



Fume Hoods & Exhaust Snorkels

Working with the **INSTOCK**® Lab Team is Fast and Easy

Using this catalog

Each catalog focuses on a segment of the over 600 commonly used lab furnishing products. This format will help you to locate the products that you need quickly and easily.

Product Organization

Products have been clearly presented using pictures, specifications, descriptive information and performance data to assist with selection.

Next Steps

If you wish to place an order please CONTACTUS@LFSYSTEMS.com or use the Excel Order Form (link) that follows the list of catalogs.
(Note: The order form link requires an Excel Spreadsheet app.)

Hood Design Options to Fit Any Need with Unlimited Customization

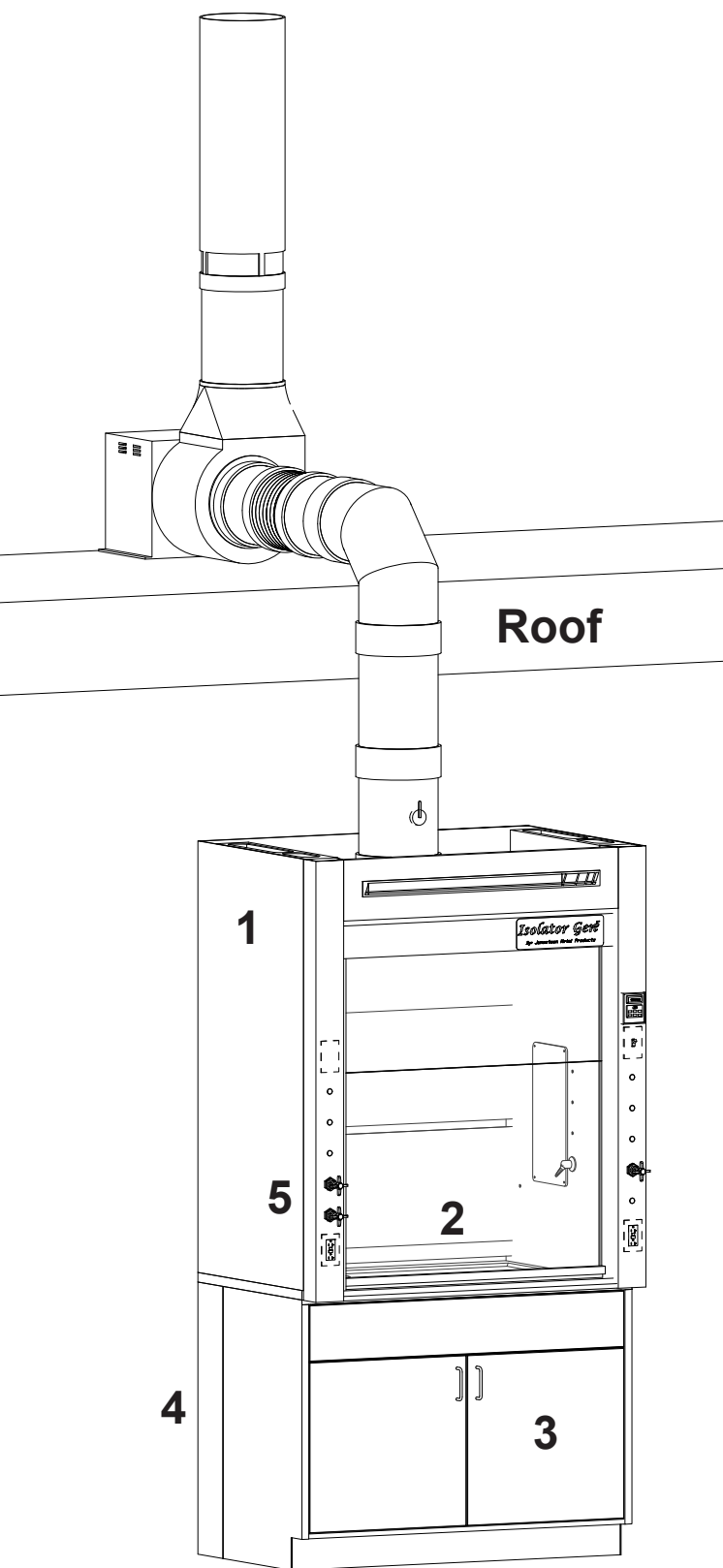
Our chemical fume hoods provide exceptional safety, function, style & adaptability.

