AirConcepts

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2021

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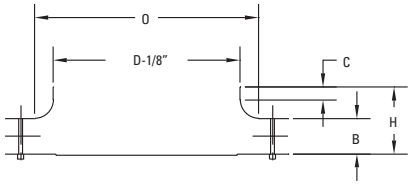
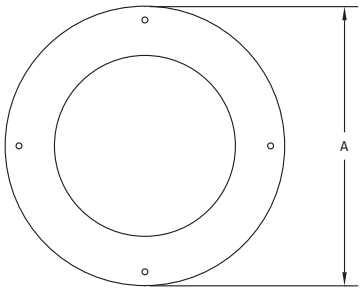
SPD/SPDV

SPD

Saturn Plaque Diffuser

US Patent





SPD Dimensions in Inches

MODEL	A	B	C	D	H	O
SPD-04	7-1/2	2	1-1/4	4	3-3/4	5-1/8
SPD-06	10	2	1-3/16	6	4	7-1/2
SPD-08	12	2	1-3/16	8	4	9-1/2
SPD-10	15	2	1	10	4	11-7/8
SPD-12	17	2	1	12	4	13-7/8
SPD-14	20	2	1-1/4	14	4-1/2	16-3/8
SPD-16	22	2	1-1/4	16	4-1/2	18-3/8
SPD-20	28	3	1-1/2	20	6-1/4	23-3/8
SPD-24	34	4	1-1/2	24	7-1/2	27-7/8

High Velocity/High Aspiration Air Outlet

Distinctive round design
Horizontal air pattern
Surface or exposed duct mount
SPDV has a removable blank-off which adds a vertical air pattern component when removed
Also available in a 24"x24" aluminum lay-in panel

Construction

Heavy gauge aluminum

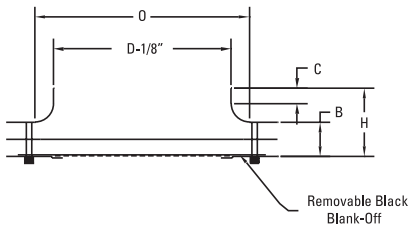
Finishes

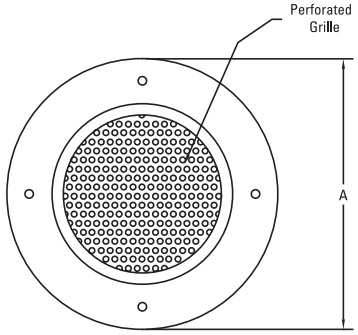
Standard: #52 White powder coat
Optional standard: #00 Mill
#10 Clear anodized
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

SPDV

Saturn Plaque Diffuser – Variable Pattern

US Patent

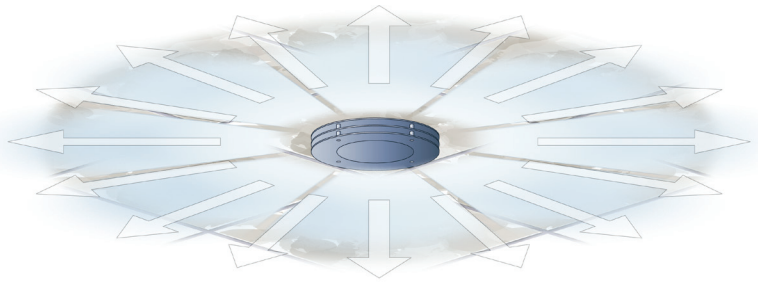




SPDV Dimensions in Inches

MODEL	A	B	C	D	H	O
SPDV-04	7-1/2	2	1-1/4	4	3-3/4	5-1/8
SPDV-06	10	2	1-3/16	6	4	7-1/2
SPDV-08	12	2	1-3/16	8	4	9-1/2
SPDV-10	15	2	1	10	4	11-7/8
SPDV-12	17	2	1	12	4	13-7/8
SPDV-14	20	2	1-1/4	14	4-1/2	16-3/8
SPDV-16	22	2	1-1/4	16	4-1/2	18-3/8
SPDV-20	28	3	1-1/2	20	6-1/4	23-3/8
SPDV-24	34	4	1-1/2	24	7-1/2	27-7/8

Radial Air Pattern



SPD/SPDV with blank-off installed have a 360° radial horizontal diffusion pattern. SPD radial air pattern performance data should be used for both diffusers.

