

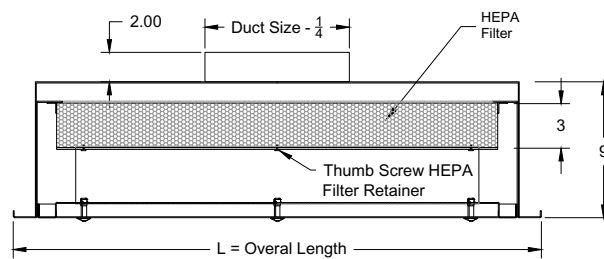
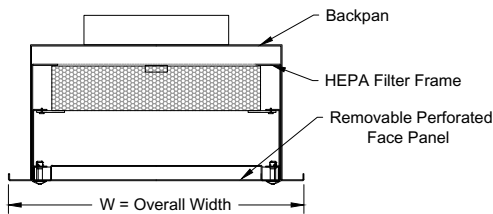
SERIES HPL-HA

The HPL-HA laminar flow diffuser design integrates a HEPA filter rack accessible from the face of the diffuser. The HPL-HA is engineered for supply air distribution in critical environments such as hospital operating rooms, laboratories and clean rooms. The diffusers are engineered to supply a low velocity piston of air.

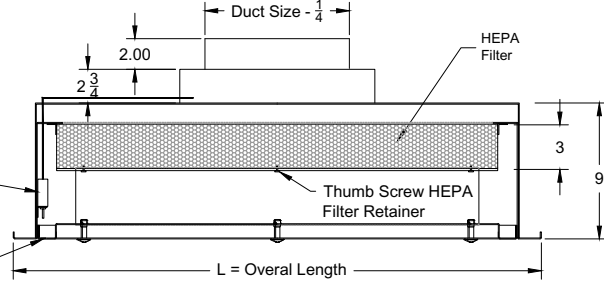
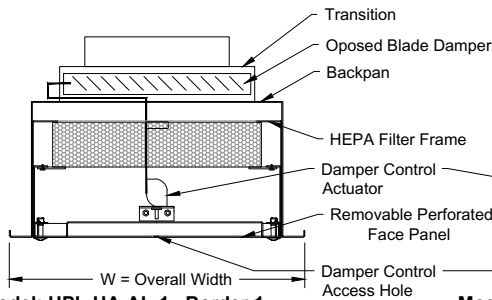


- Face and core assembly is easily removable for cleaning and sterilization
- Choice of 23%, 40% and standard 51% free area for the perforated face
- Optional gasket HEPA filter available
- Stainless steel safety chains are standard
- Available in all aluminum, stainless steel face/aluminum backpan, or all stainless steel construction

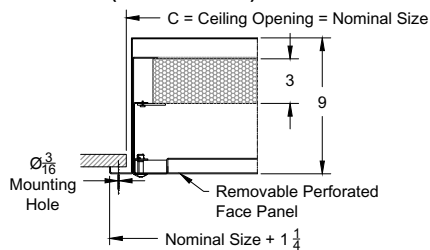
Model: HPL-HA-AL (Aluminum Backpan & Face)



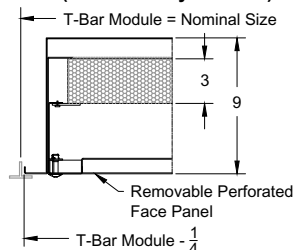
Option: HPL-HA-AL With Optional Remote Operated Opposed Blade Damper - Aluminum Backpan & Face



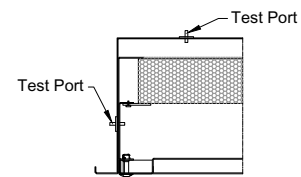
Model: HPL-HA-AL-1 Border 1 (Surface Mount)



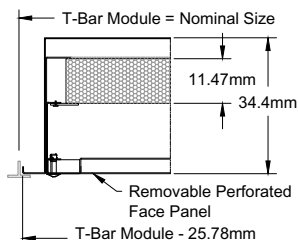
Model: HPL-HA-AL-6 Border 6 (Standard Lay In T-Bar)