Our complete fume hood offering includes:

- True One Finger Sash Operation
- Easy Maintenance & Long Product Life Cycle
- Traditional Constant Volume
- ADA Accessible
- Full Access Walk-in
- Isotope
- Perchloric Acid
- UL 1805 Listed
- 3-Year Warranty
- CAV, VAV & High Performance Hoods Available
- Distillation
- Demonstration
- Double Sided
- Teaching
- Custom Enclosures
- Lifetime Warranty on Chain & Sprocket Sash Mechanism



Selecting a Complete Fume Hood



1. Select the Fume Hood Style and Size

☐ General Purpose Bench Hood

☐ 4 ft. ☐ 5 ft. ☐ 6 ft.

☐ General Purpose Walk-In Hood - Standard Depth

☐ 4 ft. ☐ 5 ft. ☐ 6 ft. ☐ 8 ft.

☐ General Purpose Walk-In Hood - Extra Deep

☐ 4 ft. ☐ 5 ft. ☐ 6 ft. ☐ 8 ft.

2. Select a Work Surface and Sink

☐ Standard Work Surface

☐ 4 ft. ☐ 5 ft. ☐ 6 ft.

☐ Work Surface with Cup Sink

☐ 4 ft. ☐ 5 ft. ☐ 6 ft.

☐ Sink Location

☐ Left ☐ Right ☐ Both

3. Select Base Storage Cabinets

☐ Steel Cabinets (see appropriate casework catalog)

☐ General ☐ Acid Storage ☐ Solvent Storage

☐ Wood Cabinets (see appropriate casework catalog)

☐ General ☐ Acid Storage ☐ Solvent Storage

4. Select Cabinet and Hood Trim

☐ Steel Cabinet Trim (see appropriate casework catalog)

☐ Ceiling Enclosure

5. Select Service Fittings

☐ Standard Fittings

☐ Air ☐ Gas ☐ Vac ☐ CW ☐ Nitrogen

☐ CW Gooseneck

☐ Airflow Alarm ☐ Electrical

Detailed information on selecting the right fume hood for your requirements can be found within.

Fume Hoods

High Performance Fume Hood

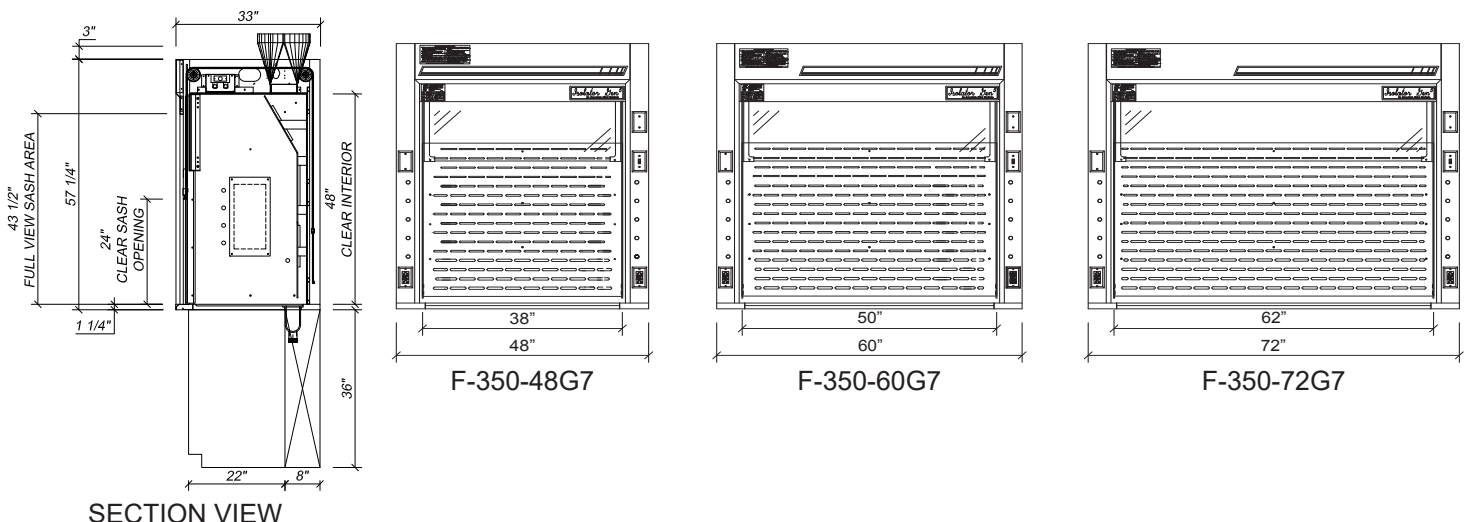
For over 70 years, we have been developing innovative and purpose driven products for the research and healthcare industries. Our highly experienced team of engineers and designers are proud to introduce our latest effort: Isolator³. Isolator³ is the latest generation of energy saving high performance fume hoods, built upon extensive R&D. Utilizing computational fluid dynamics, we were able to develop a safe and superior operating environment without the need for additional components to add or inject air into the hood chamber. By controlling baffle pressurization, Isolator³ achieves the proper capture and containment at a 60 FPM face velocity. Additionally, we do it with a sash opening of 24" (61 cm). JMP's chemical exhaust fume hoods meet or exceed SEFA 1 standards.