MODEL	Duct Velocity / Velocity Pressure	400 / 0.01	600 / 0.022	800 / 0.04	1000 / 0.062	1200 / 0.089	1400 / 0.122	1600 / 0.16
SPD-04	CFM	35	52	70	87	105	122	140
	Total Pressure	0.014	0.032	0.057	0.089	0.128	0.178	0.228
	NC	<20	<20	<20	<20	<20	<20	<20
	Radius of Diffusion	1-2-3	2-3-5	3-4-8	3-5-9	4-7-10	5-7-11	6-8-12
SPD-06	CFM	78	118	157	196	235	274	314
	Total Pressure	0.015	0.034	0.061	0.094	0.136	0.184	0.238
	NC	<20	<20	<20	<20	<20	22	26
	Radius of Diffusion	2-3-5	3-4-8	3-5-9	4-6-10	5-8-11	6-8-12	7-9-13
SPD-08	CFM	140	210	280	350	420	490	560
	Total Pressure	0.017	0.038	0.067	0.105	0.151	0.206	0.266
	NC	<20	<20	<20	<20	23	28	32
	Radius of Diffusion	2-3-6	3-5-10	4-7-11	6-8-13	7-10-14	8-11-15	9-12-16
SPD-10	CFM	218	327	436	545	654	763	873
	Total Pressure	0.018	0.04	0.072	0.112	0.161	0.22	0.286
	NC	<20	<20	<20	20	26	31	35
	Radius of Diffusion	3-5-9	4-6-13	6-9-14	7-10-16	8-11-17	10-13-19	11-14-21
SPD-12	CFM	314	471	628	785	942	1099	1256
	Total Pressure	0.02	0.044	0.078	0.122	0.175	0.252	0.306
	NC	<20	<20	<20	23	29	34	38
	Radius of Diffusion	4-6-12	5-7-15	7-11-17	8-12-18	10-14-21	12-16-23	13-17-25
SPD-14	CFM	428	641	855	1069	1283	1497	1710
	Total Pressure	0.025	0.057	0.1	0.157	0.219	0.302	0.396
	NC	<20	<20	21	29	35	40	44
	Radius of Diffusion	5-6-13	6-8-16	8-12-20	10-14-23	12-17-26	13-19-29	15-20-31
SPD-16	CFM	558	838	1117	1396	1675	1954	2234
	Total Pressure	0.035	0.078	0.14	0.222	0.319	0.432	0.556
	NC	<20	<20	27	35	41	46	50
	Radius of Diffusion	5-7-14	7-10-18	9-14-22	11-17-25	14-20-28	15-21-31	18-22-33
SPD-20	CFM	872	1308	1744	2180	2616	3052	3488
	Total Pressure	0.03	0.068	0.119	0.186	0.269	0.366	0.476
	NC	<20	<20	28	36	42	47	51
	Radius of Diffusion	6-9-17	9-13-25	11-18-28	14-21-32	18-24-35	20-26-38	22-28-41
SPD-24	CFM	1256	1885	2513	3141	3769	4397	5026
	Total Pressure	0.04	0.091	0.161	0.252	0.362	0.492	0.645
	NC	<20	21	30	38	44	49	53
	Radius of Diffusion	7-10-20	10-15-30	13-20-35	17-25-39	21-30-43	23-32-46	27-34-50

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

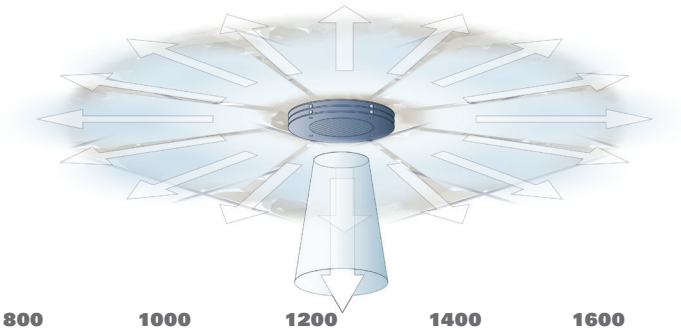
AIRFLOW CFM: Standard air density and isothermal conditions.

TOTAL PRESSURE: Inches of water gauge required.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Combination Air Pattern

SPDV with blank-off removed has a combination air pattern that is a radial horizontal diffusion pattern with a vertical projection component. Approximately 50% of the airflow is projected in a vertical column through the perforated center of the plaque. SPDV combination air pattern performance data should be used for this unit.



