

MODEL WFO

The WFO polymer Underfloor diffuser offers the choice of horizontal or vertical air patterns with its flip over design. The WFO is suitable for fitting into standard floor tile with optional fittings for concrete slab. The disc is reversible for horizontal or vertical air throw. The diffuser has a memory feature to retain damper setting once commissioned.

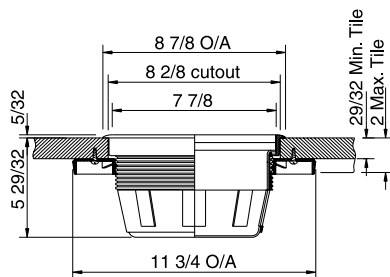
- Polymer construction
- Fire retardant material
- Standard color RAL 7037 Mid Grey
- Unique flip over design
- Memory locating peg
- Easy fit locking collar
- Available in 8" only



Aircell Polymer Floor Diffusers - Pressurized Floor Void

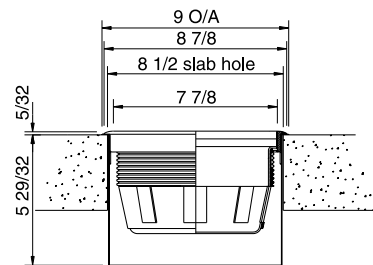
Model WFO - Tile Installation

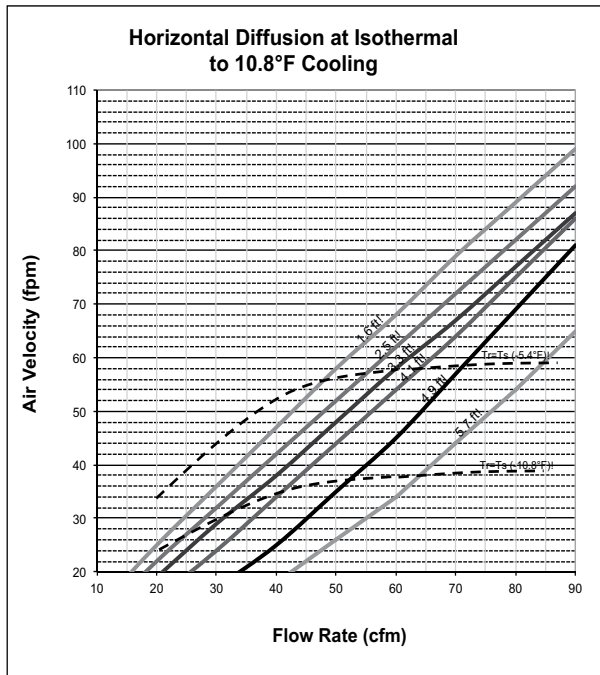
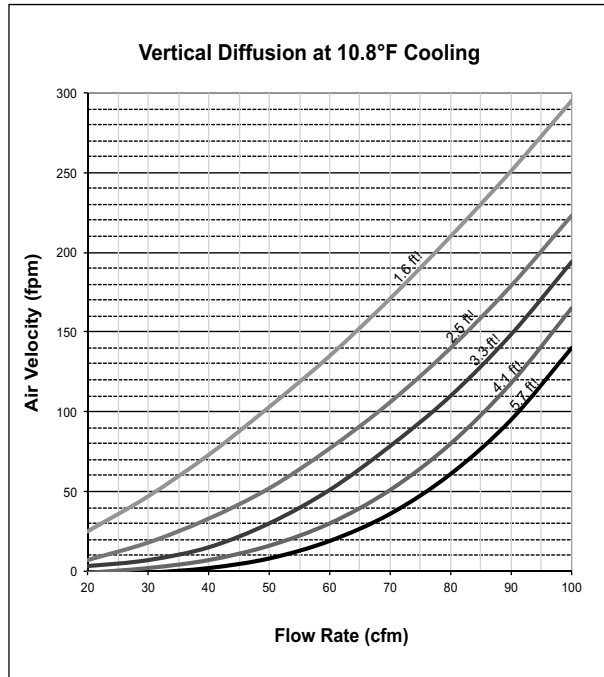
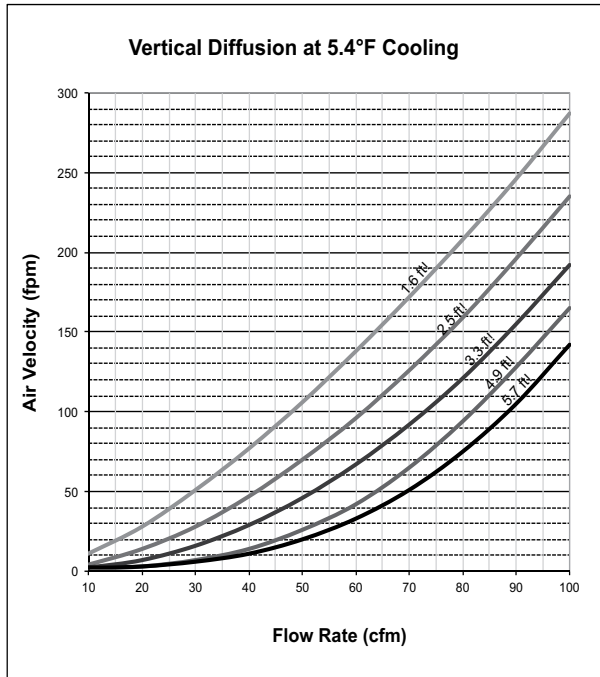
Model WFOV - Low pressure vertical air pattern



Aircell Polymer Floor Diffusers - Pressurized Void

Model WFOS - Slab Floor Installation Supplied with a steel adapter collar which is cast into the floor slab. The diffuser can then be installed into the collar with concealed spring clips.





WFO MODEL NUMBER SPECIFICATION

UNDERFLOOR DIFFUSER MODEL WFO

Model	Neck Size	Available Finishes
WFO	8	Standard
WFOV		RAL 7037 Mid Gray
WFOD		Optional
		Black
		Min 500 Pieces
		Set Up Charge

SERIES WFO PERFORMANCE DATA

MODEL WFO

PRESSURE LOSS DATA — BOTH SETTINGS

	Airflow Rate (cfm)									
	21	32	42	53	64	74	85	100	110	120
WFO	0.020	0.040	0.068	0.100	0.141	0.181	0.225	0.249	.0284	—
WFOS	0.020	0.040	0.068	0.108	0.153	0.201	0.227	0.263	—	—
WFOP	0.028	0.068	0.116	0.181	0.257	0.301	—	—	—	—
WFOD	0.016	0.028	0.048	0.076	0.104	0.141	0.181	0.196	0.224	0.251

— = not recommended

All pressure loss data is based on a fully open damper.

ACOUSTIC DATA — HORIZONTAL SETTING

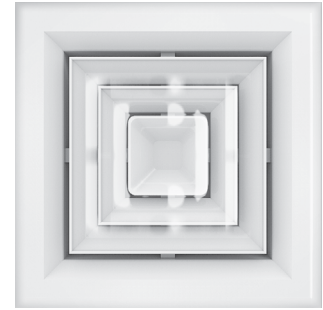
	Airflow Rate (cfm)									
	21	32	42	53	64	74	85	100	110	120
WFO	< 15	< 15	19	24	29	31	34	40	44	—
WFOS	< 15	15	21	26	30	32	37	43	—	—
WFOP	< 15	18	25	30	35	39	44	—	—	—
WFOD	< 15	< 15	< 15	20	24	26	30	35	39	42

— = not recommended

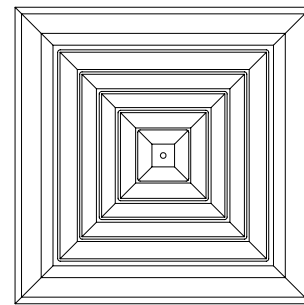
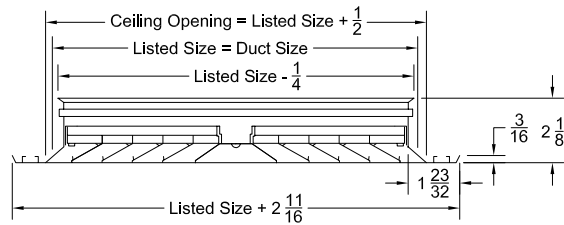
MODEL 5200

The Model 5200 is an economical diffuser designed for industrial, commercial and light commercial applications. The 5200 is available in square sizes only up to 18 x 18.

- Aluminum construction
- Removable core for concealed mounting
- Square neck sizes only in 2" increments with 1" vane spacing
- Flush, T-bar Lay-in or beveled frames

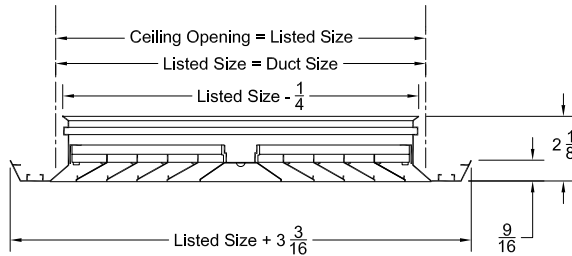


□ Model: 5200-1 (Flush Surface Mount)



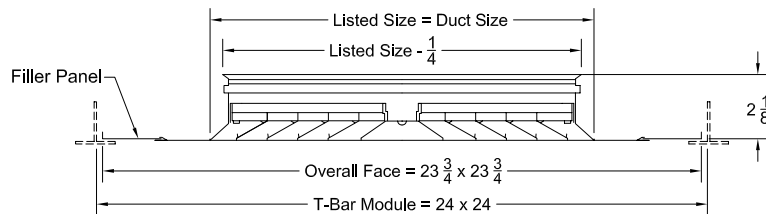
Face view - Shown S4 Pattern

□ Model: 5200-2 (Beveled Drop Surface Mount)

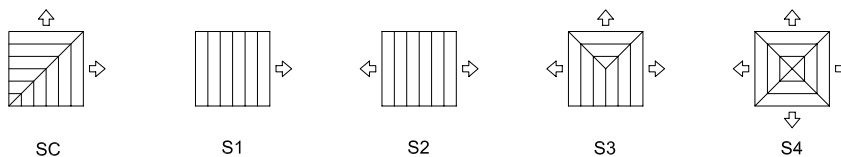


Available Neck Sizes	
-1 & -2 Frame	-8 Frame
6 x 6	6 x 6
8 x 8	8 x 8
10 x 10	10 x 10
12 x 12	12 x 12
14 x 14	14 x 14
16 x 16	16 x 16
18 x 18	18 x 18

□ Model: 5200-6 (T-Bar Mount)



Available Directional Blow Patterns



SERIES 5200 SPECIFICATIONS

Air Diffusers shall be model:

- 5200-1 Surface Mount
- 5200-2 V-Beveled
- 5200-6 T-bar Lay-in

- Air Diffusers shall be aluminum model 5200 manufactured by METALAIRE. Units shall consist of a fixed pattern louvered core fastened into a border with spring loaded latches. Core shall be removable without the use of tools. The units shall be the size and quantity outlined in the plans and specifications.
- Diffusers shall be available in 1, 2-way opposite, 2-way corner, 3, and 4-way directional air patterns. Units shall be designed to integrate into the specified ceiling system.

Accessories

OPTIONAL DAMPERS:

- Aluminum DA opposed blade dampers shall be provided. Damper shall be adjusted using a handle accessible through the face of the diffuser.
- Screwdriver slot operators are not allowed.

Performance Specification

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

Paint Specification

Process shall be anodic electro-deposition using an anodic acrylic paint. Units shall undergo pre-treatment including a pressurized spray stage using an alkaline cleaner and a de-ionized water rinse.

5200 MODEL NUMBER SPECIFICATION

LOUVERED FACE CEILING DIFFUSER SQUARE/ALUMINUM

Model		Width	Height	Air Pattern		Available Finishes	
5200-1	Surface Mount	6	6	Standard			
5200-2	Beveled Drop Surface Mount	8	8	S4	Sq 4-Way	01	White
		10	10	Optional			
		12	12	S1	1-Way	02	Satin Silver
		14	14	S2	Sq 2-Way	03	Black
		16	16	S3	Sq 3-Way	24	Mill
		18	18	SC	Sq 2-Way corner	28	Custom Color

Available Accessories	
DA	Aluminum Opposed Blade Damper

Available Options	
NSH	No Screw Holes
SH	Screw Holes

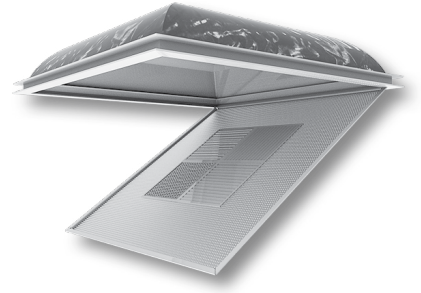
Model	Panel	Width	Height	Air Pattern		Available Finishes	
5200-6	T-bar Lay-in	24 x 24	6	6	Standard		
			8	8	S4	Sq 4-Way	01 White
			10	10	Optional		
			12	12	S1	Sq 1-Way	02 Satin Silver
			14	14	S2	Sq 2-Way	03 Black
			16	16	S3	Sq 3-Way	24 Mill
			18	18	SC	Sq 2-Way corner	28 Custom Color

Available Accessories	
DA	Aluminum Opposed Blade Damper

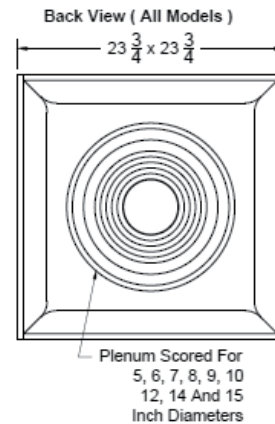
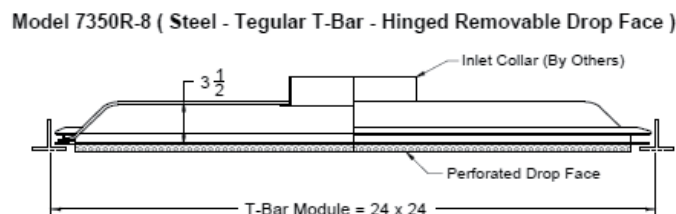
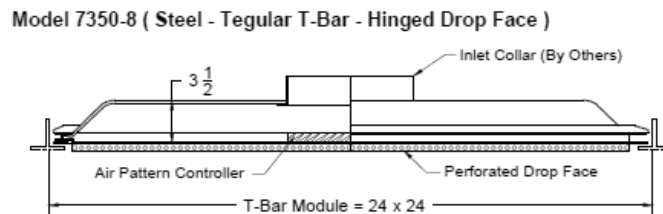
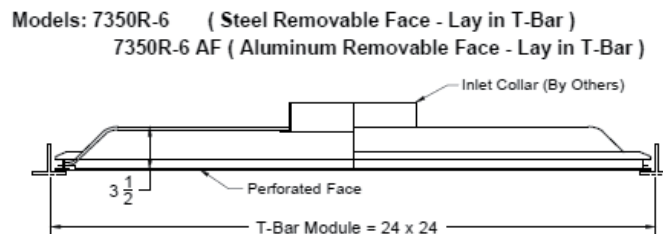
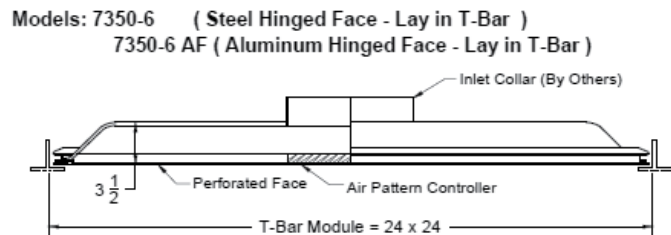
Available Options	
NSH	No Screw Holes
SH	Screw Holes

MODEL 7350

Model 7350 with a fiberglass plenum is designed to provide economical, efficient, draft free air distribution in ceiling applications where a plenum vapor barrier is desirable. It is designed to allow field installation of the inlet collar (by others). Model 7350 is furnished with an extruded aluminum frame to accommodate hinging of the steel perforated face. Four air pattern controllers are centrally pivoted to the inside of the face. Each pattern controller can be rotated 360° to achieve a 1, 2, 3 or 4-way air pattern even after the diffuser is installed.



