the liner is truly a liner, not structural as in other hoods. This makes it feasible to change liners or liner types in the field in the case of a damaged liner or a significant change in use and it is much easier to relocate the fume hood should it become necessary.

"Knocked Down" (KD) Style Construction

The **ISOLATOR**'s galvanized pan system is the heart of our Knocked-down assembly strategy. The **ISOLATOR** is the only fume hood made in the United States whose standard models are all shippable "knocked-down" – **KD**. This option not only affords more moving and storage options on cluttered job sites but a lower source cost than assembled units. Two trained installers can completely assemble a **KD ISOLATOR** within two hours.

Even our factory pre-assembled **ISOLATOR** hoods are built from **KD** parts. This design makes it ideal for situations where limited space is available for movement to the installation location.



The Viewpass

The viewpass is a revolutionary system utilizing a tempered glass panel to create a bypass. This replaces the older style louvered steel panel used by other manufacturers. Because there is no direct path between this bypass slot and the suspended ceiling cavity common in many labs, bypass air is taken from the lab under all sash positions, even if the hood top is soffeted into the hung ceiling.

For increased safety, this system also affords excellent visual monitoring of the entire containment cavity, a feature not standard on any other fume hood.

How the ISOLATOR is Different, continued

ISOLATOR Sash / Counterweight System

The **ISOLATOR**'s heavy duty gear/chain/bearing components, designed to be virtually indestructible, are integrated into our unique four wheel drive sash counterweight system – assuring you of a lifetime of reliable and safe performance. **We guarantee it.***

The steel chain used in the **ISOLATOR**'s counterweight system has bending flexibility as an inherent feature of the chain, plus only two directional changes occur with each chain's motion.

The **ISOLATOR**'s unique system ensures ease of operation and non-binding performance for enhanced safety. Fume hood operators can be sure that quick sash closure and adjustment is always possible and always with fingertip control.



Typical Cable/Pulley Sash System

*Lifetime warranty covers the sash mechanism. Sash mechanism refers to the #35 case-hardened steel chain, sealed bearings, drive axles, sprockets and chain attachment points at both sash handle and counterweight.

Fume Hood – Overview

Fume Hood Selection Guide

Fume hoods are a critical piece of safety equipment. Your choice may impact the safety and comfort of working in your lab. When selecting a fume hood, you should consider:

Containment

Containment is the ability of the fume hood, and the related HVAC system, to keep your procedures inside the hood, safely away from the operator. The newest ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) standard, ANSI/ASHRAE 110-1995, is the most comprehensive evaluation of a fume hood's containment.

All fume hoods use test data based on the ASHRAE 110-1995 criteria. This evaluation demonstrates how well a hood performs for static containment, rapid sash movement and perimeter containment.

The ACGIH (American Council of Governmental and Industrial Hygienists) recommends a 4.0 AM 0.1 PPM tracer gas static containment rating. The standard 6' **ISOLATOR** averages 0.002 PPM which exceeds the recommended level by a factor of 50 (factor derived by dividing 0.1 PPM by the **ISOLATOR**'s 0.002 PPM). The **ISOLATOR**'s high efficiency baffle system delivers a uniform face velocity with \pm 10% or less variance.

The **ISOLATOR** provides a higher level of containment that goes beyond just containing fumes. The standard tempered glass increases resistance to breakage from heat and impact. The steel pans provide a metal superstructure that greatly increases the hood's ability to withstand fire and explosion. While these events are unlikely, it is good to know that when working with the **ISOLATOR**, you have the greatest degree of integral protection of any standard hood on the market.

Noise Levels

Working at a noisy hood for long periods can be more than a distraction. Much of this noise is generated by the HVAC system itself. The **ISOLATOR** has been designed not to contribute to the noise level and has tested at substantially lower sound levels than the 65db reported by other manufacturers. In addition to the lower noise levels, the combination of CFM (cubic feet per minute) and static pressure make the **ISOLATOR** very energy efficient. Lower CFM at 100 FPM translates into less consumption of conditioned air. **Non-round duct collars** further aid in reduced noise levels due to static pressure reduction.

