

# HEMCO

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*Laboratory Planning Solutions*

*Installation, Operation, Maintenance Manual*  
*Demonstration Fume Hood*  
*Model #*  
*53001*



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The **HEMCO** Demonstration Fume Hoods are shipped palletized, fully crated, padded and wrapped for maximum protection and ease of handling. If damaged call the adjuster for the delivering carrier promptly and notify **HEMCO** at 1-816-796-2900.

- Upon receiving, inspect for crate damage and possible concealed damage that may have occurred in transit. Save all delivery receipts and crating materials. If damaged call the adjuster for the delivering carrier promptly and notify HEMCO at 1-816-796-2900.
- When uncrating the Demonstration Fume Hood remove the top section of the crate, which is stapled to the top of the side. Then carefully remove the front, two sides and the rear of the crate.
- When ready to install Demonstration Fume Hood, carefully lift from pallet and set on work surface in proper location.

Your Demonstration hood has been assembled, wired, and tested at the factory, and is ready for set up and operation. Please read through these instructions before beginning setup.

### **1. Hood Location**

- A. Choose a work area away from heavy traffic and cross drafts. As excessive air movement will adversely affect the hoods ability to contain fumes.
- B. Place the hood on a level, stable surface appropriate for use with your experiments.

### **2. Operation**

- Plug hood 8' power cord into modular receptacle on rear of fume hood and into 115 Volt outlet of a 15 ampere or greater electrical service.
- Turn on power switch.
- Your hood is now ready for use.

### **3. Replacement of Incandescent Bulb (Bulb is not included with the hood)**

- Unscrew the glass globe from the internal ceiling mount.
- Install 60-75 watt bulb.
- Reinstall the glass globe, careful not to cross-thread

### **4. Exhaust Blower**

- Vented Demonstration Hood is equipped with an integral blower. The standard blower is prewired at the factory and can be plugged into a standard 115 volt, 60 Hz, AC outlet rated at 15 amperes. Please consult your electrician regarding the local codes in your area.
- Blower is sized for a total equivalent duct run of less than 15 feet. If your equivalent duct run is more than 15 feet, please contact the factory for a recommendation for a remote exhaust bower.

### **5. Warnings and Recommendations**

- **RECOMMENDATION** - Consult your Lab Safety Manager to assure the safe operation of this vented hood.

Upon completion of the installation of your Vented Demonstration Fume Hood it is a good idea to clean thoroughly to eliminate any miscellaneous debris and/or surface soil.

1. For all composite surfaces use a general-purpose nonabrasive household cleaner.
2. For all phenolic work surface use a general-purpose nonabrasive household cleaner.
3. For glass surfaces use a formula glass cleaner. (Windex).
4. For metal cabinet painted surfaces use a general purpose nonabrasive cleaner,

Any questions? Call HEMCO customer service at 1-816-796-2900.

## **MAINTENANCE**

### **SASH**

Standard fume hoods are provided with a type of movable sash or viewing window. The sash should be cleaned frequently to avoid the possibility of residue building up on the surface. A soft, cloth and mild cleaner should be used for best results.

### **DEMONSTRATION FUME HOOD**

Spills should be flushed immediately using neutralizing compounds as required and cleaned thoroughly afterwards. If sashes are grabbing, lubrication of hinge(s) with a good quality machine oil and application of paraffin to sliding metal surfaces will help performance substantially. General cleaning can be done with normal detergents and water.

### **CABINETS**

Although designed for wear and tear, the life of cabinets can be greatly extended through observance of proper cleaning and maintenance procedures. Drawers that are overloaded, doors misadjusted, and locks which malfunction can lead to undue stress on equipment, and can permanently affect performance. Metal casework and hardware should be cleaned periodically with good quality cream furniture Polish or an automotive cleaner and finishing wax. Use of rubbing compound often can restore superficial abrasions. Spills should be cleaned up immediately followed by a wash down with detergent and water.

Corrosive reagents should be stored in well ventilated casework specifically designed for corrosive storage. HEMCO offers a complete line of acid/corrosive cabinets and flammable / combustible cabinets.

### **WORKSURFACES**

Epoxy Resin Fine scratches will usually disappear when the top is cleaned with a good quality liquid furniture polish. Mildly abrasive cleaners can be used for stain removal.