- Fiberglass plenum designed to allow field installation of inlet collar (by others)
- Hinged removable face with four pattern controllers centrally pivoted to the inside of the face
- Each pattern controller can be rotated 360° to achieve 1, 2, 3 or 4-way air pattern
- Available with a steel face Model 7350 or aluminum face Model 7350-AF



SERIES 7350 SPECIFICATIONS

SUPPLY — PERFORATED FACE — FIBERGLASS BACKPAN — ADJUSTABLE PATTERN CONTROLLERS

Steel Face Aluminum Face

7350-6 T-bar Lay-in

7350-6 AF T-bar Lay-in

7350-8 Tegular T-bar

- Air Diffusers shall be aluminum face model 7350 or steel face model 7350 AF manufactured by METALAIRE. Units shall consist of a 51% free area perforated face attached to a formed fiberglass backpan. Perforated holes shall be 3/16" diameter on 1/4" staggered centers. Exposed fiberglass backpan shall have an aluminum foil liner. The diffuser's backpan shall be factory scored to allow field installation of a tab lock collar or spin-in fittings (by others).
- Outer border of units shall be extruded aluminum construction. The perforated face shall be hinged allowing access to four adjustable pattern controllers mounted onto the inside face of the diffuser. Face shall be secured in place with tension spring clips. Pattern controller blades shall be individually adjustable and allow the discharge pattern to be adjustable from vertical to horizontal.

- Diffusers shall be field adjustable allowing 1, 2-way opposite, 2-way corner, 3, and 4-way directional air patterns.
- The units shall be the size and quantity outlined in the plans and specifications.
- Units shall be designed to integrate into the specified ceiling system.

Performance Specification

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

Paint Specification

Process shall be anodic electro-deposition using an anodic acrylic paint. Units shall undergo pre-treatment including a pressurized spray stage using an alkaline cleaner and a de-ionized water rinse.

7350 MODEL NUMBER SPECIFICATION

FOIL LINED FIBERGLASS BACK PERFORATED SUPPLY DIFFUSER — HINGED FACE

Model		Module	Available Finishes	
7350-6	T-bar Lay-in Steel	24 x 24	Standard	
7350-6 AF	T-bar Lay-in Aluminum Face		01	White
7350-8	Tegular T-bar Steel		Optional	
7350R-6	T-bar Lay-in Steel		02	Satin Silver
7350R-6 AF	T-bar Lay-in Aluminum Face		03	Black
7350R-8	Tegular T-bar Steel		28	Custom Color

SERIES 7350 PERFORMANCE DATA

Nominal Neck Size	fpm Neck Velocity		300	400	500	600	700	800	1000
	Pv		.006	.010	.016	.023	.031	.040	.062
6	CFM		60	80	100	115	135	155	195
	Pt		.012	.022	.034	.045	.062	.083	.131
	NC		<	<	<	-	20	24	31
	Throw	4-Way	1-1-3	1-1-4	1-2-4	1-2-5	1-3-6	2-3-7	2-3-8
		3-Way	1-1-3	1-2-4	2-2-5	2-3-6	2-3-6	2-3-8	2-4-8
2-Way		1-2-4	1-2-5	2-3-5	2-4-6	3-4-7	3-4-9	3-4-9	
1-Way		1-2-5	1-3-5	3-4-6	3-4-7	3-4-8	3-5-9	3-5-10	
8	CFM		105	140	175	210	245	280	350
	Pt		.017	.031	.048	.070	.095	.124	.195
	NC		<	<	<	21	26	30	36
	Throw	4-Way	1-1-3	1-2-5	2-2-5	2-3-6	2-3-8	2-4-10	3-5-11
		3-Way	1-2-3	1-2-5	2-3-5	2-3-6	3-3-8	3-4-11	3-5-12
2-Way		1-2-4	1-3-5	2-4-6	3-4-7	3-4-9	3-5-12	4-6-13	
1-Way		2-3-5	2-4-5	3-4-7	3-5-8	3-5-10	3-6-13	4-6-14	
10	CFM		165	220	270	325	380	435	545
	Pt		.020	.035	.053	.077	.106	.138	.218
	NC		<	<	22	28	33	37	43
	Throw	4-Way	1-2-4	1-2-5	2-3-6	2-3-7	3-4-8	3-4-10	3-5-12
		3-Way	1-2-4	1-3-6	2-3-7	2-4-8	3-5-9	3-5-12	3-6-13
2-Way		1-2-5	2-3-6	3-4-8	3-4-8	3-6-10	3-6-14	4-7-15	
1-Way		2-3-6	2-4-7	3-5-8	3-5-10	4-7-11	4-7-14	5-9-16	
12	CFM		235	315	390	470	550	630	785
	Pt		.032	.059	.090	.131	.180	.236	.367
	NC		<	<	25	29	35	40	46
	Throw	4-Way	1-2-4	2-2-8	3-3-8	3-5-10	3-5-11	4-6-12	5-7-14
		3-Way	2-3-5	2-3-8	3-4-9	3-5-11	4-6-13	4-7-14	5-8-15
2-Way		2-3-6	3-4-8	3-5-11	3-6-12	4-7-13	5-8-15	6-9-16	
1-Way		3-4-8	3-5-9	4-6-12	4-7-13	5-8-14	6-9-16	7-10-18	
14	CFM		320	425	535	640	750	855	1070
	Pt		.039	.068	.108	.156	.213	.277	.435
	NC		<	23	29	34	39	44	50
	Throw	4-Way	2-3-6	3-4-8	3-5-11	4-6-13	4-7-14	5-8-15	6-9-17
		3-Way	2-4-7	3-5-9	3-6-12	4-7-14	5-8-16	5-9-17	6-10-18
2-Way		2-5-8	3-5-10	3-7-13	5-8-15	6-10-17	7-10-18	8-11-19	
1-Way		3-5-9	4-8-11	4-8-14	6-9-16	7-11-18	8-12-19	9-12-20	

CEILING
DIFFUSERS

PERFORATED
CEILING DIFFUSERS

7350

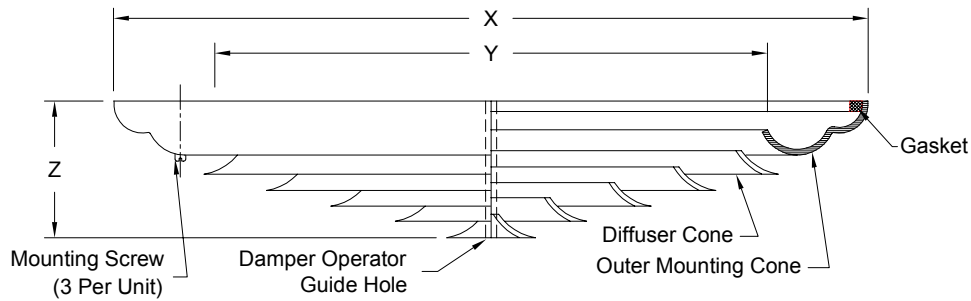
MODEL 900

Model 900 is an economical high performance diffuser of aluminum construction.

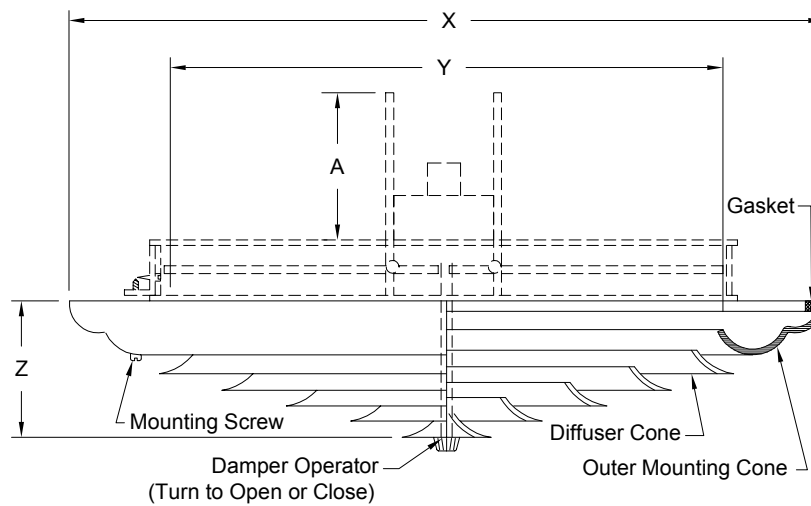
- 360° air pattern
- Concentric rings for even air distribution
- Mounting holes in outer ring
- Optional damper Model 900D
- Diffuser allows for damper control via the face with factory provided operator



Model: 900 (Fixed Pattern)



Model: 900 D (Fixed Pattern with Round Damper)



Diffuser Size	X	Y	Z	Number of Cones
6	10 1/8	5 13/16	1 7/8	4
8	12 1/8	7 13/16	2 13/16	5
10	14 1/8	9 13/16	2 1/2	6
12	16 1/8	11 13/16	2 13/16	7
14	18 1/8	13 13/16	3 1/8	8

Damper Size	A
6	3
8	4
10	5
12	6
14	6 1/4

SERIES 900 SPECIFICATIONS

Air Diffusers shall be model:

- Air Diffusers shall be Model 900 manufactured by METALAIRE. Diffuser shall have a series of uniformly spaced concentric round cones. Units shall be aluminum construction. The units shall be the size and quantity as outlined in the plans and specifications.
- Unit's cone shall drop down and provide an efficient horizontal radial discharge pattern. Diffuser shall include countersunk screw holes for installation into the ceiling system. Center cone of diffuser shall include an access hole to allow face adjustment of an optional damper operator.

Optional Accessories

900 SERIES DAMPER

- Diffusers shall be installed with a neck-mounted damper, model 900D, manufactured by METALAIRE. Damper shall be of aluminum construction and designed to give jam-free operation. Sizes 6" – 12" round dampers shall be 2 blades, butterfly type. Size 14" damper shall be an 8 blade opposed blade damper. Units shall include a damper operator knob constructed of high impact nylon. Damper knob shall be removable to prevent tampering after the diffuser is balanced.

Performance Specification

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

Paint Specification

Process shall be anodic electro-deposition using an anodic acrylic paint. Units shall undergo pre-treatment including a pressurized spray stage using an alkaline clear and de-ionized water rinse.

900 MODEL NUMBER SPECIFICATION

FIXED ROUND DIFFUSER — MULTI CORE

Model		Available Neck	Available Finishes	
Model 900-1	Surface Mount	6	Standard	
		8	01	White
		10	Optional	
		12	02	Satin Silver
		14	03	Black
			28	Custom Color
Available Accessories				
		900D	Aluminum Butterfly Damper	
		EK	Extra Knob	

SERIES 900 PERFORMANCE DATA MODEL 900

Neck Size	fpm	200	300	400	500	600	700	800	900	1000
	Pt	0	0.01	0.02	0.03	0.035	0.05	0.065	0.08	0.1
6	CFM	37	55	75	90	110	130	145	165	185
	Throw	3-5	3-5	3-6	3-6	4-6	4-6	4-6	5-7	5-7
	NC	-	-	-	-	20	23	25	25	30
8	CFM	65	100	135	165	200	230	265	300	330
	Throw	4-6	4-6	4-6	5-7	5-8	5-8	5-8	5-9	6-10
	NC	-	-	-	20	25	25	28	30	35
10	CFM	105	160	210	265	315	370	420	475	525
	Throw	4-7	5-8	5-9	5-10	6-11	6-12	7-13	7-14	7-14
	NC	-	-	-	20	25	30	30	35	35
12	CFM	150	230	305	380	455	535	610	685	760
	Throw	5-8	5-9	6-10	6-11	6-12	7-13	7-14	6-16	10-18
	NC	-	-	20	25	25	30	30	35	35
14	CFM	200	310	415	520	625	730	830	935	1040
	Throw	6-9	7-11	8-13	9-14	11-15	12-17	13-19	15-21	18-23
	NC	-	-	20	25	30	30	35	35	40

PERFORMANCE NOTES FOR SERIES 900

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

fpm Velocity of air stream in Feet per Minute

Pt Total pressure (inches of water column)

Throw Throw distance in feet at terminal velocities of 150-100fpm with a supply air temperature 20°F cooler than room temperature

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

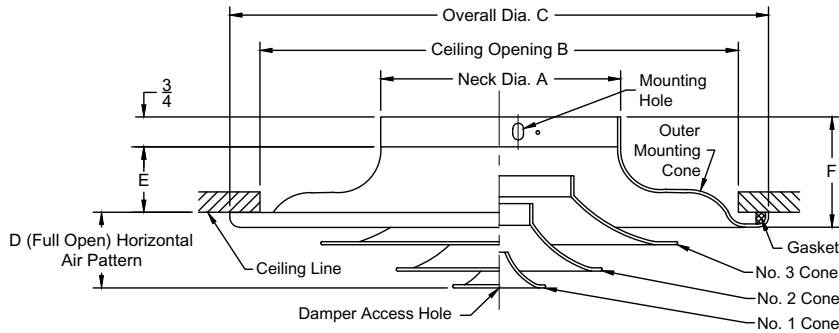
MODEL 3000

Model 3000 is an adjustable 3 Cone round diffuser that incorporates a high induction design to efficiently handle large volumes of air. It is fully adjustable from horizontal to vertical projection for spot heating or cooling applications.

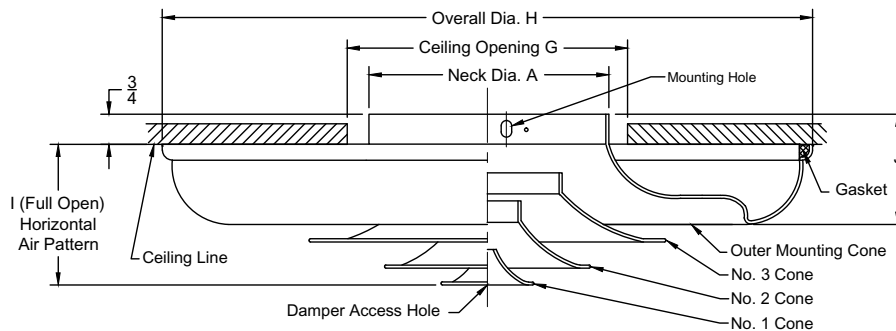


- High induction capacity with 3 cones
- Fully adjustable from horizontal to vertical discharge
- Low profile flush face, or dropped face designs are available

Model: 3000-1 (Flush Cone)



Model: 3000-2 (Drop Cone)



Size Designation	Neck Size	A	B	C	D	E	F	G	H	I	J
3006	6	5 7/8	12	13 7/8	2 1/4	1 3/4	3	7	16 1/4	3 7/8	2 5/8
3008	8	7 7/8	16	18 5/8	2 5/8	2	3 5/8	9	21	4 3/4	3 5/8
3010	10	9 7/8	20	22 1/8	3	2 5/8	3 3/4	11	26 3/8	5 9/16	4
3012	12	1 7/8	24	27	3 1/2	4 3/8	5	13	31 1/2	6 3/4	4 5/8
3014	14	13 7/8	28	31 1/4	4 1/4	4 7/16	5 5/8	15	36 7/8	8	5 1/4
3016	16	15 7/8	32	36 1/2	4 3/4	4 1/2	6 1/8	17	42	8 7/8	6
3018	18	17 7/8	36	41 3/8	5	4 5/8	6 3/4	19	47 5/8	9 7/8	6 5/8
3020	20	19 7/8	40	45 1/4	5 3/8	5 1/2	7 1/2	21	52 3/8	10 3/4	7 1/4
3024	24	23 7/8	40	45 1/4	5 3/8	5 1/2	7 1/2	25	52 3/8	10 3/4	7 1/4

SERIES 3000 SPECIFICATIONS

- Air Diffusers shall be Model 3000 manufactured by METALAIRE. Diffuser shall be constructed of 3 round inner cones and a round outer frame. Diffuser shall be adjustable to allow the discharge pattern to be set from full horizontal to vertical. Units shall be aluminum construction. The units shall be the size and quantity as outlined in the plans and specifications.
- Pattern adjustment shall be accomplished by rotating the innermost cone. The inner core assembly shall be removable for installation and for access into the ductwork. The center cone shall include an access hole to allow adjustment of an optional damper.