Primary Functions

In addition to containment, other functions such as sash operation must be considered. The operation of the sash is one of the most common interfaces with a hood. You can't get any better than the **ISOLATOR**. Unlike cable driven sash systems which can fail in as few as 25,000 cycles, our chain driven system has been tested in excess of 1,000,000 cycles without failure. Our sash will not bind or jam. *We are so sure of this performance, we guarantee our sash mechanism...for life.* Ask the others to do that with their sash systems.

Appearance

Another factor important to our users is appearance. The word used most often to describe the **ISOLATOR** is "High Tech". Our innovative design eliminates the metal louvered top airfoil and replaces it with a glass bypass. This, along with the use of stainless steel, gives the **ISOLATOR** the sleek, clean lines that will enhance the look of any laboratory.

Fume Hood Selection Guide

Location Planning

The planned location of the fume hood within the laboratory affects both the safety and convenience of the user and the airflow patterns of the room. The fume hood must be properly located within the laboratory and must allow the users to safely and efficiently perform their tasks. Keep these basics in mind when planning your space:

- 1. Hoods should not be located near operable windows, doors or air conditioning registers because potential cross drafts will interfere with the airflow into the hood.
- 2. Never locate the hood adjacent to an exit or where the user would be forced to work in a high traffic area.
- 3. If a common exhaust or supply system is used for several hoods, the fume hoods should be arranged to require a minimum amount of ductwork.
- 4. Hoods used in conjunction with a heating or air conditioning system as room exhaust should generally be located on the opposite side of the room from the inlet registers (see diagram for an example). The air from the registers should sweep through the laboratory first, then be exhausted through the hood for both safety and HVAC efficiency.



Keep hoods away from heavy traffic patterns.

Note: In this sample diagram, the **ISOLATOR** fume hoods are used in conjunction with the laboratory HVAC system as room exhaust.

Fume Hood – Overview

Fume Hood Selection Guide

Constant Air Volume Fume Hoods

Constant Air Volume (CAV) fume hoods always extract air at the same rate, or CFM (cubic feet per minute). In a CAV hood, an alternate air route is opened as the sash is lowered. This alternate route is called a bypass. The air speed through a partially opened sash could approach 1000 FPM without such a bypass opening. This prevents very high air velocities which could cause problems within the hood.

Capabilities and Drawbacks

- 1. Simple to design and construct.
- 2. Will generally provide very safe containment without design complexity.
- 3. Allows experiments to proceed safely at any sash position
- 4. Can be expensive to operate because of exhaust volumes. On average, a 6 foot fume hood can exhaust 630 million cubic feet of air per year.
- 5. Requires large initial expenditure on ductwork and a lab heating/cooling capability sufficient to keep up with the exhaust rate.
- 6. Difficult to retrofit such systems into laboratories where the installation of extra exhaust or HVAC support is difficult.



CAV Fume Hood Sash Closed



CAV Fume Hood Sash Open

Hood – Overvi

Fume Hood Selection Guide

Variable Air Volume Fume Hoods

Variable Air Volume (VAV) fume hoods extract an air volume necessary to maintain a specified fume hood face velocity (usually 100 FPM), regardless of sash position, by utilizing either a restricted or completely closed bypass. These fume hoods use dramatically less exhaust air if the sash is kept closed and therefore have the potential of reducing air conditioning/heating costs.

Capabilities and Drawbacks

- 1. Can save between 10% and 50% of exhaust volume (based on end-user cooperation on keeping the sashes closed).
- 2. Can reduce initial HVAC costs on large facilities because the supporting HVAC can be downsized from requirements for a CAV system.
- 3.Since exhaust requirements are less, VAV systems are sometimes easier to retrofit since duct sizes of both make-up and exhaust systems may be substantially smaller.
- 4. A more complex system than CAV, the control systems will add cost to initial construction and maintenance.
- 5. Some VAV systems have response time difficulties; when sashes are opened, the fume hood exhaust CFM may not immediately increase to the required level, resulting in a temporarily low face velocity and possible loss of containment.
- 6. Some experiments that produce large quantities of acidic or flammable vapor or heat will overtax the reduced exhaust rate of a VAV hood with the sash closed and may create corrosion of internal equipment, explosion hazards, cracked safety glass or singed liners.