Features:

- 24" (61 cm) deep clear interior
- Low static rectangular exhaust duct
- Integral stainless steel 12" (30.5 cm) round duct transition
- Slotted rear baffle for even plenum balance
- Safe operation at 60 fpm
- Chemically resistant white Poly glass liner
- UL1805 listed, ANSI/ASHRAE 110-1995, UL1275
- Three year hood superstructure warranty
- Chain & Sprocket sash mechanism come with an exclusive lifetime warranty
- Exclusive standard 43 1/2" (110.5 cm) tall full view sash area
- Easy conversion from VAV to CAV
- Tempered glass sash with full-length formed steel handle for a neat, clean appearance and streamline air passage
- Standard Color: Pearl White
- Two pre-wired 120V 20 amp GFCI duplex receptacles
- One pre-wired 20 amp light switch
- Pre-wired vapor tight T8 fluorescent light fixture
- Each hood side post and interior is punched and plugged to receive 5 service fixtures
- Upper left side post is punched for optional fan switch
- One pre-wired outlet on roof of hood for an optional alarm
- Upper right side post is punched for optional alarm

			Total CFM & Static Pressure			
Isolator ³ Part Number with frame less vertical sash	Overall Hood Width	Sash Opening Area (Sq Ft)	24" (61 cm) Vertical Opening @ 60 FPM Face Velocity	S.P. Loss	18" (45.7 cm) Vertical Opening @ 80 FPM Face Velocity	S.P. Loss
F-350-48G7	4'-0" (121.9 cm)	6.3	380 CFM	0.21"	380 CFM	0.12"
F-350-60G7	5'-0" (152.4 cm)	8.3	500 CFM	0.20"	500 CFM	0.11"
F-350-72G7	6'-0" (182.9 cm)	10.3	620 CFM	0.31"	620 CFM	0.17"



Fume Hoods



Full width sash weight at rear of hood



Heavy duty chain and sprocket sash mechanism with an exclusive lifetime warranty

Pre-wired outlet for available alarm



Integral stainless steel 12" (30.5 cm) round duct transition



Exclusive 43 1/2" (110.5 cm) tall "full view" sash area



High performance baffle design, which can be used in both low and standard volume applications



Hood post and interior is punched to receive 5 service fixtures and a fan switch



Acid cabinets are furnished with a chemical resistant lining that has a 1 1/2" (3.8 cm) spill lip. Exhaust vent kit is included.