MODEL 3000-1 – FLUSH FRAME

- Diffuser shall have an outer frame that allows flush mounting to the ceiling opening.

MODEL 3000-2 – DROP FRAME

- Diffuser shall have a dropped outer frame to move the discharge jet away from the ceiling surface. Dropped frame shall minimize ceiling smudging.

Performance Specification

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

Paint Specification

Process shall be anodic electro-deposition using an anodic acrylic paint. Units shall undergo pre-treatment including a pressurized spray stage using an alkaline cleaner and a de-ionized water rinse.

3000 MODEL NUMBER SPECIFICATION

ADJUSTABLE ROUND DIFFUSER 3 CONE
MODEL 3000 — ALUMINUM

Model		Available Neck	Available Finishes	
Model 3000-1	Surface Mount	6	Standard	
Model 3000-2	Drop Face	8	01	White
		10	Optional	
		12	02	Satin Silver
		14	03	Black
		16	24	Mill
		18	28	Custom Color
		20	Available Accessories	
		24	D3	Aluminum Radial Damper
			SD3	Steel Radial Damper
			G3	Round Equalizing Grid
			GD3	Combo Grid / Damper
			BDS	Butterfly Damper
			RSD	Radial Shutter Damper

Available Options	
SC	Safety Chain

SERIES 3000 PERFORMANCE DATA MODEL 3000

CEILING
DIFFUSERS

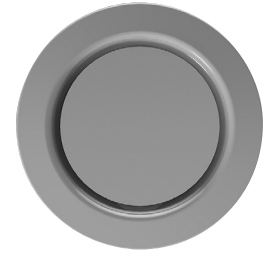
ROUND
CEILING DIFFUSERS

3000

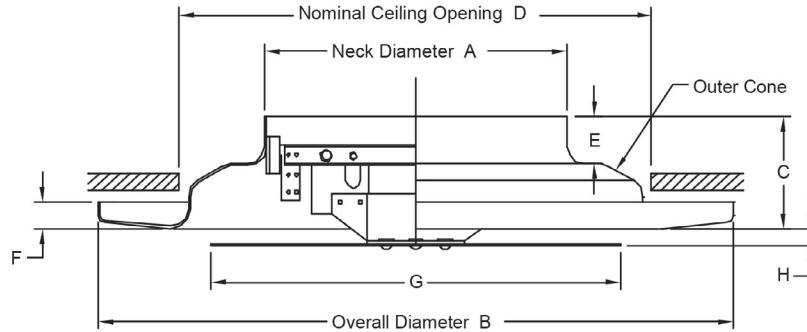
Neck Size	fpm Neck Vel	400	500	600	700	800	900	1000	1200	1400	1600
	Pv	0.01	0.016	0.023	0.031	0.04	0.051	0.063	0.09	0.122	0.16
	Ps Horiz.	0.011	0.018	0.026	0.035	0.046	0.059	0.072	0.105	0.145	0.19
	Ps Vert.	0.019	0.03	0.043	0.058	0.075	0.096	0.115	0.17	0.225	0.3
6	CFM	80	100	110	140	160	180	200	240	280	320
	Throw	1-3	2-4	2-5	3-6	3-7	3-8	4-8	4-9	5-10	6-12
	NC	-	-	-	20	24	27	36	36	39	44
8	CFM	140	175	210	245	280	315	350	420	490	560
	Throw	2-4	2-5	3-6	3-7	4-8	4-10	5-11	5-13	6-14	7-16
	NC	-	-	-	20	24	27	31	36	39	44
10	CFM	220	270	330	380	435	490	545	655	765	870
	Throw	2-5	3-6	3-7	4-8	5-10	6-11	6-12	7-14	8-18	9-21
	NC	-	-	-	21	25	28	32	37	40	45
12	CFM	315	390	470	550	630	710	785	940	1100	1260
	Throw	3-7	3-8	4-10	5-11	6-13	7-15	8-17	9-19	10-21	12-25
	NC	-	-	20	22	26	29	33	38	41	46
14	CFM	425	535	640	750	855	965	1070	1285	1500	1710
	Throw	3-8	4-9	5-11	6-13	7-16	8-18	9-20	11-13	13-26	15-30
	NC	-	-	20	23	27	31	34	40	43	48
16	CFM	560	700	840	980	1120	1260	1400	1680	1960	2240
	Throw	4-9	5-10	5-13	6-15	7-17	9-21	10-23	12-27	14-30	16-35
	NC	-	-	21	24	28	33	36	41	44	49
18	CFM	710	885	1060	1240	1420	1595	1770	2120	2480	2830
	Throw	4-10	5-12	6-15	7-17	9-21	11-23	13-26	15-31	16-34	18-38
	NC	-	-	21	25	29	34	37	42	45	51
20	CFM	875	1090	1310	1525	1745	1965	2180	2620	3060	3490
	Throw	4-11	6-14	7-16	8-19	9-23	17-23	13-28	15-33	18-38	20-42
	NC	-	20	22	26	30	36	39	44	47	53
24	CFM	1255	1570	1885	2200	2510	2825	3140	3770	4395	5025
	Throw	12-24	13-26	14-28	15-30	16-33	17-35	18-37	20-40	23-45	25-50
	NC	22	26	28	31	35	38	41	47	51	55

MODEL R5750

Model R5750 is an architecturally pleasing plaque face round ceiling diffuser that blends well into the ceiling surface. It is available in aluminum, aluminum face with steel backpan and steel construction.



- Designed for architectural ceilings and facilities with exposed ductwork
- Can be used effectively in heating and cooling applications
- Uniform 360° discharge pattern
- Round face panel is removable for ease of installation



Normal Round Duct Size	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Dim. F	Dim. G	Dim. H
6	5 3/4	16 5/8	2 15/16	11	3/4	5/8	9	3/4
8	7 3/4	16 5/8	2 15/16	11	3/4	5/8	9	3/4
10	9 3/4	22 3/16	3 5/16	17	1.0	7/8	14	7/8
12	11 3/4	22 3/16	3 5/16	17	1.0	7/8	14	7/8
14	13 3/4	29 1/4	4 3/16	22	1.0	7/8	19	7/8
16	15 3/4	29 1/4	4 3/16	22	1.0	7/8	19	7/8

SERIES R5750 SPECIFICATIONS

- Air diffusers shall be Model R5750-AL (all aluminum), R5750-AF (aluminum face, steel backpan) or R5750-S (all steel) manufactured by METALAIRE.
- Diffuser shall be constructed of a round flat face panel and a round outer frame. Diffuser shall have a fixed horizontal pattern. The units shall be the size and quantity as outlined in the plans and specifications.
- Round face panel shall be removable to allow access to the round outer frame. Diffuser shall be designed for surface mounting applications and have an outer frame that allows flush mounting to the ceiling opening.

Performance Specification

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

Paint Specification

Process shall be anodic electro-deposition using an anodic acrylic paint. Units shall undergo pre-treatment including a pressurized spray stage using alkaline cleaner and a de-ionized water rinse.

R5750 MODEL NUMBER SPECIFICATION

ROUND PANEL FACE DIFFUSER

Model		Available Neck	Available Finishes	
R5750-1	Steel	6	Standard	
R5750-AF-1	Aluminum Face/ Steel Backpan	8	01	White
R5750-AL	Aluminum	10	Optional	
		12	02	Satin Silver
		14	03	Black
		16	28	Custom Color
			Available Accessories	
			D3	Aluminum Radial Damper
			SD3	Steel Radial Damper
			G3	Round Equalizing Grid
			GD3	Combo Grid / Damper
			BDS	Butterfly Damper
			RSD	Radial Shutter Damper
Available Options				
			SC	Safety Chain

SERIES R5750 PERFORMANCE DATA MODEL R5750

Neck Size	Nk Velocity	400	500	600	700	800	900	1000	12000
	Pv	0.015	0.024	0.034	0.046	0.06	0.076	0.094	0.136
6	CFM	79	98	118	137	157	177	196	236
	Ps	0.023	0.035	0.052	0.070	0.092	0.117	0.143	0.208
	Pt	0.038	0.059	0.086	0.116	0.152	0.193	0.237	0.344
	Throw	1-2-4	2-3-5	2-3-6	2-3-6	2-4-7	3-4-8	3-5-9	4-6-11
	NC	-	-	19	24	29	31	34	38
8	CFM	140	175	209	244	279	314	349	419
	Ps	0.024	0.037	0.054	0.074	0.096	0.122	0.150	0.216
	Pt	0.039	0.061	0.088	0.120	0.156	0.198	0.244	0.352
	Throw	1-2-4	2-3-6	2-3-7	3-4-8	3-4-9	3-5-10	4-6-11	4-7-13
	NC	-	16	21	26	31	33	35	40
10	CFM	218	273	327	382	436	491	545	654
	Ps	0.026	0.040	0.058	0.080	0.104	0.132	0.162	0.233
	Pt	0.041	0.064	0.092	0.126	0.164	0.208	0.256	0.369
	Throw	3-4-7	4-6-9	4-7-11	5-8-13	6-9-14	7-10-16	7-11-18	9-13-21
	NC	-	-	-	24	28	32	35	41
12	CFM	314	393	471	550	628	707	785	942
	Ps	0.035	0.054	0.078	0.106	0.139	0.175	0.216	0.311
	Pt	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.447
	Throw	4-5-11	4-7-12	5-8-13	6-9-14	7-11-16	8-12-19	9-13-21	11-16-22
	NC	-	-	-	26	29	34	36	43
14	CFM	428	535	641	748	855	962	1069	1283
	Ps	0.025	0.038	0.055	0.075	0.098	0.124	0.153	0.220
	Pt	0.040	0.062	0.089	0.121	0.158	0.200	0.247	0.356
	Throw	4-6-12	5-7-12	6-9-13	7-10-16	8-12-17	9-13-19	10-15-21	12-18-21
	NC	-	-	22	23	25	26	29	33
16	CFM	559	698	838	977	1117	1257	1396	1676
	Ps	0.038	0.058	0.084	0.114	0.149	0.187	0.230	0.328
	Pt	0.053	0.082	0.118	0.160	0.209	0.263	0.324	0.464
	Throw	4-7-13	6-8-13	7-10-15	8-12-18	9-13-19	10-15-21	11-17-23	13-20-24
	NC	19	19	24	26	32	33	34	37

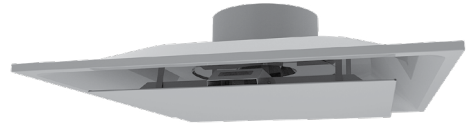
CEILING
DIFFUSERS

ROUND
CEILING DIFFUSERS

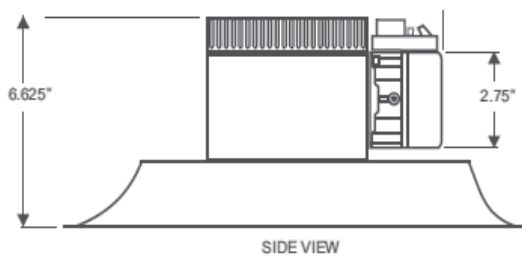
R5750

MODEL MSE-HC

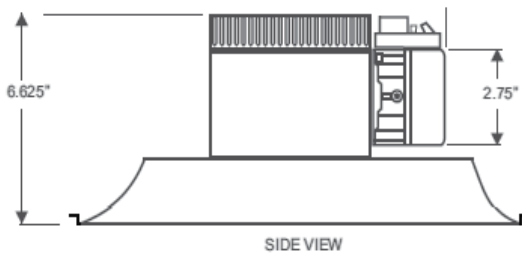
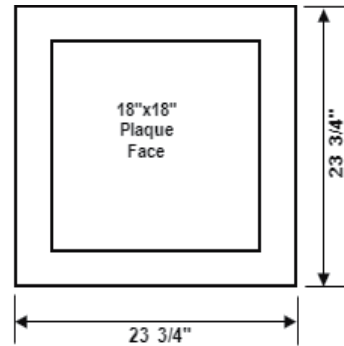
The MSE-HC diffuser effectively regulates the amount of supply air into the space and uses a wall-mounted thermostat to achieve true VAV control in the heating mode, as well as the cooling mode. Automatic changeover from heating to cooling is standard. The diffuser is designed to maintain Coanda effect (draft free) of discharge air along the ceiling, providing a sustained velocity throughout the volume range. Operating the diffuser from an individual wall-mounted thermostat enables users to choose their own desired comfort control from desk top level, rather than a stratified ceiling level.



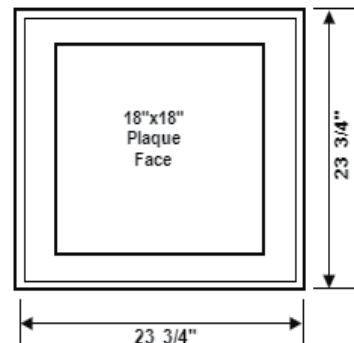
- Excellent choice for reception areas, offices, conference rooms and buildings with east/west exposure
- Economical solution to overcooling or overheating issues in a building that does not warrant a full-blown zoning or BAS system.
- Wall mounted thermostatic control
- Powerful, low voltage actuator
- True variable air volume in heating and cooling modes
- One 40VA transformer will power a single Master (MSE-HC-M) and up to 19 slave units (MSE-HCS)
- One 75 VA transformer will power a single Master (MSE-HC-M) and up to 36 slave units (MSE-HC-S)



MSE-HC-1 / 6 (Master / Slave)



MSE-HC-8 / -9 (Master / Slave)



SERIES MSE-HC — VAV SMART ZONE DIFFUSER SPECIFICATIONS

Air Diffusers shall be model:

MSE-HC VAV Smart Zone Diffuser

- Units shall be manufactured by METALAIRE and be of steel construction. Units shall be square with a formed backpan and a flat face panel. The face panel shall project no more than 1/4" below the ceiling grid or surface. The diffuser shall have the same appearance from the face regardless of the inlet size.
- The diffuser shall include an integral modulating disk that continually regulates the volume of supply air in response to the wall mounted thermostat. Diffusers dependent on integral air induction ceiling located sensors or set point adjustment methods other than from wall mounted thermostats shall not be acceptable.
- To ensure finite control of temperature by modulation, the electric 24Vac actuators shall be a drive-open, drive-closed motor on the electrically driven units. Actuators that incorporate an expanding material which only drives the unit open when subjected to heat-causing electrical current, requiring a spring return mechanism to force the diffuser to a closed position shall not be acceptable.
- The electronic modulating wall-mounted thermostatic control shall be either a 2 to 10Vdc or floating point. All field wiring, materials and labor shall be supplied and installed by others.

Performance Specification

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

Paint Specification

Process shall be anodic electro-deposition using an anodic acrylic paint. Units shall undergo pre-treatment including a pressurized spray stage using an alkaline cleaner and a de-ionized water rinse.