Model: HPL-HA-AL With Test Port



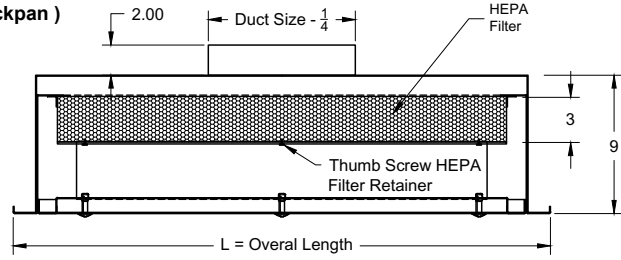
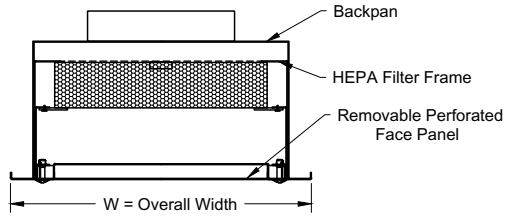
Model: HPL-HA-AL-6M Border 6M



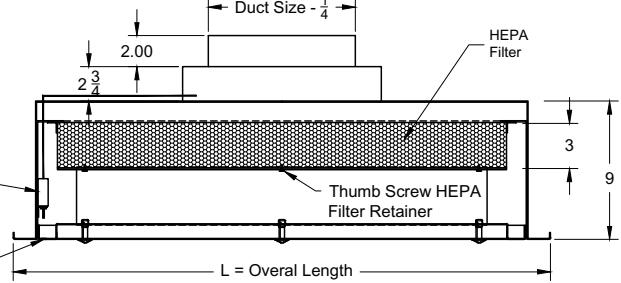
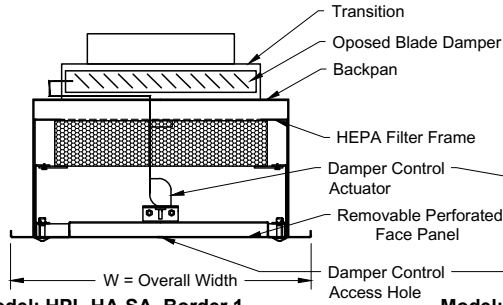
Nominal Size	Frame 1			Frame 6		Frame 6M	
	C	L	W	L	W	L	W
24 x 24	24 x 24	25 1/4	25 1/4	23 3/4	23 3/4	23 5/8	23 5/8
24 x 48	24 x 48	49 1/4	25 1/4	47 3/4	23 3/4	47 5/8	23 5/8

NOTE: Units Are Provided With Zinc Coated Non Painted Quarter Turn Fasteners.

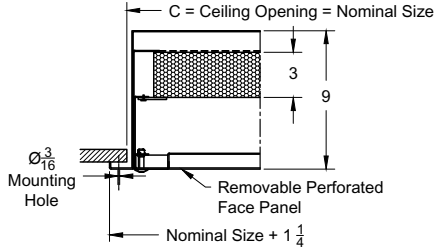
Models: HPL - HA - SA (Stainless Steel Face & Aluminum Backpan)



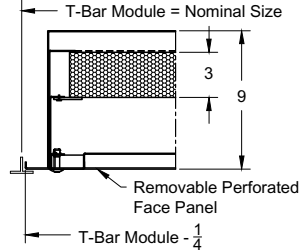
Options: HPL - HA - SA With Optional Remote Operated Opposed Blade Damper (Stainless Steel Face & Aluminum Backpan)



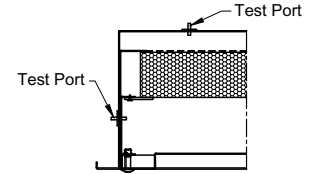
Model: HPL-HA-SA Border 1 (Surface Mount)