Full range of standard and specialty storage base cabinets



Hood is fully pre wired with two GFCI duplex outlets, light fixture, light switch and outlet on the roof

Walk-In Fume Hoods

Walk-In Fume Hood

The Isolator Gen-5 bypass walk-in fume hood with the frameless vertical sash is similar to the bench style unit in design and function. The top view-pass is clear tempered glass. These units are normally used with tall equipment setups where maximum clarity of vision is a priority. When floor mounted, the walk-in's top fascia aligns with a standard bench hood thus providing a clean look to any design utilizing both types of hood. The Isolator Gen-5 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 with a chain driven sash operation
- Unique design qualities for unlimited customization possibilities
- Field conversion between Constant Air Volume (CAV) and Variable Air Volume (VAV) with a restricted by-pass

Features:

- Unsurpassed containment (designed and tested to exceed ASHRAE 110-1995)
- Hood is UL1805/CUL certified listed
- Unique chain driven sash mechanism that comes with a lifetime warranty
- Painted steel pan substructure
- 17.25" H. clear observation glass panel, bypass system
- Non-metallic interior
- Vertical sashes provide the greatest hood interior access
- Full view frameless sash with 66-1/2" upper and lower sash openings
- Quality engineering ensures years of reliable service
- White Polyglass liner
- Prewired T8 light and switch
- 2 prewired GFCI duplex outlets
- Prewired duplex outlet on hood roof for optional alarm
- Can be pre-plumbed with remote rod driven fixtures.
- Walk-in hoods are available for shipment in 7-8 weeks
- These hoods are furnished in Pearl White
- Other sash configurations and hood styles available upon request
- Epoxy resin work decks available upon request
- All hoods are available in both a standard 24" depth as well as a 30" deep format (D30)
- 2 pre-wired GFCI Duplex outlets
- Pre-wired T8 light and switch
- Each hood side post and interior is punched and plugged to receive 5 service fixtures
- Upper left side post is punched for optional fan switch
- One pre-wired outlet is provided on roof of hood for an optional alarm
- Upper right side post is punched for optional alarm
- Adjustable baffles

Walk-In Fume Hood



Our Walk-In hoods are a great choice for large apparatus or procedures to ensure user safety and efficacy of operations.

Fume Hood Accessories

Fittings for Fume Hood

- These WaterSaver brand remote control fittings consist of a brass angle valve with a replaceable seat, an epoxy coated brass nylon color-coded panel flange with angle serrated hose connector, a remote control rod assembly with a plastic flange and a tank nipple, locknut and washer.
- Fittings may be used on either side of hood.
- Shipped loose and installed in field.



Fitting Type	Part Number
Air (Orange)	L3185N-LR-A
Gas (Dark Blue)	L3185N-LR-G
Nitrogen (Brown)	L3185N-LR-N
Vacuum (Yellow)	L3185N-LR-V

Cold Water Fitting for Fume Hood

- These WaterSaver brand remote control fittings consist of a brass angle valve with a replaceable seat, and epoxy coated brass nylon color-coded panel flange with a gooseneck with a vacuum breaker, a remote control rod assembly with a plastic flange and a tank nipple, locknut and washer.
- Shipped loose and installed in field.



Fitting Type	Part Number
Cold Water with Vacuum Breaker	L3185W-9RSVB

Fume Hood Alarm

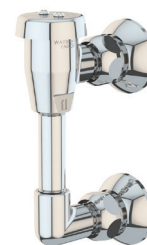
- Each **INSTOCK**® fume hood is pre-punched for the fast and easy installation of this alarm.
- The monitor provides a digital readout of fume hood face velocity and sounds an alarm when the airflow falls below safe levels.
- Consisting of a thermostat sensor (mounted through the side wall of the fume hood) and a monitor (mounted on the fascia), the unit gives both a visual and audible alarm.
- The monitor also contains test/reset button allowing the user to verify alarm readiness.
- This monitor is shipped loose for field installation.



Product	Part Number
Fume Hood Alarm	AFA4000

External Vacuum Breaker

- Shipped loose and installed in field.



Fitting Type	Part Number
External Vacuum Breaker	L112WSA

Cold Water Fitting for Fume Hood

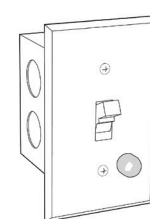
- These WaterSaver brand remote control fittings consist of a brass angle valve with a replaceable seat, and epoxy coated brass nylon color-coded panel flange with a gooseneck without a vacuum breaker, a remote control rod assembly with a plastic flange and a tank nipple, locknut and washer.
- Shipped loose and installed in field.