### **SERVICE FIXTURES**

Fixtures which have been subjected to chemical fumes over a prolonged period of time may show signs of corrosion. When this occurs thorough cleaning with formulated chrome cleaner followed by an application of paste wax is recommended.

Epoxy coated fixtures used in chemical areas can be cleaned with detergent and water, dried, and lightly polished with a soft cloth. Do not use abrasive cleaners. High temperatures may alter the color of the plastic coating on fixtures; this condition cannot be cleaned away, but the chemical resistance of the finish is unchanged. A break in the plastic coating of these fixtures should be touched up immediately with matching paint or lacquer to protect the fixture.

## SAFETY RECOMMENDATIONS

**DO** - AVOID UNNECESSARY EXPOSURE OF PERSONNEL TO FUMES INSIDE HOOD BY KEEPING SASH CLOSED EXCEPT WHEN LOADING OR UNLOADING HOOD. AFTER INITIALLY SET.

**DO** - KEEP MATERIALS 6" OR MORE FROM FRONT EDGE OF SASH PLANE.

**DO** - AVOID OPERATE ONLY EXHAUST SYSTEM WHEN EXTREME HEAT LOADS. 5. GENERATE LARGE QUANTITIES OF

**DO** - CLEAN UP IMMEDIATELY ANY MAJOR SPILLS OCCURRING INSIDE HOOD. 6, PERMIT TEMPERATURE OF SASH GLASS TO

**DO** - USE ONLY GROUNDED ELECTRIC EQUIPMENT. EXCEED 160° F.

**DO** - REPORT ANY MALFUNCTION OF THE EXHAUST SYSTEM.

**DO** - ELEVATE CONTAMINATES AND EQUIPMENT ABOVE WORKSURFACE OF HOOD ENABLING AIR FLOW BENEATH AND AROUND

**DO** - KEEP MOVEMENTS IN THE HOOD AND IN FRONT OF THE HOOD TO A MINIMUM.

**DO NOT** - USE HOOD UNLESS EXHAUST SYSTEM IS IN OPERATION.

**DO NOT** - CHANGE DAMPER OR BAFFLE SETTINGS AFTER INITIALLY SET.

**DO NOT** - USE DUCTLESS DEMONSTRATION FUME HOOD FOR STORAGE OF CORROSIVE OR VOLATILE MATERIALS.

**DO NOT** - BLOCK BAFFLE OR GRILL OPENINGS.

**DO NOT** - GENERATE LARGE QUANTITIES OF INFLAMMABLES WITHIN DUCTLESS DEMONSTRATION FUME HOOD.

**DO NOT** - PERMIT TEMPERATURES OF SASH GLASS TO EXCEED 160 DEGREES FAHRENHEIT.

**DO NOT** - PLACE UPPER BODY OR HEAD INSIDE THE FRONT PLANE OF THE HOOD OPENING.

**DO NOT** - OPEN OR CLOSE SASH SWIFTLY AS THIS MAY CAUSE ADVERSE AIR FLOW CURRENTS.

**DO NOT** - APPROACH OR LEAVE HOOD FACE SWIFTLY AS THIS MAY CAUSE ADVERSE AIR FLOW CURRENTS.

## TROUBLE SHOOTING

PROBLEM	CAUSE	CORRECTIVE ACTION
Insufficient air flow	1) Improperly sized blower 2) Motor (impeller wheel) is running backwards 3) Obstruction in duct system 4) Leaks in duct system 5) Overloaded filters	1) Resize blower, change drive package 2) Correct wiring for reverse rotation of motor. 3) Locate and Remove obstruction 4) Trace and repair 5) Clean or replace filters
Fume Hood or Blower not operating	1) Blown fuse or open circuit breaker 2) Defective motor 3) Thermal protector on 4) Motor improperly wired	1) Replace fuse or reset circuit breaker 2) Consult factory 3) Check for high or low voltage input or ambient temperatures over 40 degree C ( 104 degree F) 4) Correct wiring for reverse rotation of motor
Contaminates outside fume hood face	1) Improper use or procedures 2) External factors 3) Improper face velocity	1) Follow safety guidelines and procedures 2) Check external air flow patterns around fume hood 3) Recertify fume hood face velocity and/or duct system
Sash binding	4) Cable off of pulley Cable Broke	5) Replace Sash / Cable
Air Flow Monitor	6)	7)
Electrical Services not working	8) Circuit Breaker 10)Corroded Contacts	9) Check Main Load Center 11)Clean or replace