MSE-HC MODEL NUMBER SPECIFICATION

THERMAL PLAQUE DIFFUSER —
HEATING AND COOLING — ELECTRONICALLY CONTROLLED

Model		Neck Size	Module	Available Finishes	
MSE-HC-6	T-bar Lay-in	6	12 x 12	Standard	
MSE-HC-8	Tegular Lay-in	8		01	White
MSE-HC-9	Donn Finline / Bolt Slot	6	24 x 24	Available Accessories	
		8		BAF-1	3-Way (One Baffle)
		10		BAF-2	2-Way (Two Baffles)
		12		BAF-3	1-Way (Three Baffles)
		14			

SERIES MSE-HC PERFORMANCE DATA

MODEL MSE-HC

Model	fpm vn	300	400	500	600	700	800	900	1000	1200	1400
Inlet Size	Pv	.006	.010	.016	.022	.031	.040	.051	.062	.090	.122
MSE-HC-M MSE-HC-S 6	CFM	60	80	100	120	40	160	180	200	240	280
	Pt	.009	.011	.017	.025	.034	.044	.057	.070	.100	.135
	Throw	1-1-2	1-1-4	1-2-4	1-3-5	2-3-6	2-4-7	3-4-8	3-4-9	4-5-11	4-6-11
	NC	<15	<15	<15	<15	<15	<15	17	21	28	34
MSE-HC-M MSE-HC-S 8	CFM	105	140	175	210	245	280	315	350	420	490
	Pt	.011	.018	.028	.040	.055	.072	.091	.112	.162	.220
	Throw	1-2-4	2-3-6	2-4-7	3-4-9	3-5-10	4-6-11	4-6-12	5-7-13	6-9-14	7-10-15
	NC	<15	<15	<15	<15	<15	17	21	25	32	38
MSE-HC-M MSE-HC-S 10	CFM	165	220	275	330	385	440	495	550	660	770
	Pt	.017	.029	.043	.060	.082	.108	.136	.168	.243	.331
	Throw	2-3-7	3-4-8	3-5-10	4-6-12	5-7-13	5-8-14	6-9-15	7-10-16	8-12-18	10-13-19
	NC	<15	<15	<15	<15	15	20	24	28	35	41
MSE-HC-M MSE-HC-S 12	CFM	2040	310	390	470	550	630	710	790	940	1100
	Pt	.023	.037	.059	.085	.115	.151	.191	.237	.338	.461
	Throw	2-4-7	4-5-11	5-7-14	5-8-15	6-9-16	7-11-17	8-12-18	9-14-19	11-15-21	13-16-23
	NC	<15	<15	<15	<15	18	23	27	31	38	43
MSE-HC-M MSE-HC-S 14	CFM	320	430	530	540	750	860	960	1070	1280	1500
	Pt	.031	.050	.078	.114	.155	.202	.256	.316	.453	.619
	Throw	3-4-8	4-7-13	6-8-16	7-10-17	8-12-19	9-13-20	10-15-21	11-16-23	13-17-25	15-19-27
	NC	<15	<15	<15	<15	20	25	29	33	40	45

PERFORMANCE NOTES FOR SERIES MSE-HC

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

fpm Velocity of air stream in Feet per Minute

Pv Velocity pressure (inches of water column)

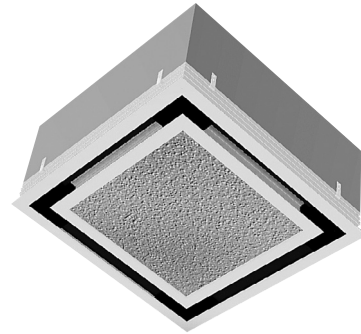
Pt Total pressure (inches of water column)

Throw Horizontal distances in feet to the terminal vel of 150, 100 and 50fpm with supply air temp 20°F below room air temp

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

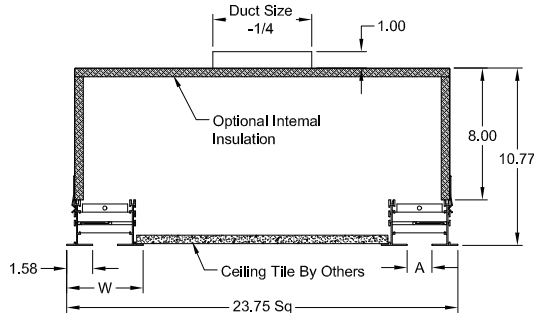
MODEL FAI (INTEGRA)

The appeal of Formations Integra is its design. Laying in an acoustical tee bar or hard ceiling, the specified ceiling material becomes the face of the Integra diffuser that fully integrates the ceiling and the diffuser. Integra is available in 1", 1.5" and 2" slot widths. Constructed of extruded aluminum, Integra diffusers are available for either supply or return and can be field adjusted for one-, two-, three- or four-way directional air flow. Air patterns can be adjusted for horizontal or vertical throws.

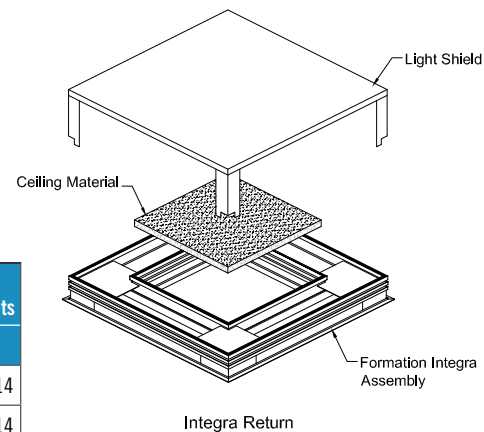
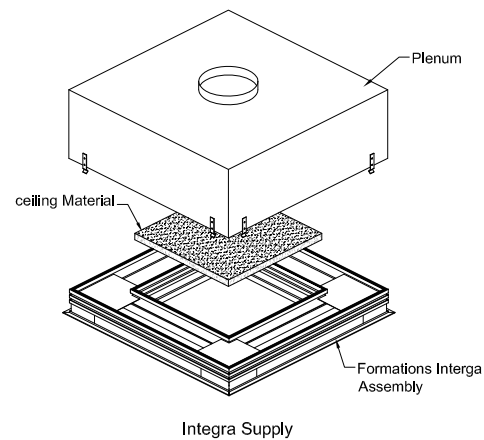
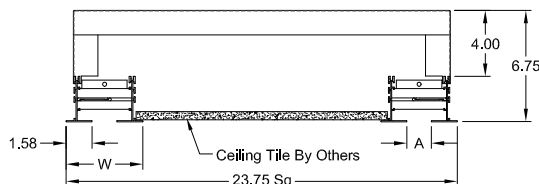


- Available size – 24 x 24
- Available inlets – 6", 8", 10", 12", 14" or no inlet
- Finish – white face with black interior
- Optional steel center panel

- Model: FAI-10, 15, 20 = Non Insulated
- Model: FAII-10, 15, 20 = Insulated
- Model: FAIB-10, 15, 20 = Bolt Slot Non Insulated
- Model: FAIBI-10, 15, 20 = Bolt Slot Insulated

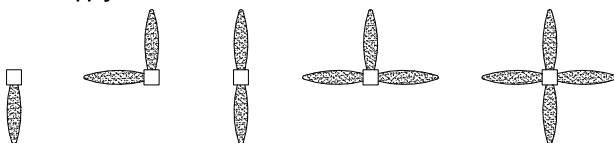


- Model: FAIR-10, 15, 20 = Return
- Model: FAIBR-10, 15, 20 = Bolt Slot Return



Models	Formations Unit A Slot Width	Number of Slots	W (width)	Standard available inlets	
				Round	
FAI, FAII, FAIR, FAIB, FAIBI, FAIBR-10	1"	1	4 1/8	6, 8, 10, 12, 14	
FAI, FAII, FAIR, FAIB, FAIBI, FAIBR-15	1 1/2"	1	4 5/8	6, 8, 10, 12, 14	
FAI, FAII, FAIR, FAIB, FAIBI, FAIBR-20	2"	1	5 1/8	6, 8, 10, 12, 14	

Optional Supply Air Patterns



SERIES FORMATIONS SPECIFICATIONS

FORMATIONS ARCHITECTURAL LINEAR SLOT DIFFUSER — EXTRUDED ALUMINUM — MODELS FAI/FAIR

- Diffusers shall be models FAI/FAIR manufactured by METALAIRE. Units shall be constructed of heavy wall extruded aluminum. The units shall be in 1", 1 1/2" or 2" slot widths. One or two slot units shall be provided.
- The diffusers shall be available in 24" X 24". The units shall be the size and quantity as outlined in the plans and specifications.

Performance Specification

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

Paint Specification

Process shall be anodic electro-deposition using an anodic acrylic paint. Units shall undergo pre-treatment including a pressurized spray stage using an alkaline cleaner and a de-ionized water rinse.

FORMATIONS MODEL NUMBER SPECIFICATIONS ARCHITECTURAL LINEAR

Model	Slot Width	Border Style	Inlet	# of Slots	Length	Finish	Mtg Hdw	Pattern Controller	Available Options			
FAI	10-1"	AA	NI - No Inlet	1	24 x 24	20 - White/Black	F1	C - Combo	FODR	Face Operated Damper		
FAII	15-1.5"		06						F6	S - Straight	ID	Inlet Damper
FAIR	20-2"		08							ROD	Remote Operated Damper	
			10							CC	Closed Cell Insulation	
			12							EI	External Insulation	
			14									

METALAIRE INTEGRA 24 X 24

1.5" Slot Width	Four Way Throw	6" Inlet	CFM	80	120	155	190	225	260	300
			Ps	.024	.049	.084	.128	.181	.244	.315
Pt	.035	.072	.123	.187	.264	.355	.459			
NC	-	17	23	28	32	36	39			
Throw	3-5-10	5-7-13	6-9-14	7-11-16	9-2-17	10-13-19	12-14-20			
1.5" Slot Width	Four Way Throw	8" Inlet	CFM	85	120	160	195	230	265	300
			Ps	.013	.026	.043	.065	.091	.122	.157
Pt	.016	.033	.056	.084	.118	.158	.203			
NC	-	18	24	29	33	36	40			
Throw	3-5-10	5-7-13	6-9-15	8-11-16	9-12-18	10-13-19	12-14-20			
1.5" Slot Width	Four Way Throw	10" Inlet	CFM	90	130	165	205	240	275	315
			Ps	0.009	0.018	0.03	0.045	0.063	0.084	0.108
Pt	0.011	0.022	0.036	0.054	0.075	0.1	0.129			
NC	-	19	25	30	34	37	40			
Throw	4-5-11	5-8-13	7-10-15	8-12-17	9-13-18	11-14-19	12-15-21			
1.5" Slot Width	Four Way Throw	12" Inlet	CFM	100	140	175	210	245	280	320
			Ps	.008	.014	.023	.034	.046	.061	.077
Pt	.009	.016	.026	.038	.052	.069	.087			
NC	-	20	26	31	35	38	41			
Throw	4-6-12	5-8-14	7-10-15	8-12-17	10-13-18	11-14-19	12-15-21			
1.5" Slot Width	Three Way Throw	6" Inlet	CFM	70	100	125	155	180	210	235
			Ps	.021	.041	.066	.099	.137	.182	.233
Pt	.029	.056	.092	.137	.190	.252	.323			
NC	-	17	23	28	32	35	39			
Throw	2-4-7	3-5-10	4-6-13	5-8-14	6-9-16	7-10-17	8-12-18			
1.5" Slot Width	Three Way Throw	8" Inlet	CFM	75	105	130	160	190	215	245
			Ps	.012	.022	.035	.052	.072	.095	.121
Pt	.015	.027	.044	.065	.090	.118	.151			
NC	-	18	24	29	33	36	39			
Throw	3-4-8	3-5-10	4-7-13	5-8-15	6-9-16	7-11-17	8-12-18			
1.5" Slot Width	Three Way Throw	10" Inlet	CFM	75	105	135	165	195	225	255
			Ps	0.007	0.014	0.023	0.035	0.049	0.065	0.084
Pt	0.008	0.016	0.027	0.041	0.057	0.076	0.097			
NC	-	18	24	29	34	37	40			
Throw	2-4-7	3-5-10	4-7-13	5-8-15	6-10-16	7-11-17	8-13-18			
1.5" Slot Width	Three Way Throw	12" Inlet	CFM	70	105	135	165	195	225	260
			Ps	.005	.009	.016	.024	.034	.046	.060
Pt	.005	.011	.018	.027	.038	.051	.066			
NC	-	18	24	29	34	38	41			
Throw	2-4-7	3-5-10	4-7-13	5-8-15	7-10-16	8-11-17	9-13-19			

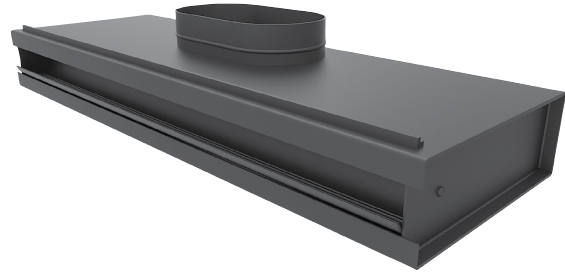
LINEAR DIFFUSERS
AND GRILLES

FORMATIONS
LINEAR DIFFUSERS

FAI

MODEL PHPS-J

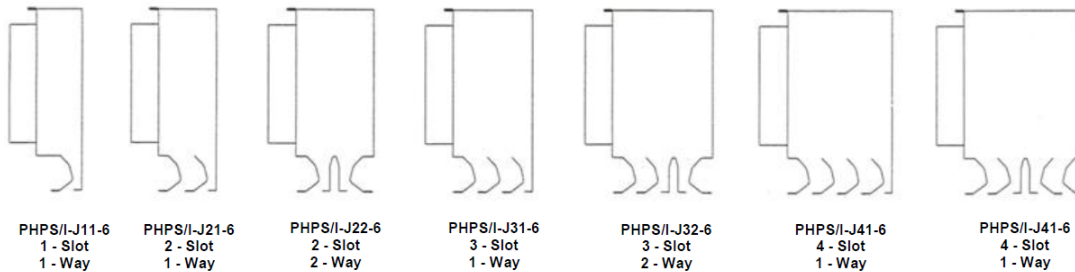
The PHPS-J is a high capacity diffuser with fixed aerodynamic control vanes. The fixed vanes provide a full range of air flow. It is an excellent choice for variable volume systems. The pattern controllers are integral with the diffuser and can be fixed in a one way or two way air pattern.



- Corrosion resistant steel construction
- Lower flanges provide tile support as an integral part of the diffuser housing
- Available in 1 to 4 slots
- Available lengths 24", 36", 48" and 60"
- Optional insulation on PHPSI-J

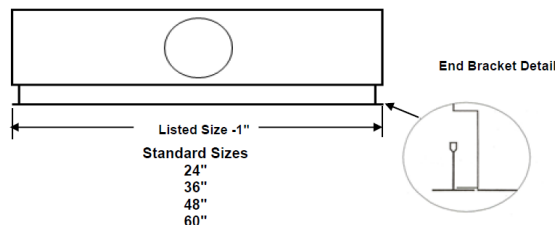
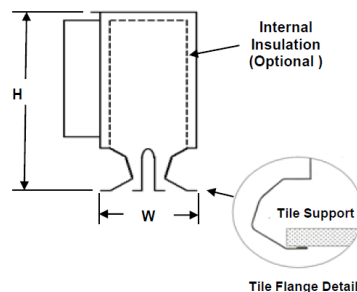
PHPS-I-J11-6	One Slot 1 Way Non-insulated
PHPS-I-J21-6	Two Slot 1 Way Non-insulated
PHPS-I-J22-6	Two Slot 2 Way Non-insulated
PHPS-I-J31-6	Three Slot 1 Way Non-insulated
PHPS-I-J32-6	Three Slot 2 Way Non-insulated
PHPS-I-J41-6	Four Slot 1 Way Non-insulated
PHPS-I-J42-6	Four Slot 2 Way Non-insulated

PHPSI-I-J11-6	One Slot 1 Way Insulated
PHPSI-I-J21-6	Two Slot 1 Way Insulated
PHPSI-I-J22-6	Two Slot 2 Way Insulated
PHPSI-I-J31-6	Three Slot 1 Way Insulated
PHPSI-I-J32-6	Three Slot 2 Way Insulated
PHPSI-I-J41-6	Four Slot 1 Way Insulated
PHPSI-I-J42-6	Four Slot 2 Way Insulated



Model	W
PHPS/I-J11	1 13/16
PHPS/I-J21	3 1/16
PHPS/I-J22	4 1/8
PHPS/I-J31	4 5/16
PHPS/I-J32	5 3/8
PHPS/I-J41	5 9/16
PHPS/I-J42	6 5/8

Inlet Diameter	H
5, 6	9 1/4
7, 8, 9	12 7/16
10	14



SERIES PHPS-J SPECIFICATIONS

- Diffusers shall be available with 1 to 4 slots. Discharge deflectors shall be integral with the diffuser housing and be fixed in one way or two way blow directions. Standard nominal lengths shall be 24", 36", 48" or 60". Units shall be constructed of corrosion resistant steel.
- The inlet collar must have at least 1 1/2" depth for duct connection. The standard finish will be white.
- The lower flange of the deflectors shall provide support for adjacent ceiling tile without additional ceiling grid tee bars. Lower flanges shall be constructed of a double metal thickness for rigidity.
- Optional internal insulation shall be available. Factory furnished plaster frames and inlet dampers shall be available as optional accessories.