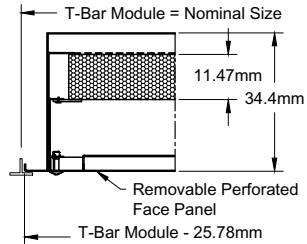
Model: HPL-HA-SA Border 6 (Standard Lay-In T-Bar)



Model: HPL-HA-SA With Test Port



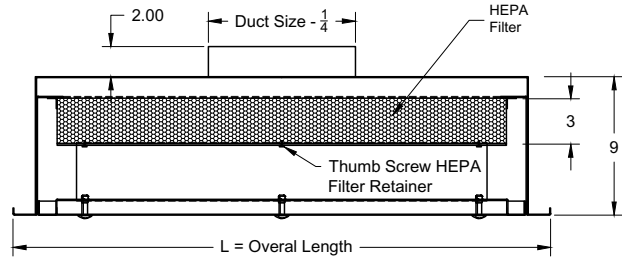
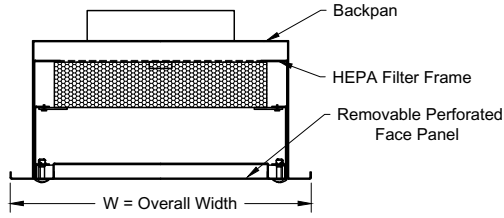
Model: HPL-HA-SA Border 6M



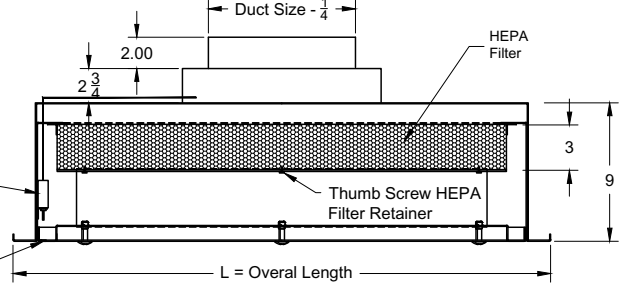
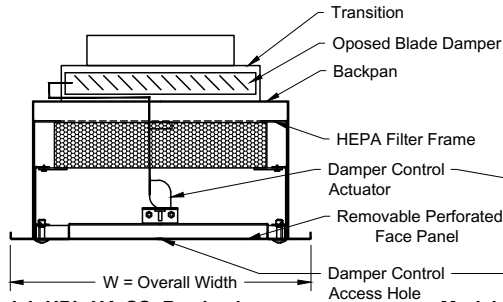
Nominal Size	Frame 1			Frame 6		Frame 6M	
	C	L	W	L	W	L	W
24 x 24	24 x 24	25 1/4	25 1/4	23 3/4	23 3/4	23 5/8	23 5/8
24 x 48	24 x 48	49 1/4	25 1/4	47 3/4	23 3/4	47 5/8	23 5/8

NOTE: Units Are Provided With Zinc Coated Non Painted Quarter Turn Fasteners.

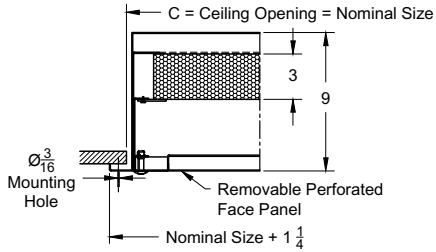
Models: HPL - HA - SS (Stainless Steel Face & Backpan)



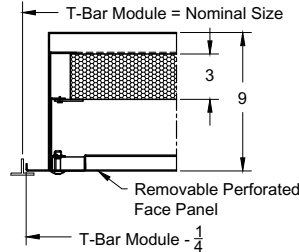
Options: HPL - HA - SS With Optional Remote Operated Opposed Blade Damper (Stainless Steel Face & Backpan)