VAV Fume Hood Sash Closed



VAV Fume Hood Sash Open

Fume Hood – Overview

Fume Hood Description & Applications

BENCH HOOD

Fume hood with 48" high clear interior on a 36" high bench top. Used for general chemistry applications. This is the most common hood type.

A.D.A. HOOD

Bench hood with combination sash on 34" high or lower table frame to comply with Americans with Disabilities Act. It facilitates handicapped access and saves energy.

WALK-IN HOOD

A floor-to-ceiling hood with an 84" high clear interior and 62" clear sash opening. Available with twin vertical sashes, combination or horizontal sash. Used with chromatography, distillations, pilot plant mock-ups, vat drug preparation and other large equipment procedures.

O.S. HEIGHT HOOD

Bench hood with a 60" clear interior height. It is available with single vertical or combination sash. Used with intermediate distillations, drying oven applications and work requiring intermediate sized equipment such as grinders.

PERCHLORIC ACID HOOD

Bench hood with coved 316 grade stainless steel interior and baffle washdown system with trench drain. For use with perchloric acid which forms unstable perchloric and organic peroxides that may become contact explosives. Water neutralizes these chemicals which allows for their disposal.

RADIOISOTOPE / BIOCHEMICAL HOOD

Bench hood with coved 304 grade stainless steel interior for use with isotopes or biologicals that must be thoroughly cleaned. Used with titration, iodination, isotope analysis, necropsy and virobiological sample processing.

AUXILIARY AIR HOOD

This fume hood supplies up to 70% of its own exhaust air from a top mounted supply air plenum. It is an ideal hood for situations where the air flow environment is limited.

H.O.P.E.C. HOOD

The HOPEC (Hand Operated Positive Energy Control) fume hood is designed to operate at one half the amount of air of a traditional hood. With no bypass system the hood is designed to operate without the use of a VAV (Variable Air Volume) system. The HOPEC also addresses concerns such as ADA and LCV (Low Constant Volume).

F-100 Bench Hood – Frameless Vertical Sash

The **ISOLATOR** bench hood with a frameless vertical sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It has an expansive interior view, superior containment and functional design along with a stylish appearance. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- Full hood access for easy set ups
- Years of maintenance free service
- Unmatched ease of use
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas



* NOTE: D30 HOOD DIMENSIONS: 30" (CLEAR INTERIOR) 37" (TOP DEPTH) / 41 1/4" (D.A. DEPTH)



F-100 Bench Hood Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Aerodynamically designed Airplane wing style sash handle enhances the perimeter containment
- Vertical sashes provide the greatest hood interior access
- Full view sash with 26 1/2" opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-100 Series Air Flow Data

Catalog Number	Duct Diameter	28" Vertical Open @ 100 FPM	18" Vertical Open @ 100 FPM
F-100-36	1 : 10"	505 CFM @ .15" SP	325 CFM @ .06" SP
F-100-48	1 : 10"	739 CFM @ .32" SP	475 CFM @ .13" SP
F-100-60	1 : 12"	972 CFM @ .27" SP	625 CFM @ .11" SP
F-100-72	1 : 12"	1205 CFM @ .41" SP	775 CFM @ .17" SP
F-100-96	2 : 10"	1672 CFM @ .41" SP	1075 CFM @ .17" SP

F-100 Series Product Numbers

F-100-36	Bench 36"	Frameless	
F-100-36D30	Bench 36"	Frameless	30" Deep
F-100-48	Bench 48"	Frameless	
F-100-48D30	Bench 48"	Frameless	30" Deep
F-100-60	Bench 60"	Frameless	
F-100-60D30	Bench 60"	Frameless	30" Deep
F-100-72	Bench 72"	Frameless	
F-100-72D30	Bench 72"	Frameless	30" Deep
F-100-96	Bench 96"	Frameless	
F-100-96D30	Bench 96"	Frameless	30" Deep

F-100 Series Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-100 Series Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-100 Series Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-100 Series Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-100-36 – 36" Bench Hood