Performance Specification

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

PHP-J MODEL NUMBER SPECIFICATION

PLENUM SLOT DIFFUSER

Model -Non-insulated	# of Slots	Slot Lengths	Inlets	Available Finishes	
PHPS-J11-6	1	24"	No Inlet	Standard	
PHPS-J21-6	2	36"	5" Oval	25	White Tee / Black Border
PHPS-J22-6	3	48"	6" Oval	Optional	
PHPS-J31-6	4	60"	7" Oval	26	All White
PHPS-J32-6			8" Oval	27	All Black
PHPS-J41-6			9" Oval		
PHPS-J42-6			10" Oval		

Model - Insulated	# of Slots	Slot Lengths	Inlets	Available Accessories	
PHPSI-J11-6	1	24"	No Inlet	ID	Inlet Damper
PHPSI-J21-6	2	36"	5" Oval	PHP-J-TBPF	T-bar Plaster Frame
PHPSI-J22-6	3	48"	6" Oval	EI	External Insulation
PHPSI-J31-6	4	60"	7" Oval	CC	Closed Cell Insulation
PHPSI-J32-6			8" Oval		
PHPSI-J41-6			9" Oval		
PHPSI-J42-6			10" Oval		

SERIES PHCS PERFORMANCE DATA MODEL PHP-J

2' Length	1 Slot 1-Way	CFM	20	40	60	80	100
		Ps	.010	.030	.060	.100	.150
		Throw	11	17	22	25	27
		NC	<20	<20	<20	22	27
	2 Slot 1-Way	CFM	40	80	120	160	200
		Ps	.010	.030	.070	.120	.180
		Throw	14	21	27	31	34
		NC	<20	<20	<20	26	31
	2 Slot 2-Way	CFM	40	80	120	160	200
		Ps	.010	.030	.060	.090	.140
		Throw	11	17	22	25	27
		NC	<20	<20	<20	22	27
	3 Slot 1-Way	CFM	60	120	180	240	300
		Ps	.010	.030	.060	.120	.190
		Throw	17	27	35	40	43
		NC	<20	<20	<20	26	31
3 Slot 2-Way	CFM	60	120	180	240	300	
	Ps	.010	.030	.060	.100	.150	
	Throw 1	11	17	22	25	27	
	Throw 2	14	21	27	31	34	
	NC	<20	<20	<20	26	32	
4 Slot 2-Way	CFM	80	160	240	320	400	
	Ps	.010	.030	.060	.100	.150	
	Throw	14	21	27	31	34	
		NC	<20	<20	21	29	36

4' Length	1 Slot 1-Way	CFM	40	80	120	160	200
		Ps	.010	.030	.080	.140	.200
		Throw	11	17	22	25	27
		NC	<20	<20	<20	26	32
	2 Slot 1-Way	CFM	80	160	240	320	400
		Ps	.010	.040	.080	.140	.220
		Throw	14	21	27	31	34
		NC	<20	<20	21	30	37
	2 Slot 2-Way	CFM	80	160	240	320	400
		Ps	.010	.030	.060	.090	.150
		Throw	11	17	22	25	27
		NC	<20	<20	<20	26	32

4' Length	3 Slot 1-Way	CFM	120	240	360	480	600
		Ps	.010	.030	.060	.120	.190
		Throw	17	27	35	40	43
		NC	<20	<20	21	30	37
	3 Slot 2-Way	CFM	120	240	360	480	600
		Ps	.010	.030	.060	.100	.160
		Throw 1	11	17	22	25	27
		Throw 2	14	21	27	31	34
		NC	<20	<20	22	31	38
	4 Slot 2-Way	CFM	160	320	480	640	800
		Ps	.010	.030	.060	.110	.170
		Throw	14	21	27	31	34
NC		<20	<20	26	34	42	

5' Length	1 Slot 1-Way	CFM	50	100	150	200	250
		Ps	.010	.040	.090	.150	.240
		Throw	11	17	22	25	27
		NC	<20	<20	21	30	37
	2 Slot 1-Way	CFM	100	200	300	400	500
		Ps	.010	.040	.060	.140	.220
		Throw	14	21	27	31	34
		NC	<20	<20	24	35	43
	2 Slot 2-Way	CFM	100	200	300	400	500
		Ps	.010	.030	.060	.110	.170
		Throw	11	17	22	25	27
		NC	<20	<20	21	30	37
	3 Slot 1-Way	CFM	150	300	450	600	750
		Ps	.010	.030	.070	.130	.210
		Throw	17	27	35	40	43
		NC	<20	<20	24	35	43
	3 Slot 2-Way	CFM	150	300	450	600	750
		Ps	.010	.030	.060	.110	.180
Throw 1		11	17	22	25	27	
Throw 2		14	21	27	31	34	
NC		<20	<20	25	36	44	
4 Slot 2-Way	CFM	200	400	600	800	1000	
	Ps	.010	.030	.070	.130	.200	
	Throw	14	21	27	31	34	
	NC	<20	<20	32	40	48	

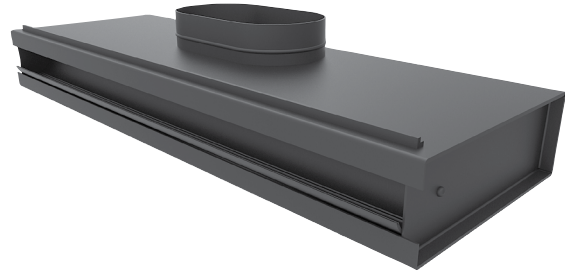
PLENUM SLOT
DIFFUSERS

PLENUM DIFFUSERS WITH
HIGH CAPACITY FIXED
PATTERN CONTROLLERS

PHPS-J

MODEL PHPS-J

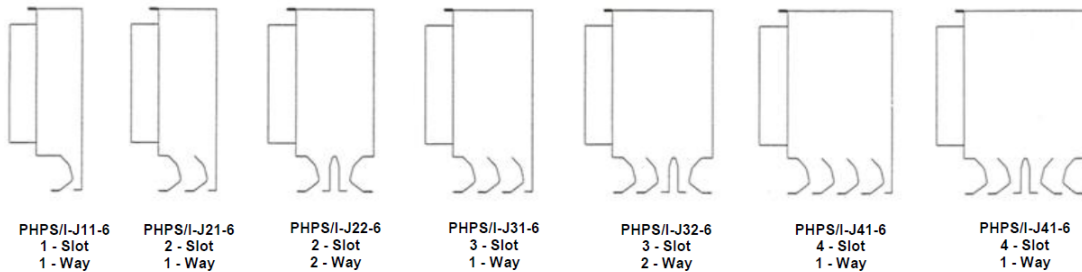
The PHPS-J is a high capacity diffuser with fixed aerodynamic control vanes. The fixed vanes provide a full range of air flow. It is an excellent choice for variable volume systems. The pattern controllers are integral with the diffuser and can be fixed in a one way or two way air pattern.



- Corrosion resistant steel construction
- Lower flanges provide tile support as an integral part of the diffuser housing
- Available in 1 to 4 slots
- Available lengths 24", 36", 48" and 60"
- Optional insulation on PHPSI-J

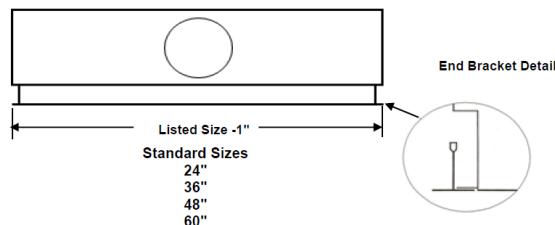
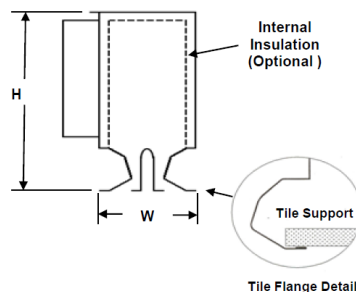
PHPS-I-J11-6	One Slot 1 Way Non-insulated
PHPS-I-J21-6	Two Slot 1 Way Non-insulated
PHPS-I-J22-6	Two Slot 2 Way Non-insulated
PHPS-I-J31-6	Three Slot 1 Way Non-insulated
PHPS-I-J32-6	Three Slot 2 Way Non-insulated
PHPS-I-J41-6	Four Slot 1 Way Non-insulated
PHPS-I-J42-6	Four Slot 2 Way Non-insulated

PHPSI-I-J11-6	One Slot 1 Way Insulated
PHPSI-I-J21-6	Two Slot 1 Way Insulated
PHPSI-I-J22-6	Two Slot 2 Way Insulated
PHPSI-I-J31-6	Three Slot 1 Way Insulated
PHPSI-I-J32-6	Three Slot 2 Way Insulated
PHPSI-I-J41-6	Four Slot 1 Way Insulated
PHPSI-I-J42-6	Four Slot 2 Way Insulated



Model	W
PHPS/I-J11	1 13/16
PHPS/I-J21	3 1/16
PHPS/I-J22	4 1/8
PHPS/I-J31	4 5/16
PHPS/I-J32	5 3/8
PHPS/I-J41	5 9/16
PHPS/I-J42	6 5/8

Inlet Diameter	H
5, 6	9 1/4
7, 8, 9	12 7/16
10	14



SERIES PHPS-J SPECIFICATIONS

- Diffusers shall be available with 1 to 4 slots. Discharge deflectors shall be integral with the diffuser housing and be fixed in one way or two way blow directions. Standard nominal lengths shall be 24", 36", 48" or 60". Units shall be constructed of corrosion resistant steel.
- The inlet collar must have at least 1 1/2" depth for duct connection. The standard finish will be white.
- The lower flange of the deflectors shall provide support for adjacent ceiling tile without additional ceiling grid tee bars. Lower flanges shall be constructed of a double metal thickness for rigidity.
- Optional internal insulation shall be available. Factory furnished plaster frames and inlet dampers shall be available as optional accessories.

Performance Specification

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

PHP-J MODEL NUMBER SPECIFICATION

PLENUM SLOT DIFFUSER

Model -Non-insulated	# of Slots	Slot Lengths	Inlets	Available Finishes	
PHPS-J11-6	1	24"	No Inlet	Standard	
PHPS-J21-6	2	36"	5" Oval	25	White Tee / Black Border
PHPS-J22-6	3	48"	6" Oval	Optional	
PHPS-J31-6	4	60"	7" Oval	26	All White
PHPS-J32-6			8" Oval	27	All Black
PHPS-J41-6			9" Oval		
PHPS-J42-6			10" Oval		

Model - Insulated	# of Slots	Slot Lengths	Inlets	Available Accessories	
PHPSI-J11-6	1	24"	No Inlet	ID	Inlet Damper
PHPSI-J21-6	2	36"	5" Oval	PHP-J-TBPF	T-bar Plaster Frame
PHPSI-J22-6	3	48"	6" Oval	EI	External Insulation
PHPSI-J31-6	4	60"	7" Oval	CC	Closed Cell Insulation
PHPSI-J32-6			8" Oval		
PHPSI-J41-6			9" Oval		
PHPSI-J42-6			10" Oval		

SERIES PHCS PERFORMANCE DATA MODEL PHP-J

2' Length	1 Slot 1-Way	CFM	20	40	60	80	100
		Ps	.010	.030	.060	.100	.150
		Throw	11	17	22	25	27
		NC	<20	<20	<20	22	27
	2 Slot 1-Way	CFM	40	80	120	160	200
		Ps	.010	.030	.070	.120	.180
		Throw	14	21	27	31	34
		NC	<20	<20	<20	26	31
	2 Slot 2-Way	CFM	40	80	120	160	200
		Ps	.010	.030	.060	.090	.140
		Throw	11	17	22	25	27
		NC	<20	<20	<20	22	27
	3 Slot 1-Way	CFM	60	120	180	240	300
		Ps	.010	.030	.060	.120	.190
		Throw	17	27	35	40	43
		NC	<20	<20	<20	26	31
3 Slot 2-Way	CFM	60	120	180	240	300	
	Ps	.010	.030	.060	.100	.150	
	Throw 1	11	17	22	25	27	
	Throw 2	14	21	27	31	34	
	NC	<20	<20	<20	26	32	
4 Slot 2-Way	CFM	80	160	240	320	400	
	Ps	.010	.030	.060	.100	.150	
	Throw	14	21	27	31	34	
	NC	<20	<20	21	29	36	

4' Length	1 Slot 1-Way	CFM	40	80	120	160	200
		Ps	.010	.030	.080	.140	.200
		Throw	11	17	22	25	27
		NC	<20	<20	<20	26	32
	2 Slot 1-Way	CFM	80	160	240	320	400
		Ps	.010	.040	.080	.140	.220
		Throw	14	21	27	31	34
		NC	<20	<20	21	30	37
	2 Slot 2-Way	CFM	80	160	240	320	400
		Ps	.010	.030	.060	.090	.150
		Throw	11	17	22	25	27
		NC	<20	<20	<20	26	32

4' Length	3 Slot 1-Way	CFM	120	240	360	480	600
		Ps	.010	.030	.060	.120	.190
		Throw	17	27	35	40	43
		NC	<20	<20	21	30	37
	3 Slot 2-Way	CFM	120	240	360	480	600
		Ps	.010	.030	.060	.100	.160
		Throw 1	11	17	22	25	27
		Throw 2	14	21	27	31	34
	4 Slot 2-Way	CFM	160	320	480	640	800
		Ps	.010	.030	.060	.110	.170
Throw		14	21	27	31	34	
NC		<20	<20	26	34	42	

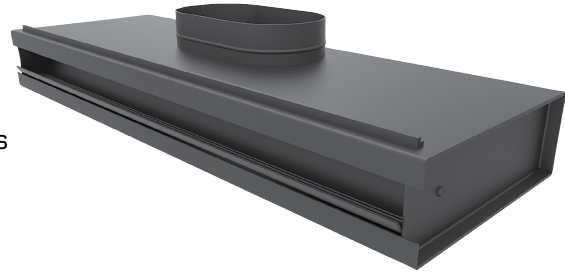
5' Length	1 Slot 1-Way	CFM	50	100	150	200	250
		Ps	.010	.040	.090	.150	.240
		Throw	11	17	22	25	27
		NC	<20	<20	21	30	37
	2 Slot 1-Way	CFM	100	200	300	400	500
		Ps	.010	.040	.060	.140	.220
		Throw	14	21	27	31	34
		NC	<20	<20	24	35	43
	2 Slot 2-Way	CFM	100	200	300	400	500
		Ps	.010	.030	.060	.110	.170
		Throw	11	17	22	25	27
		NC	<20	<20	21	30	37
	3 Slot 1-Way	CFM	150	300	450	600	750
		Ps	.010	.030	.070	.130	.210
		Throw	17	27	35	40	43
		NC	<20	<20	24	35	43
3 Slot 2-Way	CFM	150	300	450	600	750	
	Ps	.010	.030	.060	.110	.180	
	Throw 1	11	17	22	25	27	
	Throw 2	14	21	27	31	34	
4 Slot 2-Way	CFM	200	400	600	800	1000	
	Ps	.010	.030	.070	.130	.200	
	Throw	14	21	27	31	34	
	NC	<20	<20	32	40	48	