MODEL	Duct Velocity / Velocity Pressure	400 / 0.01	600 / 0.022	800 / 0.04	1000 / 0.062	1200 / 0.089	1400 / 0.122	1600 / 0.16
SPDV-04	CFM	35	52	70	87	105	122	140
	Total Pressure	0.012	0.026	0.047	0.075	0.104	0.146	0.188
	NC	<20	<20	<20	<20	<20	<20	<20
	Radius of Diffusion	0.5-1-2	1-2-3	2-3-5	2-3-6	3-4-7	3-5-8	4-6-9
	Vertical Projection	1-2	1-3	2-4	3-6	3-7	4-8	5-10
SPDV-06	CFM	78	118	157	196	235	274	314
	Total Pressure	0.013	0.028	0.05	0.079	0.113	0.153	0.203
	NC	<20	<20	<20	<20	<20	21	25
	Radius of Diffusion	2-3-4	2-3-5	3-4-7	3-4-8	3-5-9	4-6-10	5-7-12
	Vertical Projection	1-3	2-4	3-6	4-7	4-9	5-10	6-12
SPDV-08	CFM	140	210	280	350	420	490	560
	Total Pressure	0.013	0.029	0.053	0.082	0.118	0.162	0.211
	NC	<20	<20	<20	<20	<20	24	28
	Radius of Diffusion	2-3-5	2-3-6	3-4-8	4-6-10	4-7-11	5-8-12	5-9-13
	Vertical Projection	2-4	3-6	4-8	5-10	6-12	7-14	8-16
SPDV-10	CFM	218	327	436	545	654	763	873
	Total Pressure	0.014	0.03	0.054	0.084	0.12	0.165	0.218
	NC	<20	<20	<20	<20	22	26	31
	Radius of Diffusion	2-3-7	3-4-9	3-5-10	4-6-12	6-8-14	7-9-15	8-10-16
	Vertical Projection	2-5	4-7	5-10	6-12	7-15	9-17	10-19
SPDV-12	CFM	314	471	628	785	942	1099	1256
	Total Pressure	0.014	0.031	0.055	0.087	0.124	0.17	0.227
	NC	<20	<20	<20	<20	25	29	34
	Radius of Diffusion	3-4-8	4-6-12	5-8-13	6-10-15	7-11-16	8-12-18	9-13-20
	Vertical Projection	3-6	4-9	6-12	7-15	9-18	10-21	12-24
SPDV-14	CFM	428	641	855	1069	1283	1497	1710
	Total Pressure	0.015	0.032	0.058	0.09	0.129	0.177	0.234
	NC	<20	<20	<20	21	27	32	36
	Radius of Diffusion	3-5-9	5-7-13	6-9-15	7-11-17	8-12-19	9-15-23	10-16-23
	Vertical Projection	4-7	5-9	7-14	8-18	10-21	12-25	13-28
SPDV-16	CFM	558	838	1117	1396	1675	1954	2234
	Total Pressure	0.015	0.035	0.061	0.095	0.137	0.186	0.245
	NC	<20	<20	<20	25	31	36	40
	Radius of Diffusion	4-5-10	6-8-15	7-11-17	8-13-20	9-14-23	10-17-26	11-19-29
	Vertical Projection	5-8	6-12	8-15	9-19	11-24	13-26	15-31
SPDV-20	CFM	872	1308	1744	2180	2616	3052	3488
	Total Pressure	0.015	0.032	0.057	0.088	0.128	0.174	0.228
	NC	<20	<20	21	26	33	38	42
	Radius of Diffusion	5-7-12	8-10-19	9-14-22	10-16-25	12-19-29	13-22-33	14-24-37
	Vertical Projection	7-10	8-16	10-19	11-24	14-30	16-33	19-39
SPDV-24	CFM	1256	1885	2513	3141	3769	4397	5026
	Total Pressure	0.015	0.037	0.064	0.095	0.13	0.19	0.25
	NC	<20	<20	23	28	35	40	44
	Radius of Diffusion	6-8-15	9-12-23	11-16-28	12-19-31	14-24-36	15-27-40	17-29-45
	Vertical Projection	9-13	10-19	13-25	15-30	18-37	20-40	23-46

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TOTAL PRESSURE: Inches of water gauge required.

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

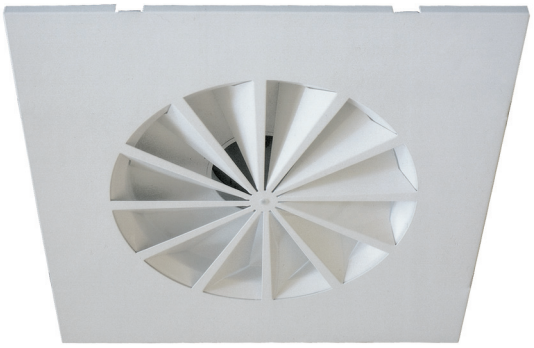
AIRFLOW CFM: Standard air density and isothermal conditions.

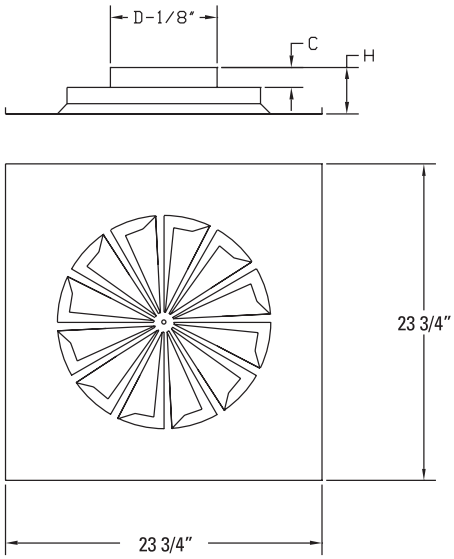
VERTICAL PROJECTION: Vertical distance (THROW) in feet - minimum value is 20-degree heating to 0 fpm terminal velocity and maximum value is 20-degree cooling to 100 fpm terminal velocity.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