F-100-48 - 48" Bench Hood







F-100-72 – 72" Bench Hood



F-100-96 – 96" Bench Hood



F-101 Bench – Combination Sash

The **ISOLATOR** bench hood with a combination sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides superior energy savings via this functional design. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- · Years of maintenance free service
- Unmatched ease of use
- Substantial energy savings via the sash configuration
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-101 Bench Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Offers the best features of both the vertical and horizontal sashes thus allowing flexible interior access while minimizing the sash opening for energy savings
- Full view stainless steel combination sash with 26 1/2" vertical opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-101 Bench Air Flow Data

Catalog Number	Duct Diameter	28" Vertical Open @ 100 FPM	18" Vertical Open @ 100 FPM
F-101-48	1 : 10"	739 CFM @ .32" SP	410 CFM @ .10" SP
F-101-60	1 : 12"	972 CFM @ .27" SP	559 CFM @ .09" SP
F-101-72	1 : 12"	1205 CFM @ .41" SP	704 CFM @ .14" SP
F-101-96	2 : 10"	1672 CFM @ .41" SP	986 CFM @ .14" SP
F-101-120	2 : 12"	2138 CFM @ .42" SP	1150 CFM @ .12" SP
F-101-144	2 : 12"	2605 CFM @ .62" SP	1408 CFM @ .18" SP

*50% Open may be achieved two ways: 1. Vertical Sash Open 14"; horizontal panels closed. 2. Vertical sash closed; horizontal panels full open

F-101 Bench Product Numbers

F-101-48	Bench 48"	Combo Sash	
F-101-48D30	Bench 48"	Combo Sash	30" Deep
F-101-60	Bench 60"	Combo Sash	
F-101-60D30	Bench 60"	Combo Sash	30" Deep
F-101-72	Bench 72"	Combo Sash	
F-101-72D30	Bench 72"	Combo Sash	30" Deep
F-101-96	Bench 96"	Combo Sash	
F-101-96D30	Bench 96"	Combo Sash	30" Deep
F-101-120	Bench 120"	Combo Sash	
F-101-120D30	Bench 120"	Combo Sash	30" Deep
F-101-144	Bench 144"	Combo Sash	
F-101-144D30	Bench 144"	Combo Sash	30" Deep

F-101 Bench Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-101 Bench Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-101 Bench Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-101 Bench Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-101-48 – 48" Bench Hood



F-101-60 - 60" Bench Hood



F-101-72 – 72" Bench Hood



F-100-96 - 96" Bench Hood







F-100-120 - 120" Bench Hood



F-100-144 - 144" Bench Hood



K-17

F-102 Bench Hood – Horizontal Sash

The **ISOLATOR** bench hood with the horizontal sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides superior containment and significant energy saving qualities. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- Years of maintenance free service
- Unmatched ease of use
- Substantial energy savings via the sash configuration
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- · Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-102 Bench Hood Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Maximum sash opening is 50% of a vertical sash which results in energy savings based on reduced exhaust CFM
- Full view stainless steel horizontal sash
- · Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-102 Bench Hood Air Flow Data

Catalog Number	Duct Diameter	28" Vertical Open @ 100 FPM	18" Vertical Open @ 100 FPM
F-102-48	1 : 10"	NA	425 CFM @ .10" SP
F-102-60	1 : 12"	NA	564 CFM @ .09" SP
F-102-72	1 : 12"	NA	704 CFM @ .14" SP
F-102-96	2 : 10"	NA	974 CFM @ .14" SP

F-102 Bench Hood Product Numbers

F-102-48	Bench 48"	Horizontal (2 trk)	
F-102-48D30	Bench 48"	Horizontal (2 trk)	30" Deep
F-102-60	Bench 60"	Horizontal (2 trk)	
F-102-60D30	Bench 60"	Horizontal (2 trk)	30" Deep
F-102-72	Bench 72"	Horizontal (2 trk)	
F-102-72D30	Bench 72"	Horizontal (2 trk)	30" Deep
F-102-96	Bench 96"	Horizontal (2 trk)	
F-102-96D30	Bench 96"	Horizontal (2 trk)	30" Deep

F-102 Bench Hood Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-102 Bench Hood Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-102 Bench Hood Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-102 Bench Hood Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-102-48 – 48" Bench Hood