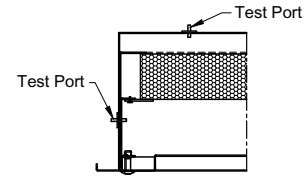
Model: HPL-HA-SS Border 1 (Surface Mount)



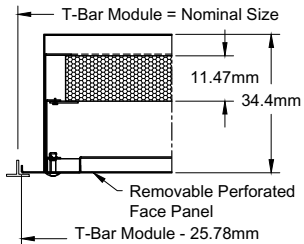
Model: HPL-HA-SS Border 6 (Standard Lay-In T-Bar)



Model: HPL-HA-SS With Test Port



Model: HPL-HA-SS Border 6M



Nominal Size	Frame 1			Frame 6		Frame 6M	
	C	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
24 x 48	24 x 48	49 1/4	25 1/4	47 3/4	23 3/4	47 5/8	23 5/8

NOTE: Units Are Provided With Zinc Coated Non Painted Quarter Turn Fasteners.

SERIES HPL-HA SPECIFICATIONS

LAMINAR FLOW DIFFUSER WITH FILTER RACK — ALUMINUM/STAINLESS STEEL — MODEL HPL-HA-AL / HPL-HA-SA / HPL-HA-SS

- Air outlets shall be model HPL-HA-AL (aluminum), HPL-HA-SA (stainless steel face/aluminum backpan) or HPL-HA-SS (stainless steel) manufactured by METALAIRE. Diffuser shall generate a low velocity, vertical piston of discharge air. Unit shall also include an integral filter section to allow for installation of a gasket type HEPA filter. Unit shall accept 3" pleated filter held in place using a trapeze hanger system.
- 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 with the core assembly removed.
- 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-HA MODEL NUMBER SPECIFICATION LAMINAR FLOW DIFFUSER

Model		Neck Size	Module	Available Finishes	
HPL-HA-AL-1	Aluminum Surface Mount			Standard	
HPL-HA-SA-1	Stainless Steel Face/Aluminum Backpan Surface Mount			01	White
HPL-HA-SS-1	Stainless Steel Surface Mount			Stainless Steel Units Only	
HPL-HA-AL-6	Aluminum T-bar			23	Satin Polish
HPL-HA-SA-6	Stainless Steel Face/Aluminum Backpan T-bar				
HPL-HA-SS-6	Stainless Steel T-bar	6	24 x 24	Available Accessories	
HPL-HA-AL-6M	Aluminum T-bar Metric	7	36 x 24	CD-AL	Aluminum Cable Operated Damper
HPL-HA-SA-6M	Stainless Steel Face/Aluminum Backpan T-bar Metric	8	48 x 24	CD-SS	Stainless Steel Cable Operated Damper
HPL-HA-SS-6M	Stainless Steel T-bar Metric	9		HEPA	Gasket Type HEPA Filter
		10		TP	Test Port
		12		EI	External Insulation
		14			

SERIES HPL-HA PERFORMANCE DATA

HPL-HA 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	.005	<15	.004	<15
30	.021	<15	.011	<15	.010	<15
40	.038	18	.020	<15	.017	<15
50	.060	21	.031	21	.027	18
60	.086	29	.045	25	.038	22
70	.117	35	.061	31	.052	24
80	.152	38	.080	34	.068	30
90	.193	40	.101	39	.086	35
100	-	-	-	-	.107	39

HPL-HA WITH 3" HEPA FILTER

CFM Per Square Foot	23% Free Area		40% Free Area		51% Free Area	
	Ps	NC	Ps	NC	Ps	NC
20	.150	20	.140	<20	.130	<20
30	.240	24	.230	24	.210	23
40	.340	29	.320	27	.300	26
50	.450	32	.430	32	.400	32
60	.545	36	.540	35	.480	34
70	.656	40	.650	39	.580	39
80	-	-	.740	42	.690	42
90	-	-	-	-	.800	44
100	-	-	-	-	-	-

PERFORMANCE NOTES FOR SERIES HPL-HA

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 L_w 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