Fitting Type	Part Number
Cold Water without Vacuum Breaker	L3185W-9RS

Fan Blower Switch

- Manual fan motor starter switch, toggle style, single pole, with red pilot light, stainless steel cover plate, 1 thermal unit, for 1 or 2 HP maximum motor size

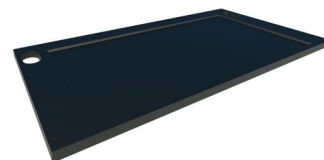


Product	Part Number
For use with a 1 HP fan	2510FS1P
For use with a 2 HP fan	2510FS2P

Bench Fume Hood Work Surface

- These 1 1/4" thick modified black epoxy resin work surfaces are required for all bench hoods and are dished to retain spills
- Sinks and cutouts are furnished as options

Bench Fume Hood Width	Part Number
4'-0" (121.9 cm)	WL-48B
5'-0" (152.4 cm)	WL-60B
6'-0" (182.9 cm)	WL-72B



Bench Fume Hood Work Surface Cup Sink Cutout and Cup Sink

- This includes a cup sink cutout and black polypropylene 3" x 6" cup sink
- Bench Fume Hood Work Surface sold separately

For use with:	Sink and Left Side Cutout	Sink and Right Side Cutout
Bench Fume Hood	CS-LS	CS-RS



Adjustable Height Fume Hood Ceiling Enclosure

- These three sided ceiling enclosures are designed to fill the space between the top of the hood and the ceiling up to 24" (61 cm) in height to provide a clean finished appearance.
- The enclosure is cut to fit in the field and includes a slip to fit ceiling finish trim angle.

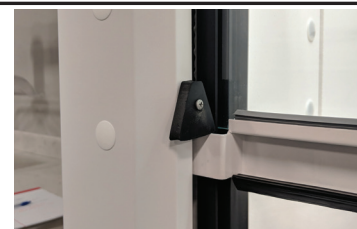
Fume Hood Width	Part Number
4'-0" (121.9 cm)	CE048P-NA-24GG
5'-0" (152.4 cm)	CE060P-NA-24GG
6'-0" (182.9 cm)	CE072P-NA-24GG



Gravity Sash Stop

- As a safety or energy conservation measure, a sash stop may be added to any of our hoods.
- 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.

Product	Part Number
Gravity Sash Stop	SP01



Fume Hood Accessories

Chemical Fume Hood Selection Considerations

A laboratory fume hood is the most important safety component used to protect laboratory personnel from exposure to hazardous chemicals and agents. Functionally, a chemical hood is a fire and chemical resistant enclosure with a movable window or sash at the face to allow user access to the interior.

The choice of a laboratory hood is based upon two important considerations:

1. The safety of the personnel that will be performing the procedure within the hood
2. The process and procedure that will be performed within it

Thought must be given to the equipment that will be placed within the hood. It needs to be large enough to leave 3" clear at the rear & sides and 6" clear at the front of the hood for the efficient passage of air into the hood and around the equipment. The configuration of the hood needs to be such that containers and implements can pass through the opening and provide a safe & comfortable working environment for the user.

The safe operating efficiency of the hood should also be considered. Laboratory fume hoods consume large quantities of conditioned air that is exhausted through the roof of the building. Choosing the right size, style and sash configuration for a hood can help significantly save an annual operating costs.

Operational Face Velocity:

Reference standards such as OSHA, ACGIH, NFPA, SEFA and ANSI/AIHA Z9.5 suggest average hood face velocities of 60-100 FPM. Note however, that hood face velocity alone doesn't guarantee a level of safety or protection. The design of the hood, it's suitability for the procedure to be performed, the quality of the supply & exhaust air systems and protocol or SOP by which it is used are critical to the overall safety of the user, lab and building. Please consult with your Environmental Health and Safety Officer for further direction.

