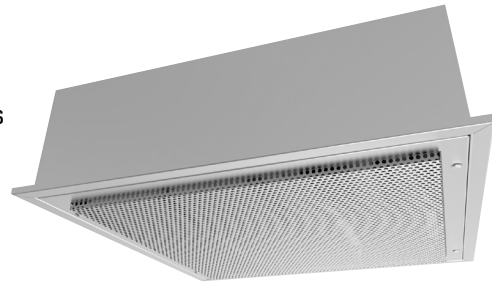


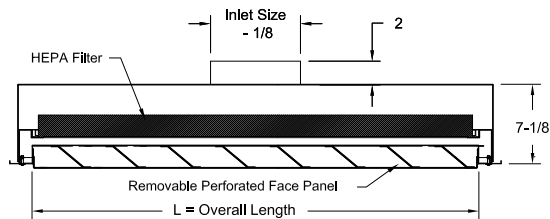
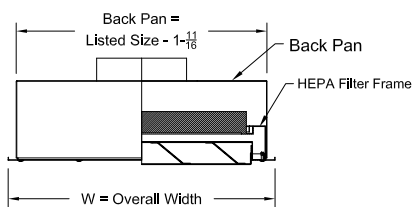
SERIES HRD-GS

HRD-GS radial discharge pattern diffuser includes a gel seal HEPA filter rack and is engineered for supply air distribution in critical environments such as chemistry labs and clean rooms. The diffusers are engineered to supply a low velocity of conditioned air in a radial pattern from the ceiling

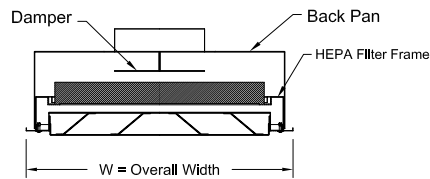
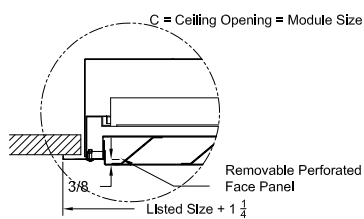


- Low velocity radial air pattern
- Available in 90° or 180° throw
- Removable face to allow ease of cleaning and sterilization
- Choice of all aluminum, all cold-rolled steel or all stainless steel construction
- Standard 23% free area
- Optional 40% free area or 51% free area
- Optional gel seal type HEPA filter
- Available in Surface Mount or T-bar Lay-in frame styles

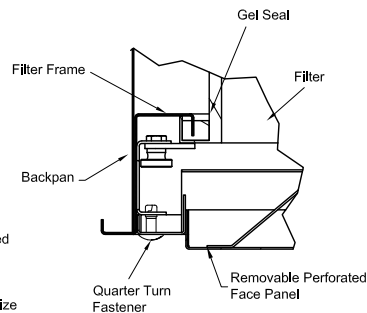
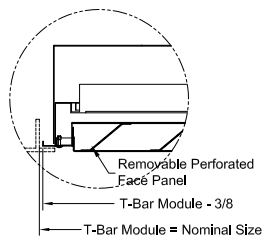
Model: HRD-GS



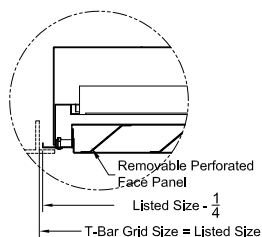
Model: HRD-GS Border 1 (Surface Mount)



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



Model: HRD-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 HRD-GS SPECIFICATIONS

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

- Air outlets shall be model HRD-GS-AL (aluminum), HRD-GS-ST (cold-rolled steel) or HRD-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 rack to allow the installation and removal of a gel seal type HEPA filter. Unit shall accept 3" gel seal type 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 standard 23% free area with optional 40% free area or 51% 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 .30 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 HRD-GS MODEL NUMBER SPECIFICATION RADIAL FLOW DIFFUSER

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

SERIES HRD-GS PERFORMANCE DATA HRD-GS – 1-WAY PATTERN WITHOUT HEPA FILTER

Module Size and Inlet Size	1-Way Pattern				Vertical Throw (feet)			Horizontal Spread (feet)		
	CFM	Ps	Pt	NC	100	75	50	100	75	50
24 x 24	250	.058	.089	19	1	2	3	2	3	5
	400	.130	.211	32	2	3	4	4	5	7
	500	.210	.340	39	2	3	4	6	7	8
48 x 24	250	.024	.037	<15	0	0	1	3	4	6
	400	.054	.088	22	0	1	2	6	7	9
	550	.100	.163	33	2	3	4	8	9	10

HRD-GS – 2-WAY PATTERN WITHOUT HEPA FILTER

Module Size and Inlet Size	2-Way Pattern				Vertical Throw (feet)			Horizontal Spread (feet)		
	CFM	Ps	Pt	NC	100	75	50	100	75	50
24 x 24	250	.056	.088	19	1	2	4	1	3	5
	400	.143	.225	32	2	3	4	5	6	7
	500	.212	.340	39	2	4	5	6	7	8
48 x 24	250	.023	.036	<15	1	1.5	2	0	3.5	5
	500	.087	.139	29	1	1.5	2.5	5	7	10
	700	.145	.248	38	1	1.5	2.5	6	8	10

PERFORMANCE NOTES FOR SERIES HRD-GS

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

Pv Velocity pressure (inches of water column)

Pt Total pressure (inches of water column)

Ps Static pressure = Pt-Pv (inches of water column)

Throw Non-isothermal horizontal throw (supply air temperature 15°F colder than average room temperature); values are for 150, 100 and 50fpm velocities

NC Noise criterion, sound pressure level NC ratings are based on sound power level (Lw) re: 10⁻¹² watts minus a 10dB room attenuation in all octave bands