F-102-60 – 60" Bench Hood







F-102-72 – 72" Bench Hood



F-103 Bench Hood – Framed Vertical Sash

The **ISOLATOR** bench hood with the framed vertical sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides an expansive interior view along with the more traditional framed look. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- Full hood access for easy set ups
- Years of maintenance free service
- Unmatched ease of use
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas



* NOTE: D30 HOOD DIMENSIONS: 30" (CLEAR INTERIOR) 37" (TOP DEPTH) / 41 1/4" (O.A. DEPTH)



F-103 Bench Hood Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- · Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Vertical sashes provide the greatest hood interior access
- Full view stainless steel framed sash with 26 1/2" opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-103 Bench Hood Air Flow Data

Catalog Number	Duct Diameter	28" Vertical Open @ 100 FPM	18" Vertical Open @ 100 FPM
F-103-36	1 : 10"	505 CFM @ .15" SP	325 CFM @ .06" SP
F-103-48	1 : 10"	739 CFM @ .32" SP	475 CFM @ .13" SP
F-103-60	1 : 12"	972 CFM @ .27" SP	625 CFM @ .11" SP
F-103-72	1 : 12"	1205 CFM @ .41" SP	775 CFM @ .17" SP
F-103-96	2 : 10"	1672 CFM @ .41" SP	1075 CFM @ .17" SP
F-103-120	2 : 12"	2138 CFM @ .42" SP	1375 CFM @ .17" SP
F-103-144	2 : 12"	2605 CFM @ .62" SP	1675 CFM @ .26" SP

F-103 Bench Hood Product Numbers

F-103-36	Bench 36"	Framed Sash	
F-103-36D30	Bench 36"	Framed Sash	30" Deep
F-103-48	Bench 48"	Framed Sash	
F-103-48D30	Bench 48"	Framed Sash	30" Deep
F-103-60	Bench 60"	Framed Sash	
F-103-60D30	Bench 60"	Framed Sash	30" Deep
F-103-72	Bench 72"	Framed Sash	
F-103-72D30	Bench 72"	Framed Sash	30" Deep
F-103-96	Bench 96"	Framed Sash	
F-103-96D30	Bench 96"	Framed Sash	30" Deep
F-103-120	Bench 120"	Framed Sash	
F-103-120D30	Bench 120"	Framed Sash	30" Deep
F-103-144	Bench 144"	Framed Sash	
F-103-144D30	Bench 144"	Framed Sash	30" Deep

F-103 Bench Hood Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-103 Bench Hood Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-103 Bench Hood Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-103 Bench Hood Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-103-36 – 36" Bench Hood



F-103-48 – 48" Bench Hood



F-103-60 - 60" Bench Hood



F-103-72 - 72" Bench Hood





















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F-121 Bench – Frameless Vertical Sash

The F-121 series of **ISOLATOR** fume hoods combine the features of a traditional Isolator bench hood with the added flexibility of double sided access. Dual rising sashes on either end allow easy access from both sides of the hood. A sash interlock, which allows only one sash to be raised at any given time, is standard on all F-121 models. Hoods may be plumbed and wired for use on both sides.

- Unparalleled user safety
- · Full hood access for easy set ups
- Years of maintenance free service
- · Unmatched ease of use
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-121 Bench Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Aerodynamically designed Airplane wing style sash handle enhances the perimeter containment
- Vertical sashes provide the greatest hood interior access
- Full view frameless sash with 26 1/2" opening
- Quality engineering ensures years of reliable service
- Sash interlock system

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-121 Bench Air Flow Data

Catalog Number	Duct Diameter	28" Vertical Open @ 100 FPM	18" Vertical Open @ 100 FPM
F-121-48	1 : 10"	739 CFM @ .32" SP	475 CFM @ .13" SP
F-121-60	1 : 12"	972 CFM @ .27" SP	625 CFM @ .11" SP
F-121-72	1 : 12"	1205 CFM @ .41" SP	775 CFM @ .17" SP
F-121-96	2 : 10"	1672 CFM @ .41" SP	1075 CFM @ .17" SP

F-121 Bench Product Numbers

F-121-48	Bench 48"	Frameless
F-121-60	Bench 60"	Frameless
F-121-72	Bench 72"	Frameless
F-121-96	Bench 96"	Frameless

F-121 Bench Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-121 Bench Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-121 Bench Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-121 Bench Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-121-48 – 48" Bench Hood





