



Defender Series

Fume Hood Installation Guide and User Manual

Attention! Important Safety and Operating Instructions.
Read and understand the manual in full before operation.



Installation

Unpack all materials and inspect for damage. File claims for freight damage within ICC regulations. The following procedures must be taken before setting of fume hoods (while hood is still on the shipping skid):

For BV Series hood, remove stainless steel airfoil – unscrew from each end of skid. Discard screws. *LA Series airfoil ships pre-installed.*



For fume hoods equipped with vertical sash - remove stretch wrap and strap. Prop up sash 30" above skid – make sure sash is parallel to skid by propping on both left and right sides of sash.

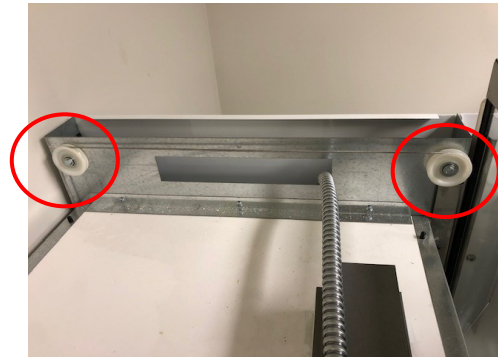


For fume hoods with horizontal sash – open crating located inside hood and carefully remove sash glass.

Glass should be carefully set aside for installation once the fume hood is positioned on it's worksurface.



For hoods with **vertical sash** - align sash cables over front and rear pulleys attaching each cable end through "L" shaped cutout at the top of the sash counterweight. Remove and discard retaining brackets from counterweight.



Remove 30" window boards and check operation of the sash, making sure that:

- The top edge of the sash finger pull stops 1 3/8" from the bottom edge of the front panel at the highest position.
- Counterweight is parallel with skid.
- Sash moves freely with fingertip pressure.
- If binding should occur, make sure cables are on pulleys. Then check hood squareness by measuring diagonals across top surface of hood.
- Rectangular foam pads are provided. These pads can be placed on the galvanized angle beneath the counter-weight for noise prevention.
- Remove screws securing hood to skid inside each side panel.



The following procedures must be taken after the setting of the hood on the work surface:

- Make sure sash operates without binding. (Once hood is set, adjustment of sash cables can only be accomplished by removing baffles and back panel.)
- Attach airfoil to hood and countertop, using screws in bias of side posts (remove nut and lock washer) and #8-32 bolts (not provided) into countertop.
- Secure hood to countertop with #8 x 1/2"-long, round head sheet metal screws. Attach two 2" x 1/4"-thick foam rubber strips to countertop under each end of counterweight. (Fig. 2)
- Have wiring of hood electrical fixtures done by qualified electrician.
- Have duct work and blower system installed and connected by qualified mechanical technician.

****WARNING! DO NOT STAND ON TOP PANEL OF FUME HOOD DURING OVERHEAD WORK. THE MATERIAL WILL NOT SUPPORT A PERSON'S WEIGHT AND FALLING THROUGH CAN CAUSE SEVERE INJURY.****

For hoods with **horizontal sash** – With hood on worksurface - Position sash rollers in track assembly, giving the rollers a squeeze until they snap into the track. Sash pieces should be offset in front and rear track. It may be necessary to adjust sash roller wheels to achieve correct fit with bottom airfoil track.

Operation

1. Turn on interior light. (*Standard fume hoods come with LED bulbs installed.*)
2. Turn on exhaust fan. Verify exhaust system is operating properly and that air is flowing through the fume hood before starting fume-producing activities.
3. Set-ups and apparatus should be as far back from the sash opening as possible for safety and optimal performance. A set back of at least 6" is necessary for proper fume containment. Avoid blocking off baffle openings.
4. Large, bulky objects should not be placed directly on the work surface. Block up 2-3" to permit air flow under the object and into lower rear baffle exhaust opening.
5. Avoid rapid movement and excessive personnel passage in front of the hood. Air disturbances created may draw fumes out of hood.
6. Keep sash closed during operation and use a safety shield when inspecting or adjusting apparatus.
7. Limit quantities of hazardous materials inside fume hood to those required. Do not use hood for storage of toxic or flammable materials.
8. Stop all hazardous fume producing processes in the event of failure of the exhaust system or electrical power.
9. Do not place face or upper body inside fume hood when in operation.
10. Changing of baffle adjustment by unqualified personnel can be dangerous. Do not close off or block baffle openings.
11. Do not use perchloric acid or radioactive materials in standard fume hoods. Use hoods specially designed for these materials.
12. Do not permit temperature of inside of sash surface to exceed 160°F. unless the sash is equipped with tempered glass.
13. To maintain a safe work environment, the fume hood should always be operated with care by trained and qualified personnel.

Maintenance

This unit has been designed to provide many years of service with minimal maintenance. Maintenance procedures consist primarily of clean-up, adjustment, lubrication, and replacement of worn, damaged or non-functioning parts.

Good housekeeping practices included cleaning sash (exterior and interior surfaces), fluorescent light glass panel, and periodic replacement of lamps to maintain adequate illumination.

1. Exterior metal surfaces should be cleaned with mild soap and water. Surfaces maybe then coated with a good furniture paste wax. Avoid excessive use of touch-up paint.
2. Interior surfaces should be periodically cleaned with a mild detergent to remove accumulated soil. Do not use an abrasive cleaner. Clean-up should be performed by, or under supervision of, a knowledgeable technician, and should include removal of the baffles for clean-up of all interior surfaces.
3. Sash guides should be lubricated with paraffin or petroleum jelly – used sparingly and only when necessary. Be sure to remove debris from sash guide area prior to applying lubricant.

Pulleys are self-lubricating, but should they require, lubricate with a light bearing grease.

Stainless steel sash frame is glazed with ¼" laminated safety glass and should not require replacement, unless cracked or broken. Due to fragility of glass in shipping, single replacement panes should be procured locally.

For additional information or guidance please contact us directly at 231-767-1301 or via email at sales@iq-laboratory.com.

Basic Wiring Diagram:

Typical fume hood wiring diagram showing light switch, blower (exhaust) switch, and two GFI receptacles.