Standard Options:

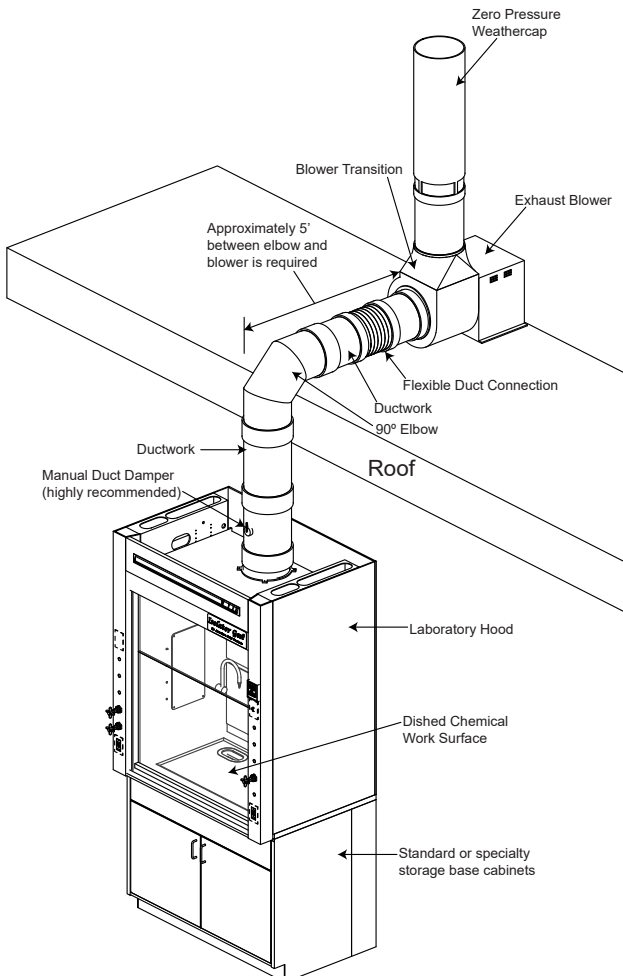
- Sash options include vertical rising, horizontal sliding, or a combination of the two
- Work tops include epoxy resin or stainless steel and can include a wide range of sinks.
- Hood liner materials can include polyglass, stainless steel and polyethylene.
- All needed lights, outlets, switches and plumbing services can be positioned to suit requirements.
- Air flow alarms and auto sash controllers are available to monitor air flow and maximize energy savings
- Seismic restraints for bench and walk-in hoods.

Exhaust System Recommendations

- Exhaust fans should be mounted on the roof so that the ductwork leading to the fan is under negative pressure. Please note that if exhaust fans are mounted inside the building, all ductwork connected to the fan outlet will be under positive pressure, and if leaks should develop in the portion of the ductwork inside the building, hazardous fumes could be forced out of the ductwork and into that area of the building.
- For the lowest possible noise level in the exhaust system, we suggest the following actions:
 - Use vibration isolators for mounting the exhaust fan.
 - Select an exhaust fan that will deliver the desired CFM and static pressure with the lowest practical impeller wheel RPM.
 - Use a flexible connection at the fan inlet to isolate transmission of noise from the duct to the hood.
 - Design the exhaust duct system with the fewest possible elbows or other fittings. Use radius type elbows and avoid square elbows.

Typical Fume Hood Ventilation System

The diagram below details of the components found in a typical fume hood ventilation system. All of these components as well as others are available within this catalog.



Hood Exhaust Blower Sizing

When sizing an exhaust blower, it is necessary to include the equivalent air movement resistance factors for all ductwork and accessories in the ventilation system. Contact your HVAC contractor to ensure an accurate supply and exhaust air system.

Steps to sizing the right hood fan

1. Review the CFM and static pressure loss for the use of the selected fume hood. The catalog details provided for each hood indicate these values.
2. Add up all the equivalent resistance amounts in feet of straight duct of the ductwork, components, fittings and fume hood in your system.
3. Use the fan selection chart to cross reference the total CFM required as well as the system static pressure loss to select the right exhaust blower for your application.
4. Contact your HVAC contractor for assistance.