SDL

Swirl Diffuser - Lay In Panel





Swirl Diffuser Dimensions in Inches

MODEL	D	C	H
SDL-06	6	1-1/2	3-1/2
SDL-08	8	1-1/2	3-1/2
SDL-10	10	1-1/2	3-1/2
SDL-12	12	1-1/2	3-1/2
SDL-14	14	1-1/2	3-1/2

High Velocity/ High Aspiration Air Outlet

Swirl pattern design
Lay-in panel
Easy installation

Construction

Heavy gauge aluminum face
Aluminum back pan with flex duct Collar

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat finish
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 0.01	600 0.022	800 0.04	1000 0.062	1200 0.089	1400 0.122
SDL-06	CFM	78	118	157	196	235	274
	Total Presure	0.016	0.037	0.065	0.101	0.146	0.2
	NC	<20	<20	<20	22	27	32
	Radius of Diffusion	1-2-4	2-3-5	3-4-6	3-4-7	4-5-8	5-7-9
SDL-08	CFM	140	210	280	350	420	490
	Total Presure	0.024	0.053	0.065	0.101	0.146	0.2
	NC	<20	<20	21	28	33	38
	Radius of Diffusion	2-3-5	3-4-8	4-5-9	5-7-10	5-8-11	6-9-12
SDL-10	CFM	218	327	436	545	654	763
	Total Presure	0.029	0.064	0.115	0.192	0.259	0.352
	NC	<20	<20	25	32	37	42
	Radius of Diffusion	2-4-7	3-5-10	4-7-11	6-9-13	7-10-15	8-12-16
SDL-12	CFM	314	471	628	785	942	1099
	Total Presure	0.037	0.082	0.15	0.222	0.329	0.442
	NC	<20	21	30	37	42	47
	Radius of Diffusion	3-5-10	4-6-12	5-8-15	7-11-16	8-12-17	10-14-19
SDL-14	CFM	428	641	855	1069	1283	1497
	Total Presure	0.059	0.132	0.23	0.352	0.509	0.692
	NC	<20	26	35	42	48	52
	Radius of Diffusion	3-5-10	4-7-14	6-9-16	8-12-18	9-13-19	11-16-21

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

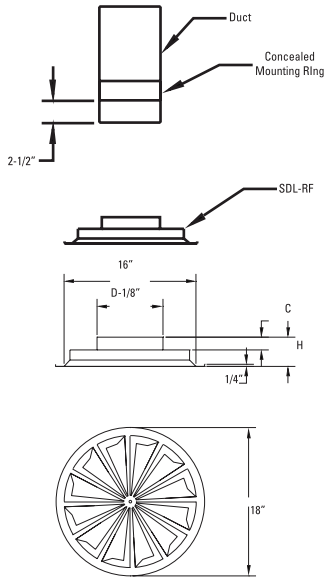
AIRFLOW CFM: Standard air density and isothermal conditions.

TOTAL PRESSURE: Inches of water gauge required.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

SDL-RF

Swirl Diffuser - Round Frame Series



Swirl Diffuser Dimensions in Inches

MODEL	D	C	H
SDL-06-RF	6	1-1/2	3-1/2
SDL-08-RF	8	1-1/2	3-1/2
SDL-10-RF	10	1-1/2	3-1/2
SDL-12-RF	12	1-1/2	3-1/2
SDL-14-RF	14	1-1/2	3-1/2

High Velocity/ High Aspiration Air Outlet

Swirl pattern design
Easy installation

Construction

Heavy gauge aluminum face
Aluminum Back Panel
Optional Concealed Mounting System

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat finish
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 0.010	600 0.022	800 0.040	1000 0.062	1200 0.089	1400 0.122
SDL-06-RF	CFM	78	118	157	196	235	274
	Total Pressure	0.016	0.037	0.065	0.101	0.146	0.2
	NC	<20	<20	<20	22	27	32
	Radius of Diffusion	1-2-4	2-3-5	3-4-6	3-4-7	4-5-8	5-7-9
SDL-08-RF	CFM	140	210	280	350	420	490
	Total Pressure	0.024	0.053	0.065	0.101	0.146	0.2
	NC	<20	<20	21	28	33	38
	Radius of Diffusion	2-3-5	3-4-8	4-5-9	5-7-10	5-8-11	6-9-12
SDL-10-RF	CFM	218	327	436	545	654	763
	Total Pressure	0.029	0.064	0.115	0.192	0.259	0.352
	NC	<20	<20	25	32	37	42
	Radius of Diffusion	2-4-7	3-5-10	4-7-11	6-9-13	7-10-15	2-12-16
SDL-12-RF	CFM	314	471	628	785	942	1099
	Total Pressure	0.037	0.082	0.15	0.222	0.329	0.442
	NC	<20	21	30	37	42	47
	Radius of Diffusion	3-5-10	4-6-12	5-8-15	7-11-16	8-12-17	10-14-19
SDL-14-RF	CFM	428	641	855	1069	1283	1497
	Total Pressure	0.059	0.132	0.23	0.352	0.509	0.692
	NC	<20	26	35	42	48	52
	Radius of Diffusion	3-5-10	4-7-14	6-9-16	8-12-18	9-13-19	11-16-21

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

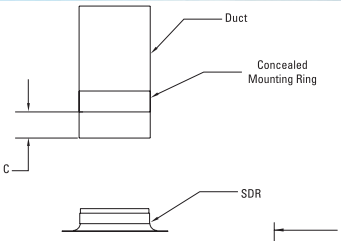
AIRFLOW CFM: Standard air density and isothermal conditions.

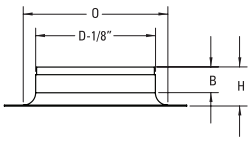
TOTAL PRESSURE: Inches of water gauge required.

