



MULTI-VENT[®]
Laminar Flow Panels
Installation
Operation
and Maintenance

Contents

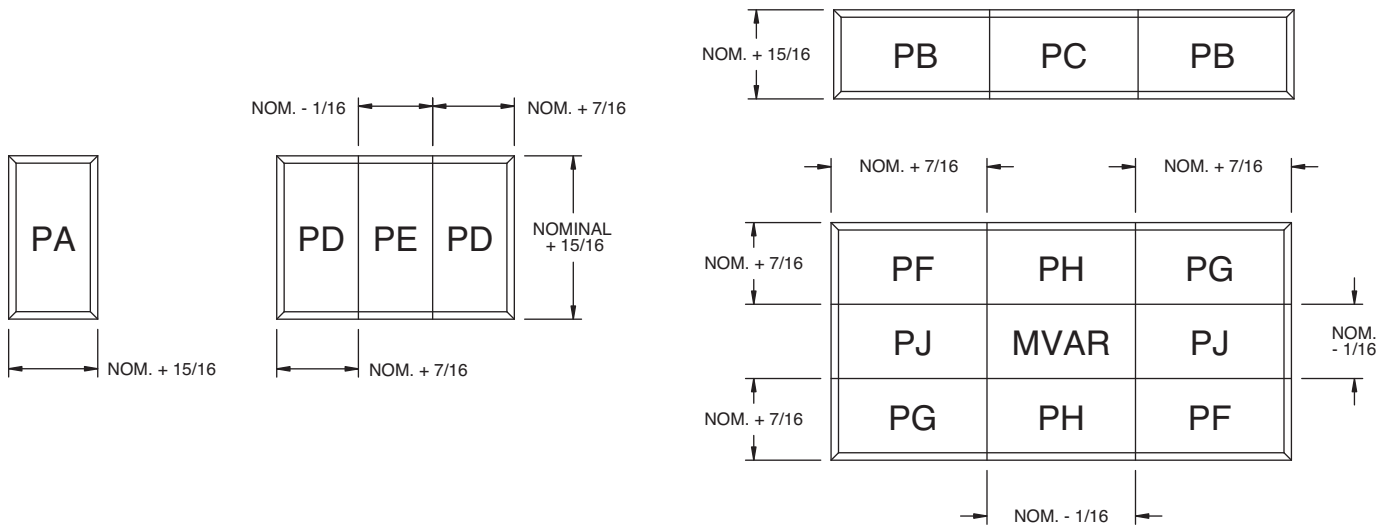
Batten Arrangements.....	3
Slip-On Battens	4
Ceiling Opening.....	5
Installation	5
Hanger Bracket Hole Location	6
HEPA Filter Installation	7

Batten Arrangements

Multi-Vent Laminar Flow Panels are available for surface mounting in plaster / gypsum ceiling construction. The Multi-Vent design permits flexibility in panel arrangement to properly integrate the air distribution into the ceiling.

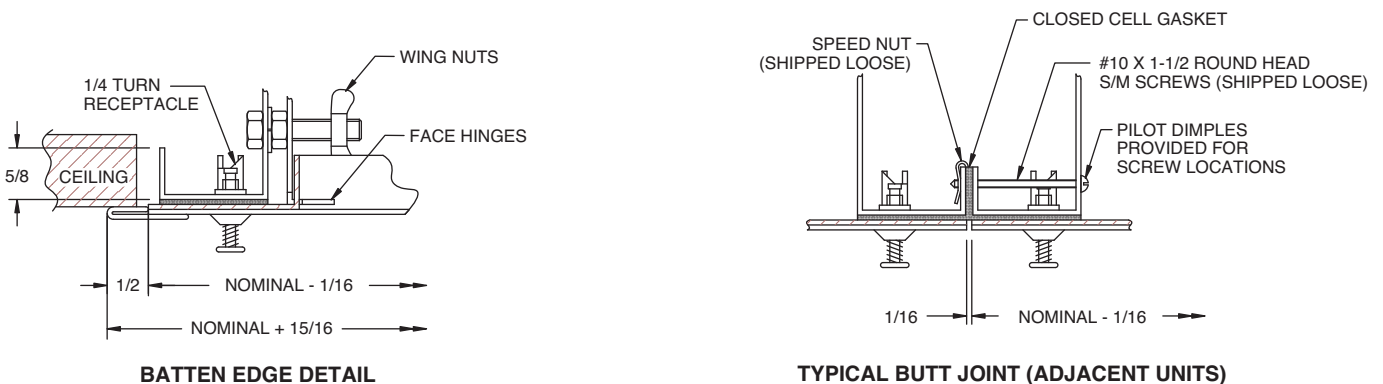
CONSTRUCTION

The Multi-Vent Design for surface mounting incorporates BATTENS. Battens are trim strips welded to the outer edges of the removable face of Surface Mounted Multi-Vent Panels. Battens provide a finished appearance and mask the ceiling opening edge. Multi-Vent Panels are ordered from the factory with preconfigured batten arrangements, and therefore, have specific locations within the building. The nomenclature for various batten arrangements are as shown in the plan view below:



For example, Batten Arrangement PA consists of a singular panel, with battens on all four edges of the face, for stand-alone installation. Batten Arrangements PD in conjunction with PE, when installed within the ceiling, provide a neat installation, with perimeter trim battens around the entire built-up assembly.

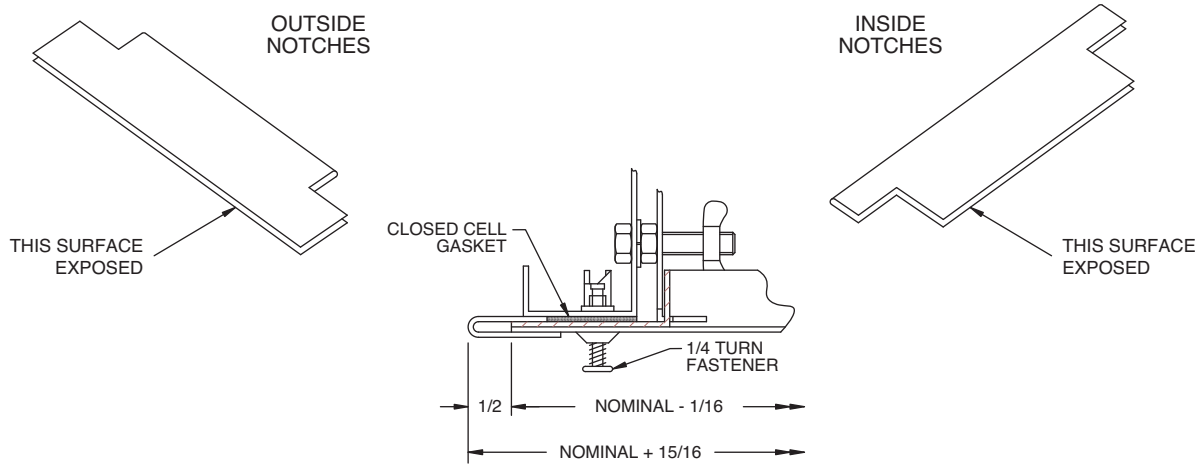
The details for both batten edges and adjacent panels are shown below:



The joint detail between two adjacent Multi-Vent Panels shows sheet metal screws and speed nuts used to fasten the units together. The sheet metal screws are installed from below, with the face plate lowered. Pilot dimples are provided in each Multi-Vent Panel for locating the sheet metal screws. Gasketing is applied at the factory for a leak tight joint.

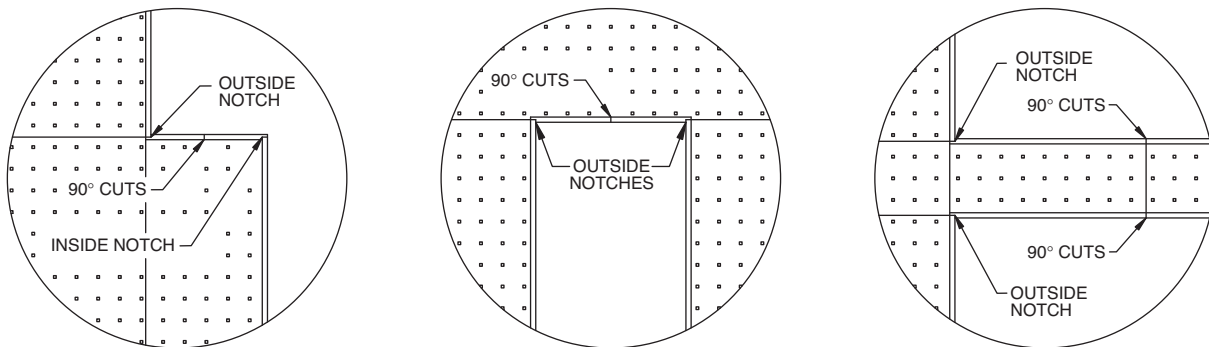
Slip-On Battens

For ceiling arrangements with inside corners, slip-on battens should be used and require custom field cutting after the entire ceiling assembly is installed. This method provides the best appearance, while allowing for installed dimensional tolerance. The Slip-On Batten is shipped in lengths, requiring field cutting. Slip-on battens are provided with outside or inside notches as shown:



SLIP-ON BATTEN DETAIL

TYPICAL ARRANGEMENT REQUIRING SLIP-ON BATTENS

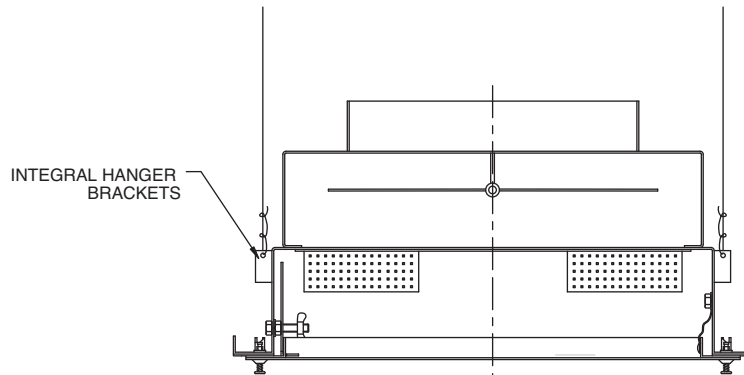


Ceiling Opening

The ceiling opening size is the nominal size of the Multi-Vent Laminar Flow Panel, or the sum of the nominal sizes for adjacent, butting units in a built-up assembly. For example, the ceiling opening for a single, 24" x 48" panel is 24" x 48". For (2) 24" x 48" panels arranged to form an overall assembly of 48" x 48", the ceiling opening required is 48" x 48".

Installation

Each Multi-Vent panel shall be individually supported by threaded rod, straps, or hanger wire. Hanger Wires are preferred, as both threaded rod and straps require field drilling of the frame body, and present obstacles which make routine cleaning more difficult. Methods and materials, gauge & size, # of supports, and spacing shall be in accordance with applicable codes and as specified in contract documents & drawings. Each Multi-Vent panel comes with integral hanger brackets that can be used with the hanger wire method of support. These "bend out" hanger brackets are located at the four corners of the frame body:



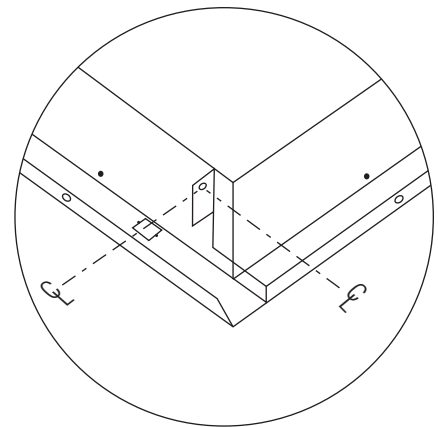
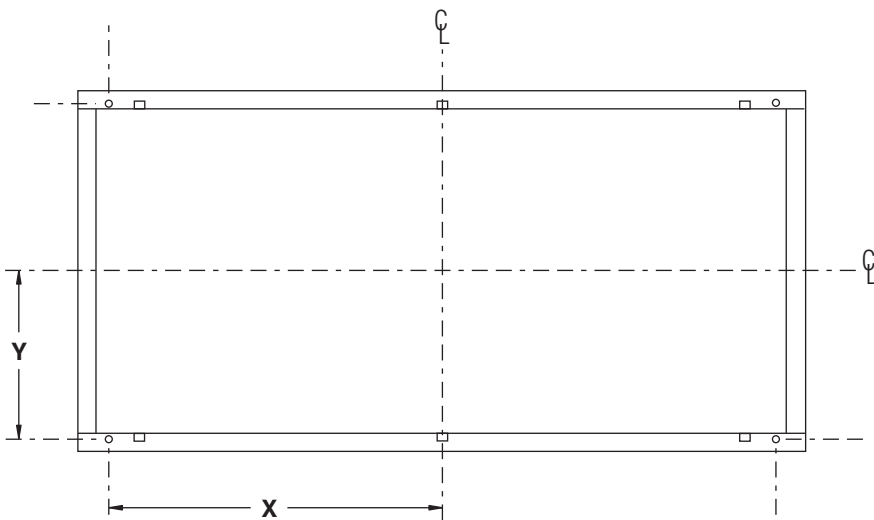
The sheet metal screws and speed nuts (shown in Butt Joint edge detail) are used to pull adjacent Multi-Vent panels together, in the horizontal plane. and are not designed to carry vertical loads.

