

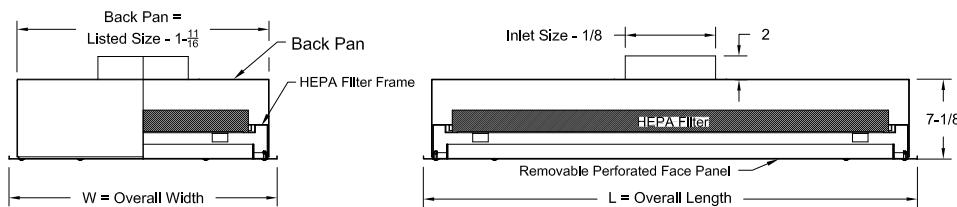
SERIES HPL-GS

HPL-GS Laminar Flow Diffuser is engineered to supply air in critical environments such as clean rooms, laboratories, hospital operating rooms, and patient isolation rooms. The diffuser provides a means of controlling particle contamination within the room by providing a unidirectional vertical "piston" of conditioned air. The HPL-GS utilizes a 3" thick, pleated filter element, which enables the overall diffuser housing to be a maximum of 7" high.



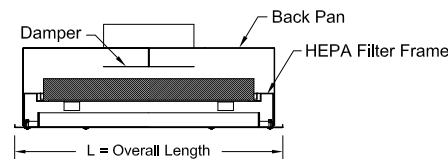
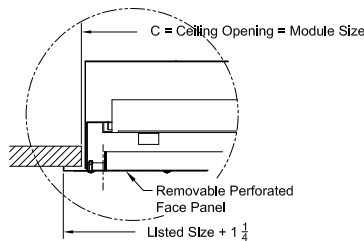
- Tested in accordance with IEST-RP-CC-034 and Alkermes SOP 110-03147
The standard gel seal HEPA filter is scan tested to meet an efficiency rating of 99.99%
- Knife Edge Flange penetrates the HEPA filter (silicone) gel seal to provide a leak proof seal between the filter and the housing
- Airtight Filter Housing construction at all joints and corners
- Flush Appearance with 1/4" turn fasteners to allow easy removal of perforated face
- Thumb Wheel Retainers hold the filter in housing and allow for easy room-side removal of filter
- Available in aluminum, cold-rolled steel or stainless steel construction

Model: HPL-GS

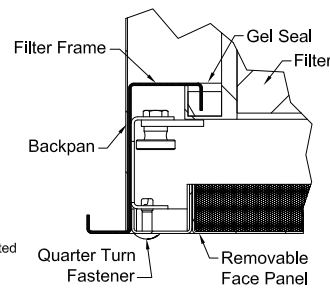
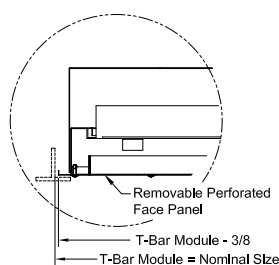


Option: HPL-GS With Damper

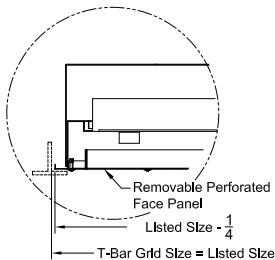
Model: HPL-GS Border 1 (Surface Mount)



Model: HPL-GS Border 6M (Standard Lay-In T-Bar)



Model: HPL-GS Border 6 (Standard Lay-In T-Bar)



Inlet Size
6
8
10
12
14

Nominal Size	Frame 1			Frame 6		Frame 6M		Filter Size	
	C	L	W	L	W	L	W	L	W
24 x 24	24 x 24	25 1/4	25 1/4	23 3/4	23 3/4	23 5/8	23 5/8	20 1/8	20 1/8
24 x 48	24 x 48	49 1/4	25 1/4	47 3/4	23 3/4	47 5/8	23 5/8	20 1/8	44 1/8

SERIES HPL-GS SPECIFICATIONS

LAMINAR FLOW DIFFUSER WITH FILTER RACK — ALUMINUM/COLD-ROLLED STEEL/STAINLESS STEEL MODEL HPL-GS-AL / HPL-GS-ST / HPL-GS-SS