F-121-60 - 60" Bench Hood





F-121-72 – 72" Bench Hood



12" Dia. DUCT COLLAR 18 Ga. #304 STN.STL. 唱 00 4 1/2 4' 1/8" 4' 52 4" 4 1/2 8 6 3/4 31" 1 4 1/4" 4 1/4" 39 1/2" R H INTERIOR SECTION VIEW

F-121-96 - 96" Bench Hood



F-170 Bench/Fixed Center Post – Frameless Vertical Sash

The **ISOLATOR** fixed center post bench hood with a frameless vertical sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It has an expansive interior view, superior containment and functional design along with a stylish appearance. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- · Full hood access for easy set ups
- · Years of maintenance free service
- · Unmatched ease of use
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-170 Bench/Fixed Center Post Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Aerodynamically designed Airplane wing style sash handle enhances the perimeter containment
- Vertical sashes provide the greatest hood interior access
- Full view frameless sash with 26 1/2" opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-170 Bench/Fixed Center Post Air Flow Data

Catalog Number	Duct Diameter	*28" Vertical Open @ 100 FPM	**18" Vertical Open @ 100 FPM
F-170-96	2 : 10"	1477 CFM @ .29" SP	950 CFM @ .12" SP
F-170-120	2 : 12"	1944 CFM @ .35" SP	1250 CFM @ .14" SP
F-170-144	2 : 12"	2411 CFM @ .53" SP	1550 CFM @ .22" SP

*Both sashes full open / **Both sashes 18" open

F-170 Bench/Fixed Center Post Product Numbers

F-170-96	Fixed Center Post Bench 96"	Frameless
F-170-120	Fixed Center Post Bench 120"	Frameless
F-170-144	Fixed Center Post Bench 144"	Frameless

F-170 Bench/Fixed Center Post Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-170 Bench/Fixed Center Post Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-170 Bench/Fixed Center Post Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-170 Bench/Fixed Center Post Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-170-96 – 96" Bench/Fixed Center Post



F-170-120 - 120" Bench/Fixed Center Post



F-170-144 – 144" Bench/Fixed Center Post



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48" Interir

(Clear Inte 51 1/2 (Duct Collar

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F-171 Bench/Fixed Center Post – Combination Sash

The **ISOLATOR** fixed center post bench hood with a combination sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides superior energy savings via this functional design. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- · Years of maintenance free service
- Unmatched ease of use
- Substantial energy savings via the sash configuration
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas



$\begin{array}{c} 12" \text{ Dia. Stn. Stl.}\\ \text{Duct Collar}_{10 1/4"}\\ \text{I}_{10 1/4"}\\ \text{I}_$

F-171 Bench/Fixed Center Post Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Offers the best features of both the vertical and horizontal sashes thus allowing flexible interior access while minimizing the sash opening for energy savings
- Full view stainless steel combination sash with 26 1/2" vertical opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-171 Bench/Fixed Center Post Air Flow Data

Catalog Number	Duct Diameter	28" Vertical Open @ 100 FPM	*14" Vertical Open @ 100 FPM
F-171-96	2 : 10"	1477 CFM @ .29" SP	820 CFM @ .09" SP
F-171-120	2 : 12"	1944 CFM @ .35" SP	1088 CFM @ .10" SP
F-171-144	2 : 12"	2411 CFM @ .53" SP	1368 CFM @ .17" SP

*50% Open may be achieved two ways: 1. Vertical Sash Open 14"; horizontal panels closed. 2. Vertical sash closed; horizontal panels full open

F-171 Bench/Fixed Center Post Product Numbers

F-171-96	Fixed Center Post Bench 96"	Combination
F-171-120	Fixed Center Post Bench 120"	Combination
F-171-144	Fixed Center Post Bench 144"	Combination

F-171 Bench/Fixed Center Post Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-171 Bench/Fixed Center Post Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-171 Bench/Fixed Center Post Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-171 Bench/Fixed Center Post Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-171-96 - 96" Bench/Fixed Center Post



F-171-120 - 120" Bench/Fixed Center Post



F-171-144 - 144" Bench/Fixed Center Post



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F-173 Bench/Fixed Center Post – Framed Vertical Sash