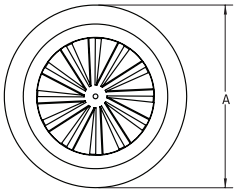
NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

SDR

Swirl Diffuser - Round Panel







Swirl Diffuser Dimensions in Inches

MODEL	A	B	C	D	H	O
SDR-06	10	1 3/16	2 3/16	6	2	7 1/2
SDR-08	12	1 3/16	2 3/16	8	2	9 1/2
SDR-10	15	1	2	10	2	11 7/8
SDR-12	17	1	2	12	2	13 7/8
SDR-14	20	1 1/2	2 1/2	14	2 1/2	17 7/8
SDR-16	22	1 3/8	2 3/8	16	2 1/2	18 3/8
SDR-20	28	1 1/2	3 1/2	20	3 1/4	23 3/8
SDR-24	34	1 1/2	3 3/4	24	3 1/2	27 7/8

High Velocity/ High Aspiration Air Outlet

Swirl pattern design
Easy installation

Construction

Heavy gauge aluminum face
Optional Concealed Mounting System

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat finish
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 0.010	500 0.016	600 0.022	700 0.031	800 0.040	900 0.051	1000 0.062
SDR-06	CFM	78	98	118	137	157	176	196
	Static Pressure	0.11	0.17	0.24	0.33	0.43	0.54	0.66
	NC	21	26	30	35	38	41	44
	Radius of Diffusion	1-2-4	2-3-6	2-4-7	3-4-7	3-5-10	4-6-11	4-6-12
SDR-08	CFM	140	175	209	244	279	314	349
	Static Pressure	0.09	0.14	0.20	0.27	0.35	0.44	0.55
	NC	21	26	30	35	38	41	44
	Radius of Diffusion	2-3-6	3-4-8	3-5-10	4-6-11	4-7-13	5-8-15	6-8-16
SDR-10	CFM	218	273	327	382	436	491	545
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	22	27	32	36	39	42	45
	Radius of Diffusion	3-4-8	3-5-10	4-6-12	5-7-14	6-9-17	6-9-18	7-10-20
SDR-12	CFM	314	393	471	550	628	707	785
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	22	27	32	36	39	42	45
	Radius of Diffusion	3-5-10	4-6-12	5-8-15	6-9-17	7-10-20	7-11-22	8-12-24
SDR-14	CFM	428	535	641	748	855	962	1069
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	22	27	32	36	39	42	45
	Radius of Diffusion	4-6-12	5-7-14	6-9-17	7-10-20	8-12-23	9-13-26	10-14-28
SDR-16	CFM	558	698	838	977	1117	1256	1396
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	23	28	33	37	40	43	46
	Radius of Diffusion	4-7-14	5-8-16	7-10-19	8-12-23	9-14-26	10-16-29	11-18-32

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

AIRFLOW CFM: Standard air density and isothermal conditions.

STATIC PRESSURE: Inches of water gauge required.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

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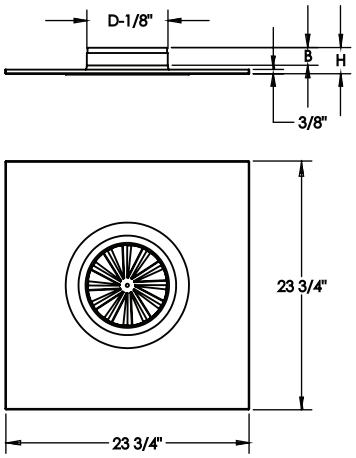
SDR-LI

Swirl Diffuser - Round Panel



Swirl Diffuser Dimensions in Inches

MODEL	B	D	H
SDR-06-LI	1 3/16	6	2
SDR-08-LI	1 3/16	8	2
SDR-10-LI	1	10	2
SDR-12-LI	1	12	2
SDR-14-LI	1 1/2	14	2 1/2
SDR-16-LI	1 3/8	16	2 1/2

High Velocity/ High Aspiration Air Outlet

Swirl pattern design
Lay-in panel
Easy installation

Construction

Heavy gauge aluminum face

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat finish
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 0.010	500 0.016	600 0.022	700 0.031	800 0.040	900 0.051	1000 0.062
SDR-06-LI	CFM	78	98	118	137	157	176	196
	Static Pressure	0.11	0.17	0.24	0.33	0.43	0.54	0.66
	NC	21	26	30	35	38	41	44
	Radius of Diffusion	1-2-4	2-3-6	2-4-7	3-4-7	3-5-10	4-6-11	4-6-12
SDR-08-LI	CFM	140	175	209	244	279	314	349
	Static Pressure	0.09	0.14	0.20	0.27	0.35	0.44	0.55
	NC	21	26	30	35	38	41	44
	Radius of Diffusion	2-3-6	3-4-8	3-5-10	4-6-11	4-7-13	5-8-15	6-8-16
SDR-10-LI	CFM	218	273	327	382	436	491	545
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	22	27	32	36	39	42	45
	Radius of Diffusion	3-4-8	3-5-10	4-6-12	5-7-14	6-9-17	6-9-18	7-10-20
SDR-12-LI	CFM	314	393	471	550	628	707	785
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	22	27	32	36	39	42	45
	Radius of Diffusion	3-5-10	4-6-12	5-8-15	6-9-17	7-10-20	7-11-22	8-12-24
SDR-14-LI	CFM	428	535	641	748	855	962	1069
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	22	27	32	36	39	42	45
	Radius of Diffusion	4-6-12	5-7-14	6-9-17	7-10-20	8-12-23	9-13-26	10-14-28
SDR-16-LI	CFM	558	698	838	977	1117	1256	1396
	Static Pressure	0.08	0.11	0.18	0.22	0.32	0.36	0.49
	NC	23	28	33	37	40	43	46
	Radius of Diffusion	4-7-14	5-8-16	7-10-19	8-12-23	9-14-26	10-16-29	11-18-32

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

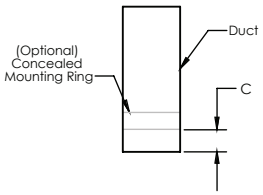
TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

AIRFLOW CFM: Standard air density and isothermal conditions.