- Air outlets shall be model HPL-GS-AL (aluminum), HPL-GS-ST (cold-rolled steel) or HPL-GS-SS (stainless steel) manufactured by METALAIRE. Diffuser shall generate a low velocity, vertical piston of discharge air. Unit shall also include an internal filter section to allow the installation and removal of a gel seal HEPA filter. Unit shall accept 3" HEPA with filter held in place using thumb wheel retaining clips.
- Diffuser shall be constructed of a one-piece perforated face and core assembly that is removable from the backpan with 1/4" turn fasteners accessible from the face. Face and core assembly mounted with internal spring clips or other mechanical fastening devices are not acceptable. Units shall include stainless steel safety chains attaching the face assembly to the backpan.
- Core and face assembly shall be removable to allow sanitizing and allow access to the backpan for cleaning. The face shall be flush with the ceiling surface.
- The perforated face shall have a 51% free area, a 40% free area or a 23% free area.
- Units shall have round inlets. Units shall be designed to integrate into the specified ceiling system. The units shall be the size and quantity as outlined in the plans and specifications.
- Optional 3" thick, 99.99% efficient filter on .3 microns.

Performance Specification

The manufacturer shall provide published performance data. Data has been tested in accordance to ANSI/ASHRAE Standard 70-2006.

Paint Specification

METALAIRE 01 paint finish is an anodic electro-deposition Melamine cross linking thermo set acrylic enamel finish, conforming to no less than 9 specific ASTM testing requirements covering a full range of physical properties. The 01 finish has been tested to exceed ASTM D4752 Double MFK minimum 100 rubs. This test demonstrates METALAIRE products ability to withstand continuous cleaning with harsh cleaners and disinfectants. Following are the ASTM specifications for physical properties.

ASTM D523-89	Gloss 60 Degree	70-80
ASTM D3363-92A	Pencil Hardness	HB-H
ASTM D3395-95	Crosshatch	4B-5B
ASTM D2794-93	Direct Impact	100 in.lb.min.
ASTM D2794-93	Reverse Impact	60 in.lb.min

SERIES HPL-GS MODEL NUMBER SPECIFICATION LAMINAR FLOW DIFFUSER

Model		Neck Size	Module	Available Finishes		Available Accessories	
HPL-GS-AL-1	Aluminum Surface Mount	6	24 x 24	Standard		HEPA GS	Gel Seal Hepa Filter
HPL-GS-ST-1	Cold Rolled Steel Surface Mount	7	48 x 24	01	White	TP	Test Port
HPL-GS-SS-1	Stainless Steel Surface Mount	8		Stainless Steel Units Only		EI	External Insulation
HPL-GS-AL-6	Aluminum T-bar	9	48 x 24	23	Satin Polish	D	Round disc damper
HPL-GS-ST-6	Cold Rolled Steel T-bar	10					
HPL-GS-SS-6	Stainless Steel T-bar	12					
HPL-GS-AL-6M	Aluminum T-bar Metric	14					
HPL-GS-ST-6M	Cold Rolled Steel T-bar Metric						
HPL-GS-SS-6M	Stainless Steel T-bar Metric						

SERIES HPL-GS PERFORMANCE DATA HPL-GS WITHOUT HEPA FILTER

CFM Per Square Foot	23% Free Area		40% Free Area		51% Free Area	
	Ps	NC	Ps	NC	Ps	NC
20	.010	<15	.008	<15	.008	<15
30	.024	<15	.019	<15	.018	<15
40	.042	19	.033	21	.033	20
50	.060	21	.051	27	.050	24
60	.076	29	.072	33	.070	30
70	.101	35	.096	38	.090	35

HPL-GS WITH GEL SEAL HEPA FILTER

CFM Per Square Foot	23% Free Area		40% Free Area		51% Free Area	
	Ps	NC	Ps	NC	Ps	NC
40	.300	18	.285	18	.290	18
60	.449	20	.440	20	.423	20
80	.632	26	.604	26	.595	26
100	.792	30	.768	30	.750	30

PERFORMANCE NOTES FOR SERIES HPL-GS

All data is tested in accordance with ANSI/ASHRAE 70-2006

DEFINITION OF UNITS

Ps Static pressure loss through the diffuser and does not include velocity pressure

NC Based on Lw re: 10⁻¹² watt, includes 10dB room attenuation and a maximum inlet velocity of 500fpm

HEPA filter is a 3" deep filter, with an efficiency of 99.97% on D-3 micron particles

CFM Cubic Feet per Minute (air)

fpm Velocity of air stream in Feet per Minute