Duct Diameter	6"	8"	10"	12"	16"
Airflow/ CFM	Static pressure loss in inches of water for each 10' length of ductwork				
250	0.039	0.011	0.003	0.001	-
500	0.147	0.037	0.013	0.005	0.001
750	0.321	0.079	0.026	0.011	0.003
1000	0.557	0.140	0.043	0.018	0.005
1250	0.855	0.210	0.066	0.027	0.008
1500	-	0.300	0.095	0.039	0.012
1750	-	0.380	0.130	0.053	0.016
2000	-	0.485	0.155	0.067	0.020
2500	-	-	0.245	0.109	0.031
3000	-	-	-	0.145	0.042
4000	-	-	-	0.240	0.074
5000	-	-	-	-	0.120

Exhaust Snorkels

Our exhaust snorkels are made of lightweight anodized aluminum sections, with three adjustable, composite friction joints. Offering strength and durability combined with easy handling. They are suitable for the removal of heat or nuisance fumes. They need to be tied into the general exhaust for the lab. They are a reliable all-round arm for general applications where there is a little risk of electrical discharges.

- Available in 3" diameter with a maximum working radius of 42.9" (109 cm) or 57.1" (145 cm)
- Each arm is furnished with 5.5" mini hood that will accept the optional hoods noted in this section
- The two outermost arm joints can rotate and swivel 360°
- These arms are designed to be mounted from the wall or ceiling. Complete mounting components and hardware is included with each exhaust arm.