With the proper ceiling opening and support straps, wires, or rods located and attached to the structure above, installation is easiest by hanging individual Multi-Vent Panels, one at a time. Access above the ceiling will be required, either through a formal access door, or through some other opening. The panel face may be removed from the unit at the floor level, for easier handling and to access the inside of the frame body to screw attach adjacent units together. As each unit is suspended & leveled within the ceiling opening, duct attachment can conveniently be made with minimal "reach". Adjacent units are subsequently suspended, leveled, screw attached to other units, etc., until the assembly is completed. Sealant may be required between the Multi-Vent units and ceiling cut-out edge to prevent leakage between the ceiling plenum and space below.

Hanger Bracket Hole Location

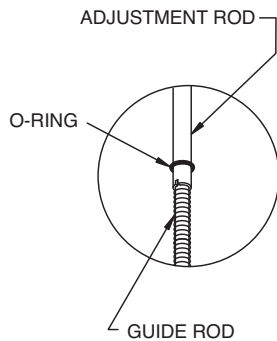
For the location of the integral hanger bracket holes on the Multi-Vent panels, see the table and drawing below. The X & Y dimensions reference the distances from the center of the frame body (which is typically the center of the top supply air inlet collar) to the center of the hole on the hanger bracket, in the plan view.

MV Size	X	Y	MV Size	X	Y
12 x 48	21-15/16	5-1/16	24 x 60	27-15/16	11-1/16
12 x 60	27-15/16	5-1/16	24 x 72	33-15/16	11-1/16
12 x 72	33-15/16	5-1/16	36 x 36	15-15/16	17-1/16
24 x 24	9-15/16	11-1/16	36 x 48	21-15/16	17-1/16
24 x 36	15-15/16	11-1/16	36 x 60	27-15/16	17-1/16
24 x 48	21-15/16	11-1/16	36 x 72	33-15/16	17-1/16

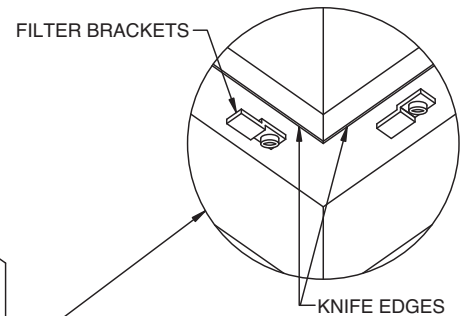


HEPA Filter Installation

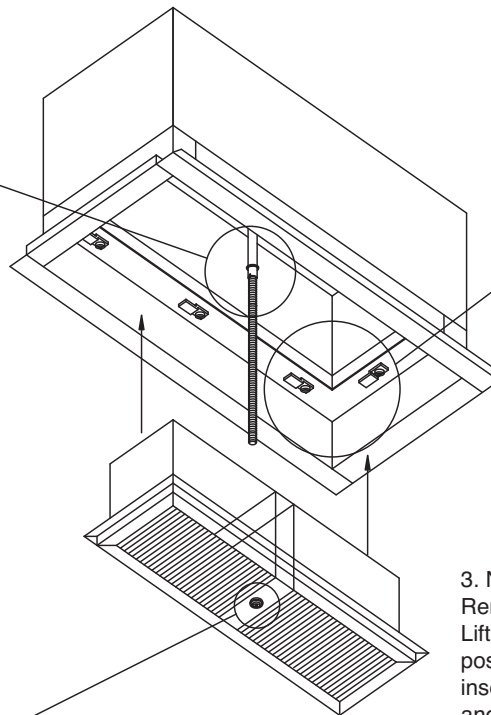
- Typical for units with top inlet.
- Units with end inlets do not utilize center rod.



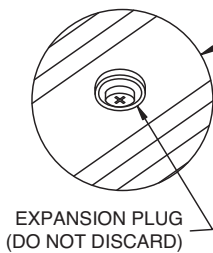
2. Thread #6-32 x 12" guide rod into adjustment rod. Don't fully tighten for ease of removal. When in place, guide rod will project about 10" below ceiling.



1. Loosen all socket head screws and rotate brackets as shown.



3. Note hole through filter. Remove expansion plug from filter. Lift filter below diffuser, then position #6-32 guide rod for insertion through hole in filter and lift filter to engage knife edges into seal within channel on filter.



4. Rotate Brackets as shown on flange of filter. Tighten all socket head screws. Remove #6-32 x 12" rod and replace expansion plug.