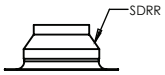
STATIC PRESSURE: Inches of water gauge required.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

SDRR

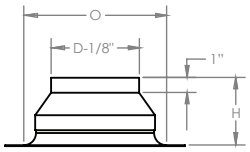


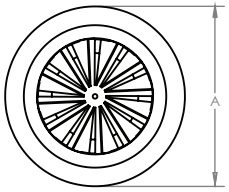
Swirl Diffuser - High Performance



Swirl Diffuser Dimensions in Inches

MODEL	A	D	H	O
SDRR-06	12	6	4-1/2	9-1/2
SDRR-08	15	8	4-1/2	11-7/8
SDRR-10	17	10	4-1/2	13-7/8
SDRR-12	20	12	5	17-7/8
SDRR-14	22	14	5	18-3/8
SDRR-18	28	18	5-1/2	23-3/8
SDRR-22	34	22	5-3/4	27-7/8





High Velocity/ High Aspiration Air Outlet

Swirl pattern design

Easy installation

Construction

Heavy gauge aluminum face

Optional Concealed Mounting System

Finishes

Standard: #52 White powder coat

Optional standard: #00 Mill

#12 Anodized powder coat

#42 Gloss black powder coat

#43 Flat black powder coat finish

#62 Grey prime powder coat

#72 Silver metallic powder coat

Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 0.010	600 0.022	800 0.040	1000 0.062	1200 0.089	1400 0.122
SDRR-06	CFM	78	118	157	196	235	274
	Static Pressure	0.05	0.11	0.19	0.30	0.42	0.58
	NC	<15	<15	23	23	36	41
	Radius of Diffusion	1-2-4	2-3-6	3-4-8	3-5-10	4-6-12	4-7-14
SDRR-08	CFM	140	210	280	350	420	490
	Static Pressure	0.04	0.08	0.14	0.22	0.32	0.43
	NC	<15	17	27	34	39	44
	Radius of Diffusion	2-3-6	3-5-9	4-6-11	5-7-14	6-8-16	7-10-19
SDRR-10	CFM	218	327	436	545	654	763
	Static Pressure	0.03	0.06	0.10	0.16	0.23	0.31
	NC	<15	21	31	38	44	48
	Radius of Diffusion	3-5-9	4-6-11	5-7-13	6-9-18	7-10-20	8-12-24
SDRR-12	CFM	314	471	628	785	942	1099
	Static Pressure	0.03	0.06	0.10	0.16	0.23	0.31
	NC	<15	21	31	38	44	48
	Radius of Diffusion	3-6-10	5-7-12	7-10-18	8-11-23	9-13-26	10-16-29
SDRR-14	CFM	428	641	855	1069	1283	1497
	Static Pressure	0.03	0.06	0.10	0.16	0.23	0.31
	NC	17	22	32	39	45	49
	Radius of Diffusion	4-7-12	6-9-16	8-12-23	10-14-28	11-17-32	12-18-34

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

AIRFLOW CFM: Standard air density and isothermal conditions.

STATIC PRESSURE: Inches of water gauge required.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

SDRR-LI

Swirl Diffuser - Round Panel

Swirl Diffuser Dimensions in Inches

MODEL	D	H
SDRR-06-LI	6	4-1/2
SDRR-08-LI	8	4-1/2
SDRR-10-LI	10	4-1/2
SDRR-12-LI	12	5
SDRR-14-LI	14	5

High Velocity/ High Aspiration Air Outlet

Swirl pattern design
Lay-in panel
Easy installation

Construction

Heavy gauge aluminum face

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat finish
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 0.010	600 0.022	800 0.040	1000 0.062	1200 0.089	1400 0.122
SDRR-06-LI	CFM	78	118	157	196	235	274
	Static Pressure	0.05	0.11	0.19	0.30	0.42	0.58
	NC	<15	<15	23	23	36	41
	Radius of Diffusion	1-2-4	2-3-6	3-4-8	3-5-10	4-6-12	4-7-14
SDRR-08-LI	CFM	140	210	280	350	420	490
	Static Pressure	0.04	0.08	0.14	0.22	0.32	0.43
	NC	<15	17	27	34	39	44
	Radius of Diffusion	2-3-6	3-5-9	4-6-11	5-7-14	6-8-16	7-10-19
SDRR-10-LI	CFM	218	327	436	545	654	763
	Static Pressure	0.03	0.06	0.10	0.16	0.23	0.31
	NC	<15	21	31	38	44	48
	Radius of Diffusion	3-5-9	4-6-11	5-7-13	6-9-18	7-10-20	8-12-24
SDRR-12-LI	CFM	314	471	628	785	942	1099
	Static Pressure	0.03	0.06	0.10	0.16	0.23	0.31
	NC	<15	21	31	38	44	48
	Radius of Diffusion	3-6-10	5-7-12	7-10-18	8-11-23	9-13-26	10-16-29
SDRR-14-LI	CFM	428	641	855	1069	1283	1497
	Static Pressure	0.03	0.06	0.10	0.16	0.23	0.31
	NC	17	22	32	39	45	49
	Radius of Diffusion	4-7-12	6-9-16	8-12-23	10-14-28	11-17-32	12-18-34