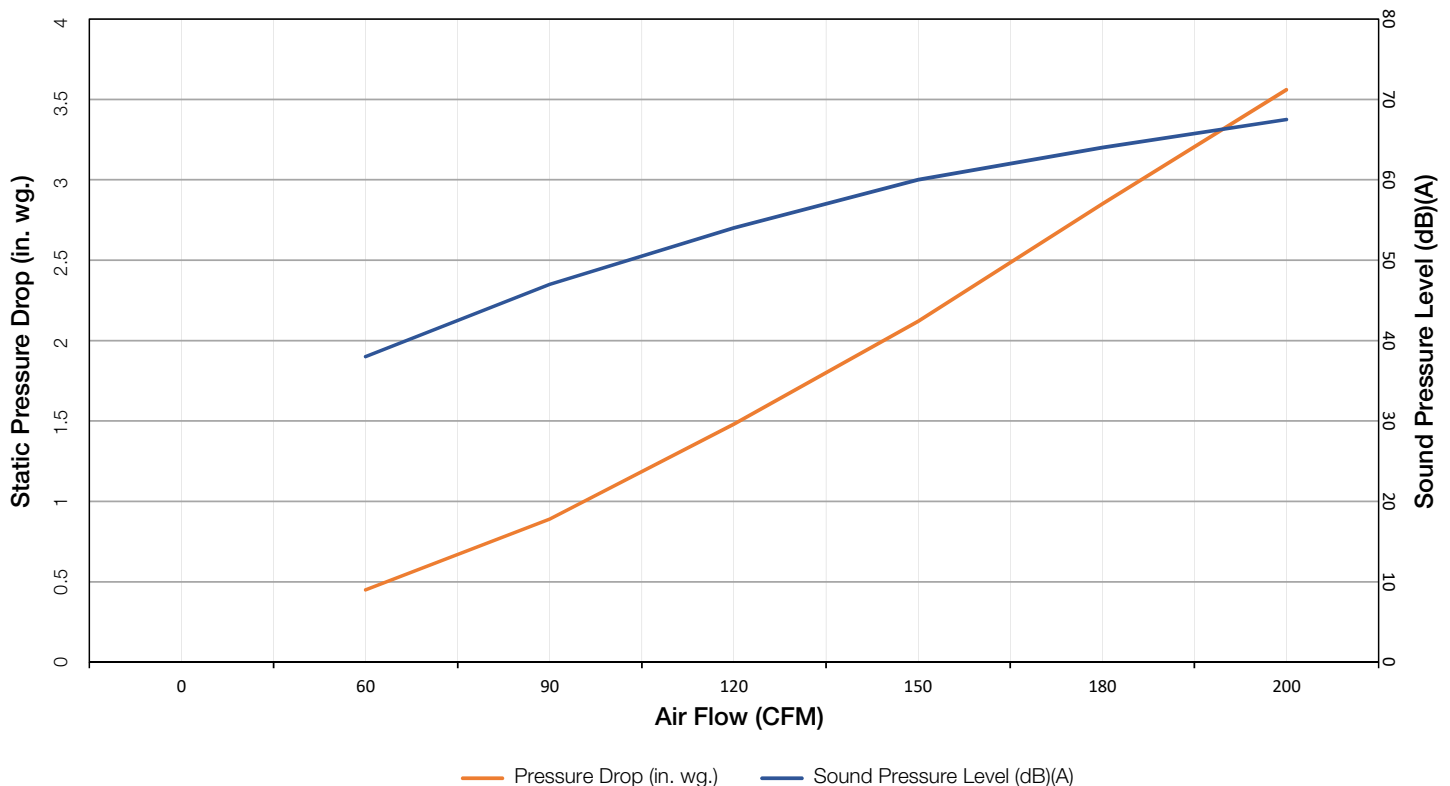


The Original model is a robust and reliable all-round exhaust snorkel for general applications where there is little risk of electrical discharges or attack by aggressive chemicals.

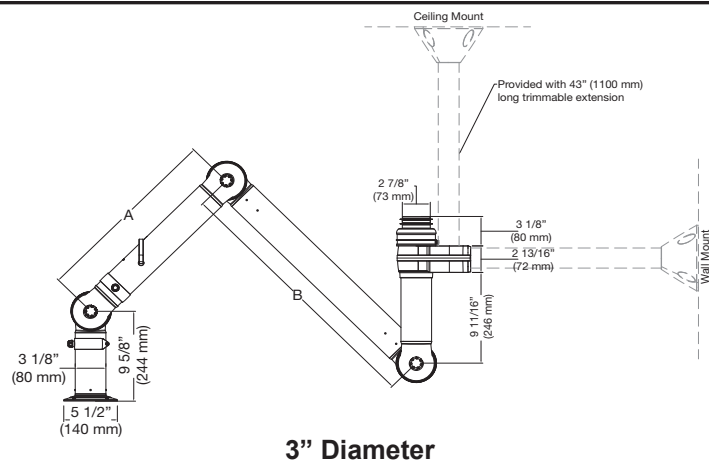


The CHEM model is constructed of anodized aluminum with a white electrophoretic deposition coating making the arm ideal for fume extraction in aggressive environments where corrosion resistance must be assured.

Air Flow with Resultant Static Pressure Drop and Sound Level



Exhaust Snorkels



Part Number	Description	Diameter	A	B	Max. Working Radius
OES-3	ORIGINAL Model	3" 75 mm	16.5" (42 cm)	16.5" (42 cm)	42.9" (109 cm)
OES-3L	ORIGINAL Model		19.7" (50 cm)	27.5" (70 cm)	57.1" (145 cm)
CES-3	CHEM Model		16.5" (42 cm)	16.5" (42 cm)	42.9" (109 cm)
CES-3L	CHEM Model		19.7" (50 cm)	27.5" (70 cm)	57.1" (145 cm)

Accessories

Combi Hood



- Transparent combi hood, made of PET-G plastic, arms are designed to capture contaminants with low energy.
- It can be attached directly on mini hood, irrespective of arm size.
- The ergonomics of handle design on both sides of the hood make it easier to maneuver.

Part Number	For Use With:
70500144	Original Model
70500344	CHEM Model

Dome Hood



- Transparent dome hood, made of PET-G plastic, is designed to capture high dispersion contaminants.
- It can be attached directly on mini hood, irrespective of arm size.
- The ergonomics of handle design on both sides of the hood make it easier to maneuver.

Part Number	For Use With:
70376982	Original Model
70376984	CHEM Model

Metal Hood



- Powder coated white metal hood, made of aluminum, is designed to capture contaminants in high temperature, aggressive fume where corrosion resistance must be assured or dust splatter.
- It can be attached directly on mini hood, irrespective of arm size.

Part Number	For Use With:
70500444	Original Model
	CHEM Model



Quick Delivery Program

Quick Delivery Lab Furnishings



249 Old Churchmans Road
New Castle, Delaware 19720

PHONE: 302-322-0460

EMAIL: contactus@lfsystems.com

WEB: www.LFSYSTEMS.com