The **ISOLATOR** fixed center post bench hood with the framed vertical sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides an expansive interior view along with the more traditional framed look. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- · Full hood access for easy set ups
- · Years of maintenance free service
- · Unmatched ease of use
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-173 Bench/Fixed Center Post Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Vertical sashes provide the greatest hood interior access
- Full view stainless steel framed sash with 26 1/2" opening
- Quality engineering ensures years of reliable service

F-100 Series - Isolator Bench Fume Hoods - Ordering Information

F-173 Bench/Fixed Center Post Air Flow Data

Catalog Number	Duct Diameter	*28" Vertical Open @ 100 FPM	**18" Vertical Open @ 100 FPM
F-173-96	2 : 10"	1477 CFM @ .29" SP	950 CFM @ .12" SP
F-173-120	2 : 12"	1944 CFM @ .35" SP	1250 CFM @ .14" SP
F-173-144	2 : 12"	2411 CFM @ .53" SP	1550 CFM @ .22" SP

*Both sashes full open / **Both sashes 18" open

F-173 Bench/Fixed Center Post Product Numbers

F-173-96	Fixed Center Post Bench 96"	Framed Sash
F-173-120	Fixed Center Post Bench 120"	Framed Sash
F-173-144	Fixed Center Post Bench 144"	Framed Sash

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F-173 Bench/Fixed Center Post Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-173 Bench/Fixed Center Post Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-173 Bench/Fixed Center Post Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-173 Bench/Fixed Center Post Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-100 Series – Isolator Bench Fume Hoods – Product Dimensions

F-173-96 - 96" Bench/Fixed Center Post



F-173-120 – 120" Bench/Fixed Center Post



F-173-144 - 144" Bench/Fixed Center Post



F-181-2 Dual Postless Bench – Combination Sash

The **ISOLATOR** dual postless bench hood with a combination sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides superior energy savings via this functional design. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- Years of maintenance free service
- Unmatched ease of use
- Substantial energy savings via the sash configuration
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-181-2 Dual Postless Bench Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Offers the best features of both the vertical and horizontal sashes thus allowing flexible interior access while minimizing the sash opening for energy savings
- Full view stainless steel combination sash with 26 1/2" vertical opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-181-2 Dual Postless Bench Air Flow Data

Catalog Number	Duct Diameter	*28" Vertical Open @ 100 FPM	**18" Vertical Open @ 100 FPM	***28" 50% Vertical Open @ 100 FPM
F-181-96-2	2 : 10"	1672 CFM @ .41" SP	577 CFM @ .04" SP	836 CFM @ .02" SP
F-181-120-2	2 : 12"	2138 CFM @ .42" SP	749 CFM @ .05" SP	1069 CFM @ .10" SP
F-181-144-2	2 : 12"	2605 CFM @ .62" SP	919 CFM @ .07" SP	1303 CFM @ .15" SP

*Both sashes vertical open

**25% Open may be achieved two ways: 1. Vertical sash open 14"; horizontal panels closed, other sash and panels closed 2. Vertical sash closed; horizontal panels full open, other sash and panels closed

***Single sash open

F-181-96-2	Dual Postless Bench 96"	Combo Sash
F-181-120-2	Dual Postless Bench 120"	Combo Sash
F-181-144-2	Dual Postless Bench 144"	Combo Sash

F-181-2 Dual Postless Bench Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-181-2 Dual Postless Bench Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-181-2 Dual Postless Bench Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-181-2 Dual Postless Bench Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-100 Series – Isolator Bench Fume Hoods – Product Dimensions

F-181-96-2 - 96" Dual Post Bench



F-181-120-2 - 120" Dual Postless Bench



F-181-144-2 - 144" Dual Postless Bench



F-183-2 Dual Postless Bench – Framed Vertical Sash

The **ISOLATOR** dual postless bench hood with the framed vertical sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides an expansive interior view along with the more traditional framed look. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- · Full hood access for easy set ups
- · Years of maintenance free service
- · Unmatched ease of use
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-183-2 Dual Postless Bench Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Vertical sashes provide the greatest hood interior access
- Full view stainless steel framed sash with 26 1/2" opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-183-2 Dual Postless Bench Air Flow Data