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

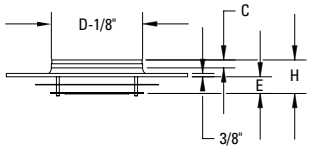
AIRFLOW CFM: Standard air density and isothermal conditions.

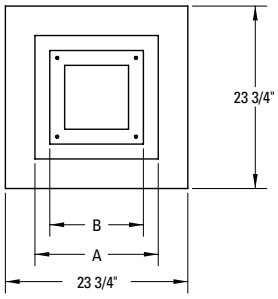
STATIC PRESSURE: Inches of water gauge required.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

PPD/PPDV-LI

PPD-LI



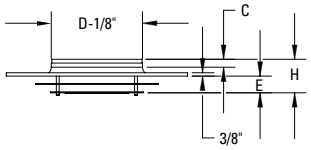


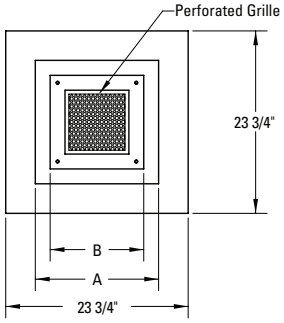
Pyramid Plaque Diffuser Lay-In

PPD-LI Dimensions in Inches

MODEL	A	B	C	D	E	H
PPD-06-LI	12-7/8	9	1-3/16	6	2	4-1/4
PPD-08-LI	12-7/8	9	1-3/16	8	2	4-1/4
PPD-10-LI	16-1/16	12-3/16	1	10	2	4-1/4
PPD-12-LI	16-1/16	12-3/16	1	12	2	4-1/4
PPD-14-LI	19-1/4	15-3/8	1-1/4	14	2	5-1/4
PPD-16-LI	19-1/4	15-3/8	1-1/4	16	2	5-1/4

PPDV-LI





Pyramid Plaque Diffuser Lay-In – Variable Pattern

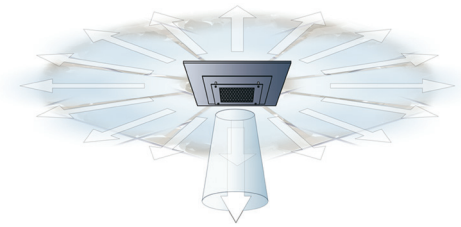
PPDV-LI Dimensions in Inches

MODEL	A	B	C	D	E	H
PPDV-06-LI	12-7/8	9	1-3/16	6	2	4-1/4
PPDV-08-LI	12-7/8	9	1-3/16	8	2	4-1/4
PPDV-10-LI	16-1/16	12-3/16	1	10	2	4-1/4
PPDV-12-LI	16-1/16	12-3/16	1	12	2	4-1/4
PPDV-14-LI	19-1/4	15-3/8	1-1/4	14	2	5-1/4
PPDV-16-LI	19-1/4	15-3/8	1-1/4	16	2	5-1/4

Air Patterns and Performance

Radial Air Pattern

Combination Air Pattern



PPD-LI/PPDV-LI with blank-off installed have a 360° radial horizontal diffusion pattern. PPD-LI radial air pattern performance data should be used for both diffusers.

PPD-LI/PPDV-LI with blank-off removed has a combination air pattern that is a radial horizontal diffusion pattern with a vertical projection component. Approximately 35% to 50% of the airflow is projected in a vertical column through the perforated center of the plaque. PPDV-LI combination air pattern performance data should be used for this unit.

High Velocity/High Aspiration Air Outlet

Distinctive Pyramid Design
Horizontal Air Pattern
Installs Easily in T-Bar Ceiling Grid
PPDV has a Removable Blank-Off which adds a Vertical Air Pattern Component when removed