PLENUM SLOT
DIFFUSERS

PLENUM DIFFUSERS WITH
HIGH CAPACITY FIXED
PATTERN CONTROLLERS

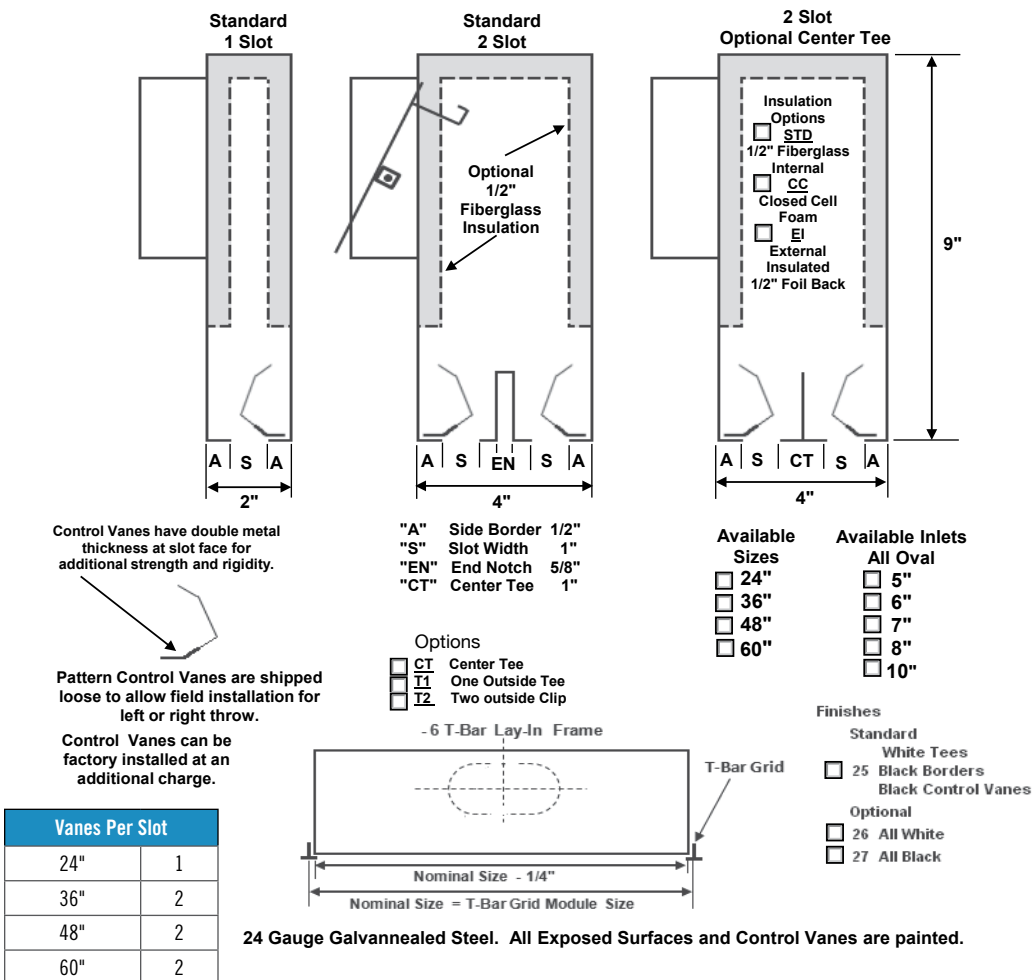
PHPS-J

MODEL PHPS-E



The PHPS-E features the same aerodynamically curved control vanes used in the PHPS-J. It maintains an air pattern tight against the ceiling in constant or variable control systems. At only 9" of height, the PHPS-E requires minimum space but provides maximum performance and flexibility for interior or perimeter applications.

- Control vanes have double metal thickness at slot face for additional strength and rigidity
- Pattern Control Vanes are shipped loose to allow field installation for left or right throw (factory installation for additional charge)
- Corrosion resistant steel construction
- Available in 1 and 2 slots
- Available lengths 24", 36", 48" and 60"
- 24" lengths has one vane per slot. Lengths 36", 48" and 60" have two vanes per individual slot
- Optional insulation on PHPSI-E
- Available for Donn Fine Line/Bolt Slot application



SERIES PHPS-E SPECIFICATIONS

- Diffusers shall be available with 1 or 2 slots. Discharge deflectors shall be integral with the diffuser housing and be fixed in one-way or two-way blow directions. Standard nominal lengths shall be 24", 36", 48" or 60". Units shall be constructed of corrosion resistant steel.
- The inlet collar must have at least 1 1/2" depth for duct connection. The standard finish will be white.
- Optional internal insulation shall be available. Factory furnished plaster frames and inlet dampers shall be available as optional accessories.

Performance Specification

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

PHP-E MODEL NUMBER SPECIFICATION

PLENUM SLOT DIFFUSER

Model - Non-insulated		# of Slots	Slot Lengths	Inlets	Available Finishes	
PHPS-E-6	1" Slot Width	1	24"	No Inlet	Standard	
PHPS-E-9	1" Slot Width			5" Oval	25	White Tee / Black Border
		2	36"	6" Oval	Optional	
			48"	7" Oval	26	All White
			60"	8" Oval	27	All Black
				10" Oval		

Model - Insulated		# of Slots	Slot Lengths	Inlets	Available Accessories	
PHPSI-E-6	1" Slot Width	1	24"	No Inlet	ID	Inlet Damper
PHPSI-E-9	1" Slot Width			5" Oval	PHP-E-TBPF	T-bar Plaster Frame
		2	36"	6" Oval	EI	External Insulation
			48"	7" Oval	CC	Closed Cell Insulation
			60"	8" Oval		
				10" Oval		

SERIES PHPS PERFORMANCE DATA

MODEL PHPS-E

2' Length	1 Slot 6" Inlet	CFM	40	50	60	80	100	120
		Pt	.020	.040	.050	.090	.150	.210
		Throw	6	8	11	14	18	20
		NC	<20	<20	<20	23	30	33
	2 Slot 6" Inlet	CFM	75	100	125	150	175	200
		Pt	.000	.040	.060	.090	.120	.160
		Throw	6	8	11	14	16	18
		NC	<20	<20	<20	22	27	30
4' Length	1 Slot 6" Inlet	CFM	75	100	125	175	200	250
		Pt	.030	.050	.080	.150	.190	.280
		Throw	7	10	13	17	19	22
		NC	<20	<20	<20	29	32	36
	2 Slot 8" Inlet	CFM	150	200	250	300	350	400
		Pt	.030	.050	.070	.110	.150	.190
		Throw	7	10	12	15	17	19
		NC	<20	<20	<20	23	29	32
5' Length	1 Slot 8" Inlet	CFM	100	140	180	220	260	300
		Pt	.030	.060	.090	.130	.190	.250
		Throw	9	12	15	17	20	22
		NC	<20	<20	25	31	35	37
	2 Slot 10" Inlet	CFM	175	225	275	350	425	500
		Pt	.020	.030	.050	.080	.120	.160
		Throw	7	9	11	14	17	19
		NC	<20	<20	<20	25	30	34

PERFORMANCE NOTES FOR SERIES PHPS-E

MODEL PHPS-E

Performance data is based on tests performed at Donco Air Products and ETL Testing laboratories in accordance with ADC 1062 GRD - 84 Test Code.

DEFINITION OF UNITS

Pt Total pressure (inches of water column)

Throw Distances in feet to terminal velocity of 50 fpm

Throw 1 and Throw 2 indicates number of slots throwing each direction on 3 slot, 2-way diffuser

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

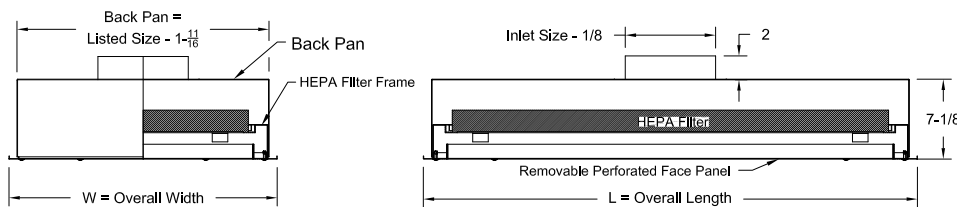
SERIES HPL-GS

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.



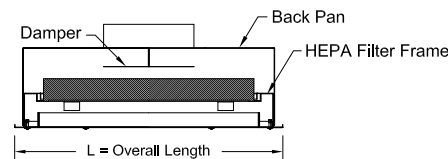
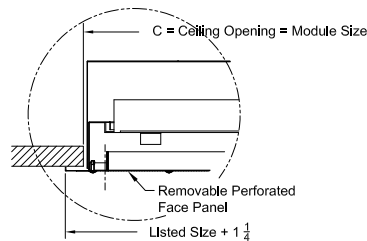
- Tested in accordance with IEST-RP-CC-034 and Alkermes SOP 110-03147
The standard gel seal HEPA filter is scan tested to meet an efficiency rating of 99.99%
- Knife Edge Flange penetrates the HEPA filter (silicone) gel seal to provide a leak proof seal between the filter and the housing
- Airtight Filter 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

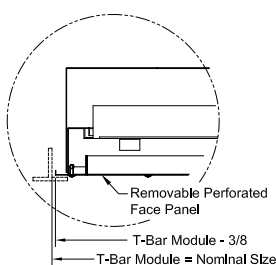


Option: HPL-GS With Damper

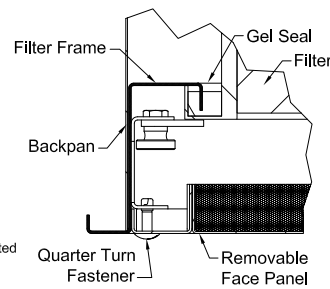
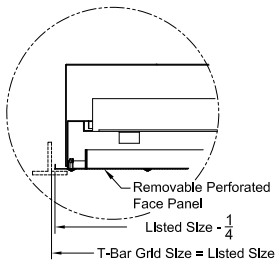
Model: HPL-GS Border 1 (Surface Mount)



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

DD-REC 1W

The Model DD-REC is a rectangular displacement diffuser designed for wall mounting around the periphery of a room. Our uniquely designed mounting system allows for quick and easy installation of these wall mount displacement diffusers.

DD-REC is available in -1W (One Way), -2 (Two Way, in 3 different combinations) and -3W (Three Way) configurations providing maximum flexibility. The DD-REC is offered in 1' to 4' widths in a variety of heights.

Optional bases and duct covers are available to complete the installation.

- 23% Perforated Face
- Designed to match DD-CU



DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-REC 1W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.01	0.016	0.022	0.031	0.04
24"x24"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.015	0.030	0.050	0.079	0.109	0.144	0.182
		Throw	1	3	4	4	6	8	10
		NC	-	-	-	-	-	11	14
24"x36"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.014	0.025	0.046	0.076	0.105	0.144	0.190
		Throw	1	2	3	4	5	6	7
		NC	-	-	-	-	-	-	-
24"x48"	8" Dia.	CFM	110	165	220	275	330	380	440
		P _t	0.011	0.025	0.044	0.069	0.100	0.132	0.177
		Throw	1	2	3	4	4	6	6
		NC	-	-	-	-	-	-	-
24"x60"	10" Dia.	CFM	110	165	220	275	330	380	440
		P _t	0.011	0.025	0.044	0.069	0.100	0.132	0.177
		Throw	2	3	5	5	6	7	8
		NC	-	-	-	-	-	-	-
36"x24"	10" Dia.	CFM	110	165	220	275	330	380	440
		P _t	0.011	0.025	0.044	0.069	0.100	0.132	0.177
		Throw	3	4	6	5	10	8	9
		NC	-	-	-	-	-	12	15
36"x36"	10" Dia.	CFM	110	165	220	275	330	380	440
		P _t	0.012	0.025	0.047	0.073	0.100	0.134	0.177
		Throw	3	4	5	5	9	8	9
		NC	-	-	-	-	-	-	-
36"x48"	10" Dia.	CFM	160	240	320	400	470	550	630
		P _t	0.011	0.025	0.045	0.071	0.098	0.134	0.175
		Throw	6	9	12	15	18	21	23
		NC	-	-	-	-	-	-	-
36"x60"	10" Dia.	CFM	160	240	320	400	470	550	630
		P _t	0.014	0.031	0.054	0.085	0.117	0.160	0.210
		Throw	5	8	10	14	16	20	21
		NC	-	-	-	-	-	-	-



DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-REC 1W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.01	0.016	0.022	0.031	0.04
48"x24"	10" Dia.	CFM	110	165	220	275	330	380	440
		P _t	0.011	0.023	0.047	0.068	0.106	0.138	0.175
		Throw	1	3	3	7	12	13	14
		NC	-	-	-	-	-	13	15
48"x36"	10" Dia.	CFM	110	165	220	275	330	380	440
		P _t	0.011	0.025	0.044	0.069	0.100	0.132	0.177
		Throw	1	2	2	5	10	11	12
		NC	-	-	-	-	-	-	-
48"x72"	12" Dia.	CFM	160	240	320	400	470	550	630
		P _t	0.011	0.025	0.045	0.071	0.098	0.134	0.175
		Throw	4	8	10	11	13	15	17
		NC	-	-	-	-	-	-	-
48"x72"	24"x8"	CFM	265	395	530	665	790	930	1065
		P _t	0.011	0.024	0.043	0.068	0.096	0.132	0.174
		Throw	7	11	15	17	22	23	27
		NC	-	-	-	-	13	18	21

PERFORMANCE NOTES FOR MODEL DD-REC 1W

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

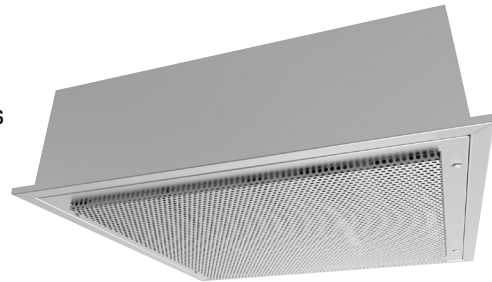
P_t Total pressure (inches of water column)

Throw Distance in feet @50fpm terminal velocity with 10°FΔT cooling differential.

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

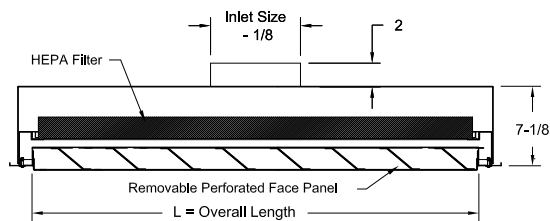
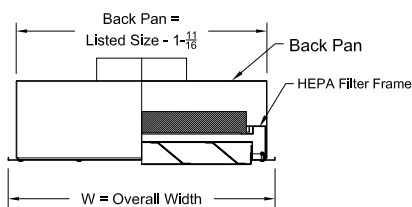
SERIES HRD-GS

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

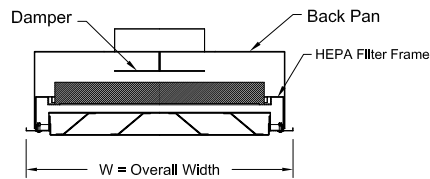
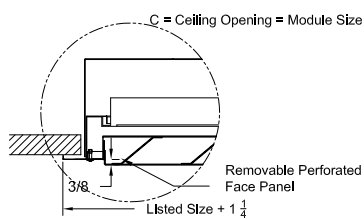


- Low velocity radial air pattern
- Available in 90° or 180° throw
- Removable face to allow ease of cleaning and sterilization
- Choice of all aluminum, all cold-rolled steel or all stainless steel construction
- Standard 23% free area
- Optional 40% free area or 51% free area
- Optional gel seal type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

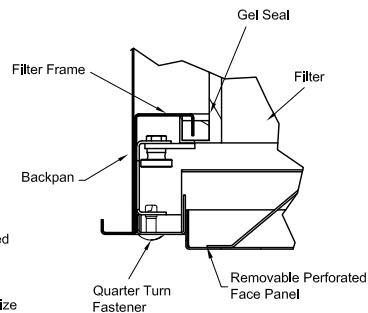
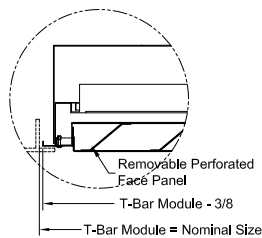
Model: HRD-GS



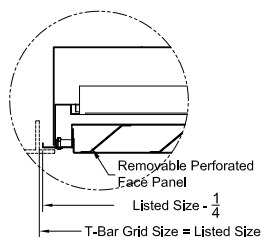
Model: HRD-GS Border 1 (Surface Mount)



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)

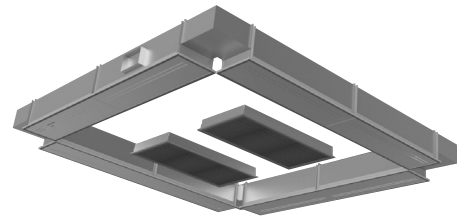
Ps Static pressure = Pt-Pv (inches of water column)

