

**INSTALLATION
OPERATION & MAINTENANCE
MANUAL
FOR
LAMI-VENT™
LAMINAR FLOW DIFFUSERS**



www.precisionairproducts.com

7620 West 78th Street, Bloomington, MN 55439 • Phone 800-404-0931 • Fax 952-854-4543

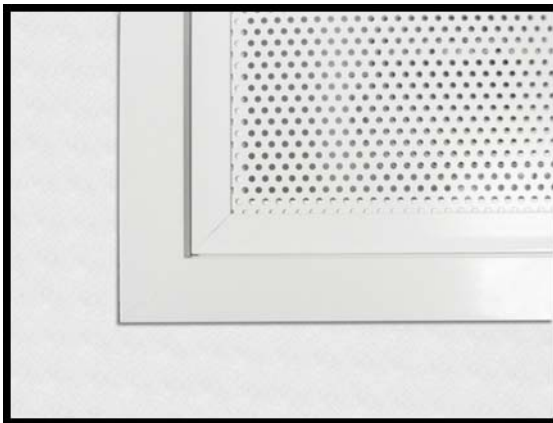
INSTALLATION, OPERATION & MAINTENANCE

STEP 1: INSTALL SUPPLY DUCTWORK PRIOR TO ERECTING CEILING.

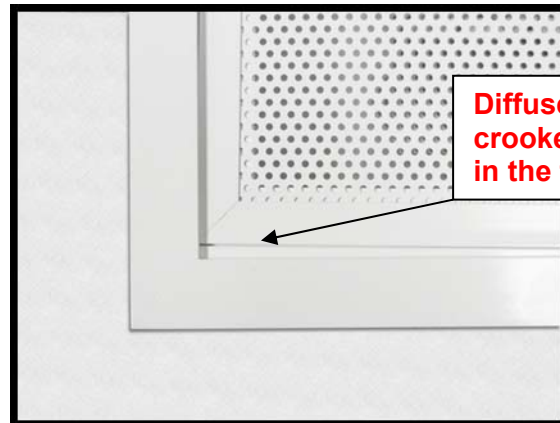
STEP 2:

Diffuser Installation

1. Install plaster frame into ceiling opening per *framing installation instructions*.
2. Insert diffuser and lower onto gasketed opening.
NOTE: If additional support is required, diffuser mounted hanging tabs may be utilized.
3. Connect the supply ductwork to the top inlet collar.
NOTE: It is imperative that the connection be fully sealed to avoid leaks in the interstitial space.
4. Position the diffuser in the frame with an even reveal to ensure proper gasket coverage and a consistent room-side appearance.
NOTE: The photos below depict PAP framing. Other framing may result in a different reveal.



Conformance



**Diffuser positioned
crooked & uneven
in the frame.**

NON-Conformance

STEP 3: **CONNECT SUPPLY DUCTWORK TO TOP INLET COLLAR**

Connect supply ductwork to top inlet collar as required by project specifications if connection has not been made prior to suspending the diffuser from above. Place the diffuser into ceiling framing after inlet connection has been installed.

STEP 4: **PREPARATION FOR BALANCING**

- a. Drop the perforated faceplates on diffusers by loosening all quarter-turn fasteners located on the perimeter of faceplate by turning fastener counterclockwise with slot screwdriver. Carefully disconnect the single safety cable and allow the faceplate to hang freely by two of the safety cables on the opposite side.

Note: Each diffuser has at least three safety cables that connect the faceplate to the plenum to prevent accidental dropping, two cables on one side and one on the opposite side. Simply disconnect the single cable and then re-hook after the filter is installed.

- b. Confirm that air-handling system has been blown down in order to eliminate dirt and debris that may have accumulated in the ductwork during the construction process. If this has not yet been completed, run the air handler on high for several minutes.
- c. Clean and dry the inside of each diffuser and both sides of perforated faceplate with a towel and a non-abrasive cleaner.
- d. Inspect that the entire framing system is gasketed to assure an airtight interface between the framing and diffuser (and any blank-off/fill-in panels or fluorescent light fixtures also installed in the framing system).

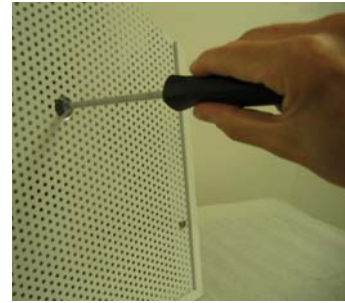
STEP 5: **BALANCING**

The Lami-Vent's self-contained module design allows for adjustment of airflow from the room side of the diffuser. Please follow the outlined procedure below for proper balancing of an entire system of diffusers. If specific air volumes for diffusers are indicated on mechanical drawings for the room, balance diffusers to specified air volumes.

- a. Prior to any adjustment, check each individual diffuser for total CFM output with a flow hood. The diffuser's internal volume adjustment valve is meant for fine-tuning only. If rough balancing is required, please adjust by the valve located within the supply ductwork before attempting to adjust the internal balancing valve, otherwise noise problems could result from restricting the inlet and increasing air velocity.
- b. The single metering damper (cone valve) located below the inlet collar can be adjusted from the room side of the diffuser with an 8-10" straight blade screwdriver by simply dropping the faceplate and accessing the adjustment screw through a hole in the diffuser's centerplate.



If the diffuser's faceplate has the optional "plug button", the faceplate need not be dropped and the plug simply should be removed to gain access to the adjustment screw. If balancing a unit with a side or end inlet, the adjustment screw is located along the perimeter of the diffuser frame on the side or end, just below the side or end inlet.



- c. Insert the screwdriver through the hole within the centerboard (and faceplate if optional plug button is provided) and turn the damper's adjustment screw to provide the required airflow.
- d. If air volume for diffuser is specified on mechanical drawings, balance accordingly. If air volume is not indicated and total system air volume is known, diffuser air volume must be calculated. To determine individual diffuser volume, first determine the CFM per square foot of active diffuser area by dividing the total CFM required in the room by the total square foot of diffuser area, then multiply that value by the nominal sq. ft. of active diffuser area (i.e. 8 sq. ft. for a 2'x4' diffuser).
- e. With a flow hood, balance for correct CFM per diffuser by first adjusting the highest volume diffusers' metering dampers to specified airflow.
- f. Continue adjusting individual diffusers to the specified airflow is obtained over the entire system of diffusers.
- g. Then, for each diffuser, attach the single stainless steel safety cable to the faceplate and tuck the three safety cables up into the diffuser and reattach each faceplate by tightening the quarter-turn fasteners clockwise. No further adjustments in balancing will be required.

STEP 6: GENERAL CLEANING

It is generally considered desirable for the hospital housekeeping staff not to require special cleaning solutions for each manufacturer's product. We recommend any commonly used solution to clean painted cabinet and ceiling finishes which are similar to the white baked enamel with which this system is finished. Care should be taken to avoid spraying anything directly at the face of the Laminar Flow Diffusers to prevent damage to the HEPA filter if the units have HEPA filters in them.

FOR ASSISTANCE, CALL 1-800-404-0931