Catalog Number	Duct Diameter	*28" Vertical Open @ 100 FPM	*18" Vertical Open @ 100 FPM	**28" 50% Vertical Open @ 100 FPM
F-183-96-2	2 : 10"	1672 CFM @ .41" SP	1075 CFM @ .15" SP	836 CFM @ .02" SP
F-183-120-2	2 : 12"	2138 CFM @ .42" SP	1375 CFM @ .24" SP	1069 CFM @ .10" SP
F-183-144-2	2 : 12"	2605 CFM @ .62" SP	1675 CFM @ .37" SP	1303 CFM @ .15" SP

*Both sashes vertical open

**Single sash open

F-183-2 Dual Postless Bench Product Numbers

F-183-96-2	Dual Postless Bench 96"	Framed Sash
F-183-120-2	Dual Postless Bench 120"	Framed Sash
F-183-144-2	Dual Postless Bench 144"	Framed Sash

F-183-2 Dual Postless Bench Liner Options

White Polyglass is standard. Please see the **Hood Liners** section for available options.

F-183-2 Dual Postless Bench Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the Electrical Fixtures section for available options.

F-183-2 Dual Postless Bench Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-183-2 Dual Postless Bench Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-100 Series – Isolator Bench Fume Hoods – Product Dimensions

F-183-96-2 - 96" Dual Postless Bench



F-183-120-2 - 120" Dual Postless Bench



F-183-144-2 - 144" Dual Postless Bench



F-183-4 Quad Postless Bench – Framed Vertical Sash

The **ISOLATOR** quad postless bench hood with the framed vertical sash is the result of extensive research and development to produce the industry's safest, most adaptable fume hood. It provides an expansive interior view along with the more traditional framed look. The **ISOLATOR**'s design and construction enhances its value by providing:

- Unparalleled user safety
- · Full hood access for easy set ups
- · Years of maintenance free service
- · Unmatched ease of use
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV)
- Hoods available in "Knock Down" (KD) mode for transport and assembly in restricted areas





F-183-4 Quad Postless Bench Features

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Galvanized Steel Pan Superstructure
- Transparent Viewpass bypass system
- Stainless steel air foil
- Vertical sashes provide the greatest hood interior access
- Full view stainless steel framed sash with 26 1/2" opening
- Quality engineering ensures years of reliable service

F-100 Series – Isolator Bench Fume Hoods – Ordering Information

F-183-4 Quad Postless Bench Air Flow Data

Catalog Number	Duct Diameter	*28" Vertical Open @ 100 FPM	*18" Vertical Open @ 100 FPM	**28" 50% Vertical Open @ 100 FPM
F-183-96-4	2 : 10"	1672 CFM @ .41" SP	1075 CFM @ .18" SP	428 CFM @ .02" SP
F-183-120-4	4 : 10"	2138 CFM @ .42" SP	1375 CFM @ .24" SP	530 CFM @ .02" SP
F-183-144-4	4 : 10"	2605 CFM @ .62" SP	1675 CFM @ .37" SP	647 CFM @ .03" SP

*All sashes vertical open

**Single sash open only

F-183-4 Quad Postless Bench Product Numbers

F-183-96-4	Quad Postless Bench 96"	Framed Sash
F-183-120-4	Quad Postless Bench 120"	Framed Sash
F-183-144-4	Quad Postless Bench 144"	Framed Sash

F-183-4 Quad Postless Bench Liner Options

White Polyglass is standard. Please see the Hood Liners section for available options.

F-183-4 Quad Postless Bench Electrical Options

Fascia is pre-punched with two electrical cutouts (four cutouts total). Please see the **Electrical Fixtures** section for available options.

F-183-4 Quad Postless Bench Plumbing Fixtures

Fascia is pre-punched with five 3/4" dia. holes to accept rod driven remote fixtures (ten holes total). Please see the **Plumbing Fixtures** section for available options.

F-183-4 Quad Postless Bench Bench Fume Hood Accessories

Please see the Fume Hood Accessories section for available options.

F-183-96-4 - 120" Quad Postless Bench

Please contact JMP Fume Hood Department for drawing.

F-183-120-4 - 120" Quad Postless Bench



F-183-144-4 - 144" Quad Postless Bench