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

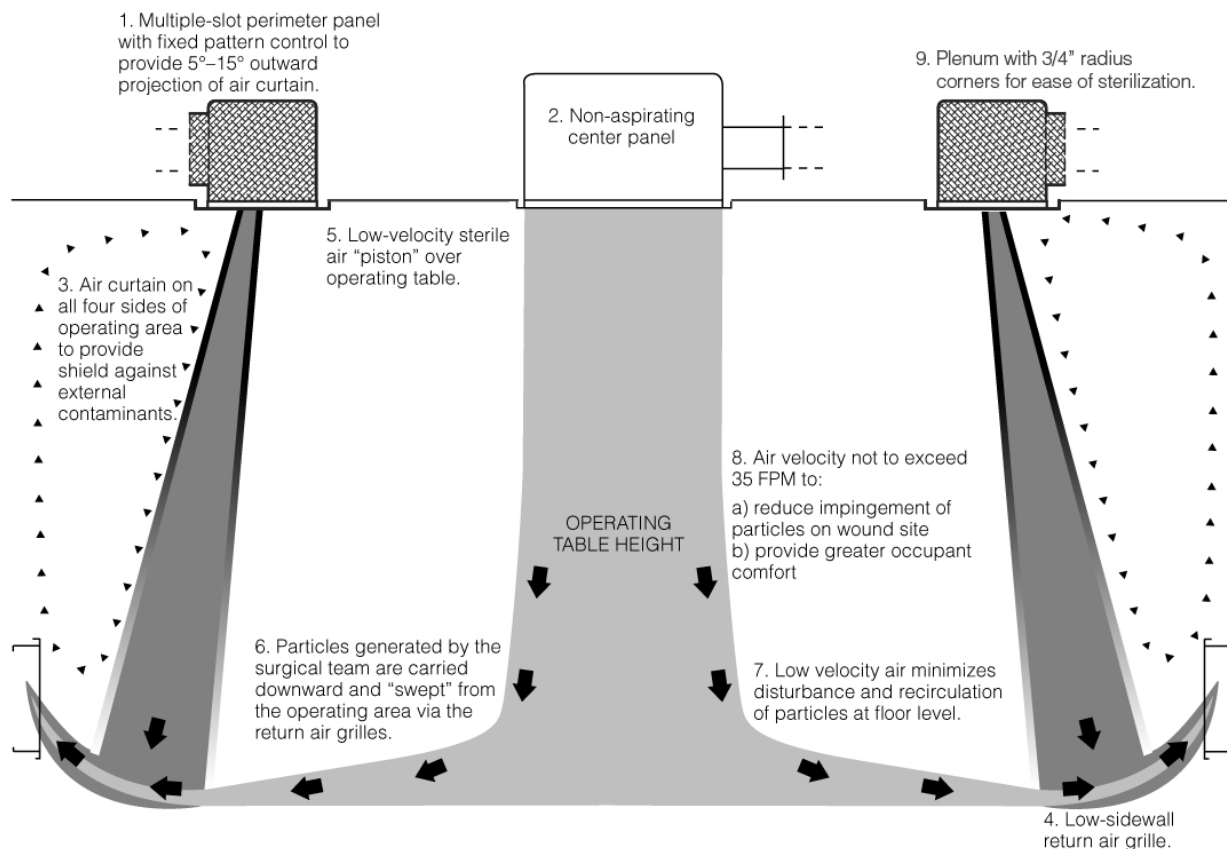
NC Noise criterion, sound pressure level NC ratings are based on sound power level (Lw) re: 10⁻¹² watts minus a 10dB room attenuation in all octave bands

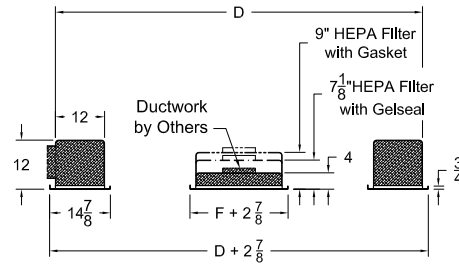
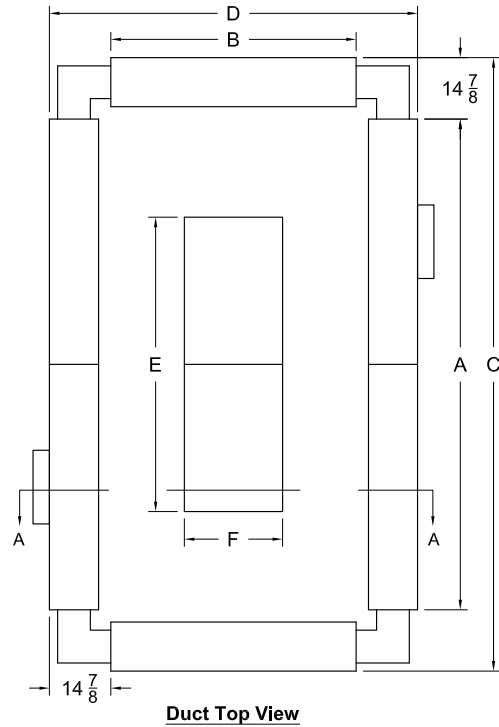
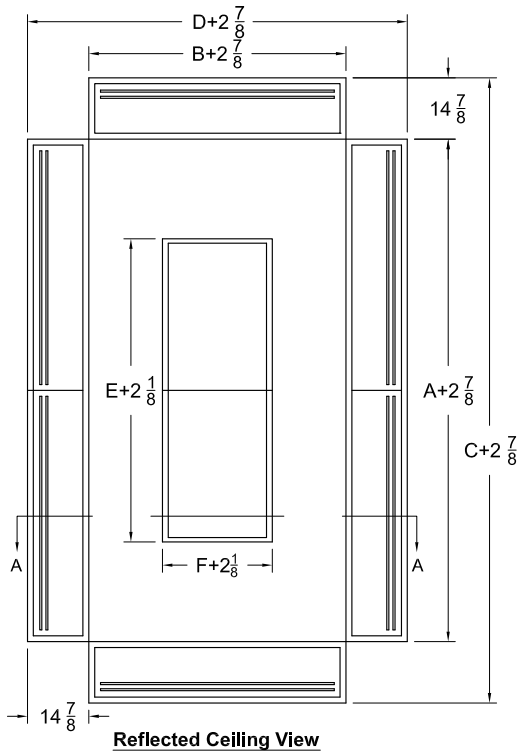
PERIFLOW SYSTEM

The Periflow Operating Room System provides control over particulate matter within the operating room environment. This system provides the highest standard of air cleanliness for patients undergoing minor procedures to major surgeries.

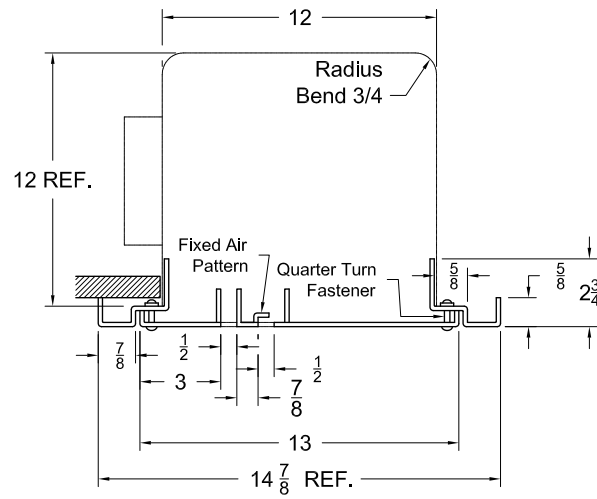
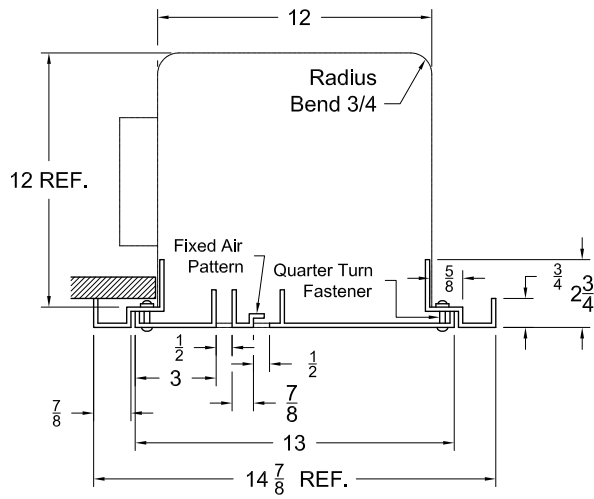
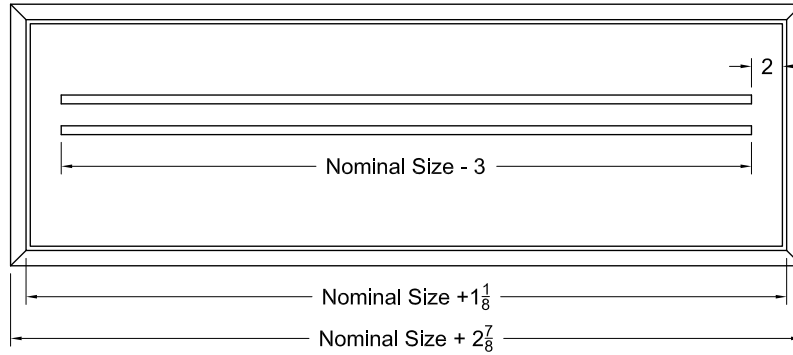


- Custom Design — each system is custom designed and precisely fabricated to accommodate the specialized mechanical needs of today's operating room environments
- Compact Design — by its compact yet efficient design, the Periflow system allows the designer the flexibility to properly provide for all the various components competing for space above the operating room ceiling
- Self-balancing — the unique loop system design is self-balancing and eliminates the need to re-calibrate after the system is set up, thus reducing startup costs
- Available in all aluminum, stainless steel face and aluminum backpan and all stainless steel construction
- Tested in accordance with the guidelines set forth by the Committee on Operating Room Environments of the American College of Surgeons as published in the January, 1976 Bulletin, and meets Class 1 Microbiological Air Cleanliness guidelines





Model	Nominal Plenum Size		Overall Foot Print		Center Diffusers				System CFM Range	
	A	B	C	D	Over All		Qty	Size	Minimum	Maximum
					E	F				
84	96	48	A + 30	B + 30	60	24	1	60 x 24	900	1620
104	120	48			72	24	2	36 x 24	1050	1890
124	144	48			96	24	2	48 x 24	1200	2160
85	96	60			60	24	1	60 x 24	980	1760
105	120	60			96	24	2	48 x 24	1130	2030
125	144	60			96	24	2	48 x 24	1280	2300
66	72	72			48	36	2	36 x 24	900	1620
86	96	72			48	48	2	48 x 24	1050	1890
106	120	72			48	48	2	48 x 24	1200	2160
126	144	72			96	24	2	48 x 24	1350	2430
88	96	96			48	48	2	48 x 24	1200	2160
108	120	96			96	24	2	48 x 24	1350	2430
128	144	96			72	48	3	48 x 24	1500	2700
148	168	96			72	48	3	48 x 24	1650	2970
1010	120	120			72	48	3	48 x 24	1500	2700
1210	144	120			72	48	3	48 x 24	1650	2970

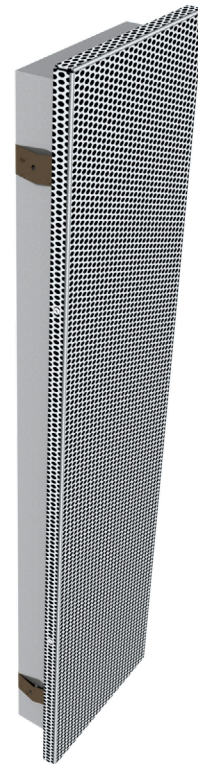


DD-WALL FM

The Model DD-WALL-RM is a spring-clip mounted perforated face displacement diffuser perfect for blending in the space architecture. This unit provides 1-way diffusion and can be custom sized to be discretely mounted in the room. These units are ideal for applications requiring 'hidden' air distribution - in trim, under kick guards of appliances, etc.

Units are available in single panel sizes ranging from 12" wide up to 48", and heights from 8" high up to 36". Multiple panel assemblies are also available.

- 18 ga. Steel Construction
- 23% Perforated Face
- Spring Clips





DISPLACEMENT VENTILATION PERFORMANCE DATA MODEL DD-WALL FM

Unit Size (D x H)	Neck Velocity	20	30	40	50
	Velocity Pressure	0.000	0.000	0.000	0.001
24"x 4"	CFM	15	20	25	35
	P _t	0.001	0.001	0.002	0.005
	Throw	-	2	4	8
	NC	-	-	-	-
24"x 6"	CFM	20	30	120	135
	P _t	0.001	0.001	0.003	0.004
	Throw	-	3	7	9
	NC	-	-	-	-
24"x 8"	CFM	25	40	55	65
	P _t	0.001	0.001	0.003	0.004
	Throw	-	4	8	11
	NC	-	-	-	-
30"x 4"	CFM	15	25	35	40
	P _t	0.001	0.001	0.003	0.004
	Throw	-	3	7	9
	NC	-	-	-	-
30"x 6"	CFM	25	40	50	65
	P _t	0.001	0.002	0.003	0.004
	Throw	-	4	9	11
	NC	-	-	-	-
30"x 8"	CFM	35	50	65	85
	P _t	0.001	0.001	0.002	0.004
	Throw	2	6	10	12
	NC	-	-	-	-
36"x 4"	CFM	20	30	40	50
	P _t	0.001	0.001	0.003	0.004
	Throw	-	4	8	11
	NC	-	-	-	-
36"x 6"	CFM	30	45	60	75
	P _t	0.001	0.001	0.003	0.004
	Throw	2	7	10	14
	NC	-	-	-	-

DISPLACEMENT VENTILATION PERFORMANCE DATA MODEL DD-WALL FM

Unit Size (D x H)	Neck Velocity	20	30	40	50
	Velocity Pressure	0.000	0.000	0.000	0.001
48"x 12"	CFM	80	120	160	200
	P _t	0.001	0.001	0.003	0.004
	Throw	7	12	16	21
	NC	-	-	-	-
24"x 24"	CFM	80	120	160	200
	P _t	0.001	0.001	0.003	0.004
	Throw	4	10	14	17
	NC	-	-	-	-
24"x 30"	CFM	100	150	200	250
	P _t	0.001	0.001	0.003	0.004
	Throw	6	11	15	19
	NC	-	-	-	-
24"x 36"	CFM	120	180	240	300
	P _t	0.007	0.016	0.029	0.046
	Throw	7	11	16	21
	NC	-	-	-	-
24"x 48"	CFM	160	240	320	400
	P _t	0.010	0.024	0.042	0.066
	Throw	8	14	17	27
	NC	-	-	-	-
30"x 24"	CFM	100	150	200	250
	P _t	0.019	0.042	0.075	0.117
	Throw	7	11	16	21
	NC	-	-	-	-
36"x 24"	CFM	120	180	240	300
	P _t	0.007	0.016	0.029	0.046
	Throw	8	14	17	23
	NC	-	-	-	-
48"x 24"	CFM	160	240	320	400
	P _t	0.010	0.024	0.042	0.066
	Throw	10	16	23	30
	NC	-	-	-	-

PERFORMANCE NOTES FOR MODEL DD-WALL FM

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

P_t Total pressure (inches of water column)

Throw Distance in feet @50fpm terminal velocity with 10°FΔT cooling differential.

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

DD-WALL 1W

The Model DD-WALL-1W is a rectangular 1-way displacement unit designed for mounting inside of stud/gypsum walls. Units are available in 1' to 4' heights and in 15" width (to fit between studs) and 35" width (to span two studs). These are installed prior to the sheet rock being hung providing a clean, finished look.

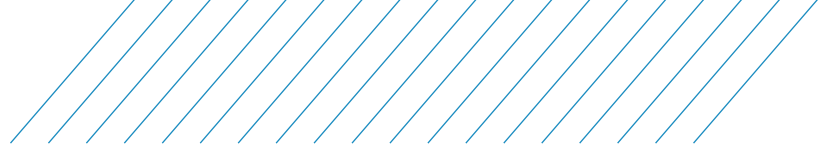
- Steel Construction
- 23% Perforated Face



DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-WALL 1W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.010	0.016	0.022	0.031	0.040
16"x16"	10"x2"	CFM	30	40	55	70	85	95	110
		P _t	0.008	0.014	0.027	0.043	0.064	0.080	0.107
		Throw	1	1	1	2	2	2	3
		NC	-	-	-	-	17	21	24
16"x24"	10"x2"	CFM	30	40	55	70	85	95	110
		P _t	0.005	0.009	0.018	0.029	0.043	0.053	0.071
		Throw	1	1	1	2	2	2	3
		NC	-	-	-	-	16	20	25
20"x20"	12"x2"	CFM	35	50	65	85	100	115	135
		P _t	0.006	0.012	0.020	0.034	0.047	0.062	0.086
		Throw	1	2	3	3	3	4	4
		NC	-	-	-	-	16	22	26
24"x24"	14"x2"	CFM	40	60	80	95	115	135	155
		P _t	0.004	0.010	0.018	0.025	0.037	0.051	0.067
		Throw	1	2	3	3	4	4	5
		NC	-	-	-	-	16	22	26
24"x30"	20"x3"	CFM	85	125	165	210	250	290	335
		P _t	0.008	0.016	0.029	0.046	0.065	0.088	0.118
		Throw	2	3	4	5	5	6	6
		NC	-	-	-	-	17	24	28
24"x36"	20"x3"	CFM	85	125	165	210	250	290	335
		P _t	0.006	0.014	0.024	0.038	0.055	0.073	0.098
		Throw	2	3	4	5	6	6	7
		NC	-	-	-	-	17	23	28
24"x48"	20"x3"	CFM	85	125	165	210	250	290	335
		P _t	0.005	0.010	0.018	0.029	0.041	0.055	0.073
		Throw	3	4	5	5	5	6	7
		NC	-	-	-	-	17	22	26
30"x24"	20"x3"	CFM	85	125	165	210	250	290	335
		P _t	0.008	0.016	0.029	0.046	0.065	0.088	0.118
		Throw	4	5	5	6	6	6	7
		NC	-	-	-	-	18	23	27



DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-WALL 1W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.010	0.016	0.022	0.031	0.040
36"x24"	20"x3"	CFM	85	125	165	210	250	290	335
		P_t	0.006	0.014	0.024	0.038	0.055	0.073	0.098
		Throw	4	5	6	6	7	7	8
		NC	-	-	-	-	17	21	26
48"x24"	20"x3"	CFM	85	125	165	210	250	290	335
		P_t	0.005	0.010	0.018	0.029	0.041	0.055	0.073
		Throw	4	4	5	6	7	8	8
		NC	-	-	-	-	17	20	26
60"x24"	24"x3"	CFM	100	150	200	250	300	350	400
		P_t	0.005	0.010	0.017	0.028	0.039	0.053	0.071
		Throw	5	6	6	7	8	9	9
		NC	-	-	-	-	17	22	26

PERFORMANCE NOTES FOR MODEL DD-WALL 1W

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

P_t Total pressure (inches of water column)

Throw Distance in feet @50fpm terminal velocity with $10^\circ F\Delta T$ cooling differential.

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

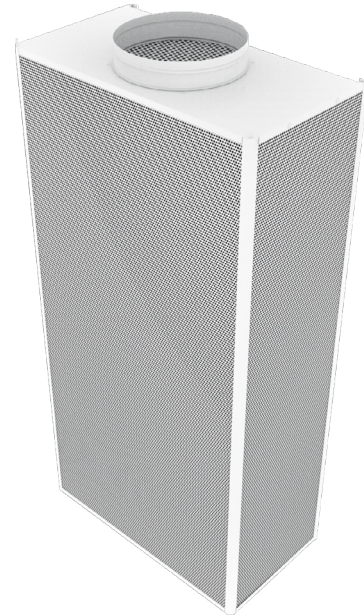
DD-REC 3W

The Model DD-REC is a rectangular displacement diffuser designed for wall mounting around the periphery of a room. Our uniquely designed mounting system allows for quick and easy installation of these wall mount displacement diffusers.

DD-REC is available in -1W (One Way), -2 (Two Way, in 3 different combinations) and -3W (Three Way) configurations providing maximum flexibility. The DD-REC is offered in 1' to 4' widths in a variety of heights.

Optional bases and duct covers are available to complete the installation.

- 23% Perforated Face
- Designed to match DD-CU





DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-REC 3W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.010	0.016	0.022	0.031	0.040
24"x24"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.005	0.011	0.020	0.031	0.044	0.060	0.078
		Throw	2	3	4	5	6	7	8
		NC	-	-	-	-	-	-	15
24"x48"	10" Dia.	CFM	110	165	220	275	325	380	435
		P _t	0.005	0.011	0.020	0.031	0.043	0.059	0.077
		Throw	1	2	2	3	5	7	9
		NC	-	-	-	-	-	-	-
24"x60"	10" Dia.	CFM	110	165	220	275	325	380	435
		P _t	0.005	0.011	0.020	0.031	0.043	0.059	0.077
		Throw	1	2	2	3	5	7	9
		NC	-	-	-	-	-	-	-
48"x24"	10" Dia.	CFM	110	165	220	275	325	380	435
		P _t	0.005	0.011	0.020	0.031	0.043	0.059	0.077
		Throw	1	1	2	3	5	7	8
		NC	-	-	-	-	-	-	15
60"x24"	10" Dia.	CFM	110	165	220	275	325	380	435
		P _t	0.005	0.011	0.020	0.031	0.043	0.059	0.077
		Throw	1	2	3	4	5	6	7
		NC	-	-	-	-	-	-	-
36"x48"	12" Dia.	CFM	155	235	315	395	470	550	630
		P _t	0.005	0.011	0.020	0.031	0.044	0.060	0.078
		Throw	2	4	5	6	8	9	11
		NC	-	-	-	-	-	-	13
36"x60"	12" Dia.	CFM	155	235	315	395	470	550	630
		P _t	0.005	0.011	0.020	0.031	0.044	0.060	0.078
		Throw	1	3	4	5	7	8	9
		NC	-	-	-	-	-	-	-
48"x36"	12" Dia.	CFM	155	235	315	395	470	550	630
		P _t	0.005	0.011	0.020	0.031	0.044	0.060	0.078
		Throw	2	3	5	6	8	9	10
		NC	-	-	-	-	-	-	15

DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-REC 3W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.010	0.016	0.022	0.031	0.040
60"x36"	12" Dia.	CFM	155	235	315	395	470	550	630
		P _t	0.005	0.011	0.020	0.031	0.044	0.060	0.078
		Throw	2	3	4	5	6	8	9
		NC	-	-	-	-	-	13	14
24"x24"	16"x6"	CFM	135	200	265	335	400	465	535
		P _t	0.005	0.011	0.019	0.031	0.044	0.059	0.078
		Throw	5	5	6	8	10	13	15
		NC	-	-	-	-	17	21	24
24"x48"	16"x8"	CFM	180	265	355	445	535	620	710
		P _t	0.005	0.011	0.019	0.030	0.044	0.059	0.078
		Throw	5	5	6	8	10	15	17
		NC	-	-	-	-	-	15	18
24"x60"	18"x8"	CFM	200	300	400	500	600	700	800
		P _t	0.005	0.011	0.019	0.030	0.044	0.060	0.078
		Throw	5	5	6	8	10	16	18
		NC	-	-	-	-	-	-	17
48"x24"	16"x8"	CFM	180	265	355	445	535	620	710
		P _t	0.004	0.009	0.015	0.024	0.035	0.047	0.061
		Throw	4	6	7	8	9	10	11
		NC	-	-	-	-	-	-	21

PERFORMANCE NOTES FOR MODEL DD-REC 3W

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

P_t Total pressure (inches of water column)

Throw Distance in feet @50fpm terminal velocity with 10°FΔT cooling differential.

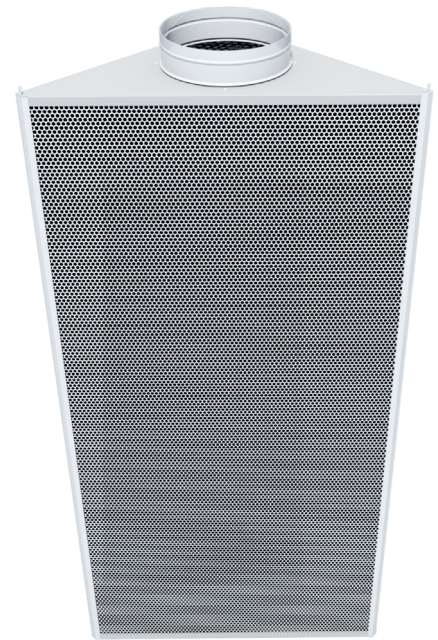
NC Noise criterion, sound pressure level NC ratings are based on sound power level (Lw) re: 10⁻¹² watts minus a 10dB room attenuation in all octave bands

DD-CU 1W

The Model DD-CU is a triangular displacement diffuser designed for mounting in corners of rooms. Our uniquely designed mounting system allows for quick and easy installation of these corner mount displacement diffusers. The DD-CU is offered in 1' to 4' widths in a variety of heights.

Optional bases and duct covers are available to complete the installation.

- 23% Perforated Face
- Designed to match DD-REC



DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-CU 1W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.01	0.016	0.022	0.031	0.04
24"x24"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	5	6	7	9	10
		NC	-	-	-	-	9	14	17
24"x36"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	5	7	8	9	11
		NC	-	-	-	-	-	12	14
24"x48"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	6	-	8	9	10
		NC	-	-	-	-	-	-	13
24"x60"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	6	7	8	10	11
		NC	-	-	-	-	-	-	12
24"x72"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	6	8	9	9	11
		NC	-	-	-	-	-	-	-
30"x24"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	5	6	6	8	9
		NC	-	-	-	-	-	17	12
30"x36"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	5	5	7	8	9
		NC	-	-	-	-	-	11	10
30"x48"	8" Dia.	CFM	70	105	140	175	210	245	280
		P _t	0.009	0.016	0.024	0.031	0.046	0.061	0.082
		Throw	3	4	5	5	7	8	9
		NC	-	-	-	-	-	-	-

DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-CU 1W

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.01	0.016	0.022	0.031	0.04
30"x60"	10" Dia.	CFM	110	165	215	270	325	380	435
		P _t	0.008	0.014	0.023	0.031	0.047	0.064	0.080
		Throw	4	5	7	9	10	11	12
		NC	-	-	-	-	-	-	-
30"x72"	10" Dia.	CFM	110	165	215	270	325	380	435
		P _t	0.008	0.014	0.023	0.031	0.047	0.064	0.080
		Throw	4	5	7	9	10	11	11
		NC	-	-	-	-	-	16	22
36"x24"	10" Dia.	CFM	110	165	215	270	325	380	435
		P _t	0.008	0.014	0.023	0.031	0.047	0.064	0.080
		Throw	4	5	6	8	9	9	11
		NC	-	-	-	-	-	16	22
36"x36"	10" Dia.	CFM	110	165	215	270	325	380	435
		P _t	0.008	0.014	0.023	0.031	0.047	0.064	0.080
		Throw	4	5	6	8	9	10	11
		NC	-	-	-	-	-	11	16
36"x48"	10" Dia.	CFM	110	165	215	270	325	380	435
		P _t	0.008	0.014	0.023	0.031	0.047	0.064	0.080
		Throw	4	6	6	8	9	10	12
		NC	-	-	-	-	-	-	11
36"x60"	12" Dia.	CFM	160	235	315	395	475	550	630
		P _t	0.007	0.013	0.022	0.034	0.051	0.069	0.082
		Throw	4	5	8	10	19	16	15
		NC	-	-	-	-	-	12	16
36"x72"	12" Dia.	CFM	160	235	315	395	475	550	630
		P _t	0.007	0.035	0.063	0.098	0.143	0.193	0.245
		Throw	-	-	-	-	-	-	-
		NC	-	-	-	-	-	-	14

PERFORMANCE NOTES FOR MODEL DD-CU 1W

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

P_t Total pressure (inches of water column)

Throw Distance in feet @50fpm terminal velocity with 10°FΔT cooling differential.

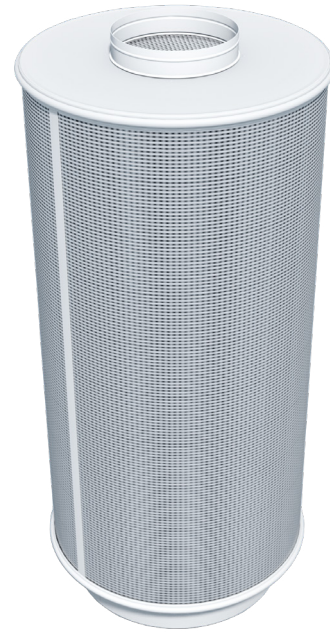
NC Noise criterion, sound pressure level NC ratings are based on sound power level (Lw) re: 10⁻¹² watts minus a 10dB room attenuation in all octave bands

DD-RD-360

The Model DD-RD-360 is a round displacement diffuser with a 360 degree airflow designed for free-standing mounting for displacement coverage of very large rooms. Our uniquely designed mounting system allows for quick and easy installation of these free-standing displacement diffusers. The DD-RD-360 is offered in 18", 24", 30" and 36" diameters in a variety of heights to accommodate various flow requirements.

Optional bases and duct covers are available to complete the installation.

- Steel Construction
- 23% Perforated Face
- Designed to match the DD-RD-180 and DD-RD-90



DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-RD-360

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.010	0.016	0.022	0.031	0.040
18"x36"	14" Dia.	CFM	215	320	430	535	640	750	855
		P _t	0.004	0.009	0.017	0.026	0.037	0.051	0.066
		Throw	5	8	9	10	11	13	14
		NC	-	-	-	-	-	-	18
24"x36"	14" Dia.	CFM	215	320	430	535	640	750	855
		P _t	0.004	0.009	0.017	0.026	0.037	0.051	0.066
		Throw	4	6	7	8	8	10	11
		NC	-	-	-	-	-	-	16
30"x36"	14" Dia.	CFM	215	320	430	535	640	750	855
		P _t	0.004	0.009	0.017	0.026	0.037	0.051	0.066
		Throw	3	5	5	6	7	8	8
		NC	-	-	-	-	-	-	-
18"x48"	14" Dia.	CFM	215	320	430	535	640	750	855
		P _t	0.004	0.009	0.017	0.026	0.037	0.051	0.066
		Throw	4	6	7	8	8	10	11
		NC	-	-	-	-	-	-	16
24"x48"	14" Dia.	CFM	215	320	430	535	640	750	855
		P _t	0.004	0.009	0.017	0.026	0.037	0.051	0.066
		Throw	3	5	5	5	6	7	8
		NC	-	-	-	-	-	-	-
30"x48"	16" Dia.	CFM	280	420	560	700	840	975	1115
		P _t	0.004	0.009	0.017	0.026	0.037	0.050	0.066
		Throw	7	9	11	13	13	14	16
		NC	-	-	-	-	16	17	19
24"x60"	16" Dia.	CFM	280	420	560	700	840	975	1115
		P _t	0.004	0.009	0.017	0.026	0.037	0.050	0.066
		Throw	7	8	10	13	14	14	16
		NC	-	-	-	-	-	-	18
30"x60"	18" Dia.	CFM	355	530	705	885	1060	1235	1415
		P _t	0.004	0.009	0.016	0.026	0.037	0.050	0.066
		Throw	15	18	19	22	24	24	26
		NC	-	-	-	-	-	17	19

DISPLACEMENT VENTILATION PERFORMANCE DATA

MODEL DD-RD-360

Unit Size (w x h)	Inlet Size	Neck Velocity	200	300	400	500	600	700	800
		Velocity Pressure	0.002	0.006	0.010	0.016	0.022	0.031	0.040
36"x36"	18" Dia.	CFM	355	530	705	885	1060	1235	1415
		P _t	0.004	0.009	0.016	0.026	0.037	0.050	0.066
		Throw	11	13	14	16	17	17	19
		NC	-	-	-	-	17	20	24
36"x48"	20" Dia.	CFM	435	655	875	1090	1310	1525	1745
		P _t	0.004	0.009	0.017	0.026	0.037	0.050	0.066
		Throw	10	13	16	17	19	20	22
		NC	-	-	-	-	18	20	21

PERFORMANCE NOTES FOR MODEL DD-RD-360

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

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

P_t Total pressure (inches of water column)

Throw Distance in feet @50fpm terminal velocity with 10°FΔT cooling differential.

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