Construction

Heavy Gauge Aluminum Construction

Finishes

Standard: #52 White powder coat
Custom Colors Available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.01	600 / 0.022	800 / 0.04	1000 / 0.062	1200 / 0.089	1400 / 0.122
PPD-06-LI	CFM	78	117	157	196	235	274
	Total Pressure	0.012	0.027	0.048	0.074	0.107	0.147
	NC	<20	<20	<20	20	26	31
	Radius of Diffusion	2-3-5	3-4-8	3-5-9	4-6-10	5-8-11	6-8-12
PPD-08-LI	CFM	140	210	280	350	420	490
	Total Pressure	0.013	0.029	0.052	0.079	0.115	0.157
	NC	<20	<20	<20	25	30	35
	Radius of Diffusion	2-3-6	3-5-10	4-7-11	6-8-13	7-10-14	8-11-15
PPD-10-LI	CFM	218	327	436	545	654	763
	Total Pressure	0.021	0.046	0.083	0.13	0.187	0.257
	NC	<20	<20	22	29	35	40
	Radius of Diffusion	3-5-9	4-6-13	6-9-14	7-10-16	8-11-17	10-13-19
PPD-12-LI	CFM	314	471	628	785	942	1099
	Total Pressure	0.03	0.066	0.116	0.182	0.259	0.357
	NC	<20	<20	26	33	39	43
	Radius of Diffusion	4-6-12	5-7-15	7-11-17	8-12-18	10-14-21	12-16-23
PPD-14-LI	CFM	428	641	855	1069	1283	1497
	Total Pressure	0.018	0.043	0.073	0.118	0.173	0.237
	NC	<20	<20	20	26	32	36
	Radius of Diffusion	5-6-13	6-8-16	8-12-20	10-14-23	12-17-26	13-19-29
PPD-16-LI	CFM	558	838	1117	1396	1675	1954
	Total Pressure	0.028	0.064	0.088	0.182	0.259	0.352
	NC	<20	<20	26	33	38	43
	Radius of Diffusion	5-7-14	7-10-18	9-14-22	11-17-25	14-20-28	15-21-31
PPDV-06-LI	CFM	78	117	157	196	235	274
	Total Pressure	0.011	0.025	0.046	0.071	0.102	0.139
	NC	<20	<20	<20	<20	<20	24
	Radius of Diffusion	1-1-2	1-2-3	2-3-5	2-3-6	3-5-9	4-6-10
	Vertical Projection	1-2	2-3	2-4	3-5	3-6	4-8
PPDV-08-LI	CFM	140	210	280	350	420	490
	Total Pressure	0.011	0.026	0.047	0.075	0.107	0.147
	NC	<20	<20	<20	<20	22	28
	Radius of Diffusion	1-2-4	2-3-6	2-4-7	3-5-9	4-7-11	5-8-12
	Vertical Projection	2-3	3-4	3-5	4-6	4-7	5-9
PPDV-10-LI	CFM	218	327	436	545	654	763
	Total Pressure	0.016	0.035	0.062	0.096	0.139	0.192
	NC	<20	<20	<20	<20	25	31
	Radius of Diffusion	2-3-7	3-5-9	4-6-13	5-7-14	6-9-15	7-10-16
	Vertical Projection	2-4	3-6	4-8	5-10	6-12	7-14
PPDV-12-LI	CFM	314	471	628	785	942	1099
	Total Pressure	0.02	0.044	0.078	0.122	0.175	0.242
	NC	<20	<20	<20	22	28	34
	Radius of Diffusion	3-4-8	4-6-12	5-7-15	7-11-17	8-12-18	9-13-20
	Vertical Projection	3-5	4-7	5-9	6-11	7-14	8-15
PPDV-14-LI	CFM	428	641	855	1069	1283	1497
	Total Pressure	0.021	0.033	0.059	0.093	0.133	0.186
	NC	<20	<20	<20	23	30	35
	Radius of Diffusion	3-4-9	5-6-12	6-7-14	7-11-17	8-12-19	9-13-21
	Vertical Projection	3-5	4-8	5-11	6-13	8-16	9-19
PPDV-16-LI	CFM	558	838	1117	1396	1675	1954
	Total Pressure	0.019	0.045	0.082	0.122	0.175	0.242
	NC	<20	<20	22	29	34	39
	Radius of Diffusion	4-6-11	5-7-14	7-10-18	8-14-21	9-14-22	11-17-25
	Vertical Projection	4-6	5-9	6-12	7-14	9-17	10-20

Performance data based on ASHRAE 70-06

RADIUS OF DIFFUSION: Horizontal distance (THROW) in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity (Vt)

TOTAL PRESSURE: Inches of water gauge required

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

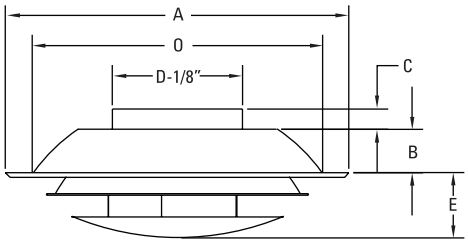
AIRFLOW CFM: Standard air density and isothermal conditions

VERTICAL PROJECTION: Vertical distance (THROW) in feet - minimum value is 20-degree heating to 0 fpm terminal velocity and maximum value is 20-degree cooling to 100 fpm terminal velocity.

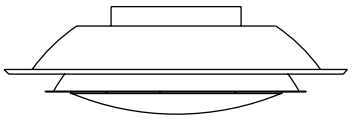
NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts

UPD

Umbrella Plaque Diffuser



HORIZONTAL AIR PATTERN



VERTICAL AIR PATTERN

Swirl Diffuser Dimensions in Inches

MODEL	A	B	C	D	O	E	E
UPD-06	15-3/4	2-1/4	1-1/4	6	13-3/8	2-7/8	1-7/8
UPD-08	15-3/4	2-1/4	1-1/4	8	13-3/8	2-7/8	1-7/8
UPD-10	22-1/2	3-1/4	1-1/4	10	20-1/4	3-11/16	2-11/16
UPD-12	22-1/2	3-1/4	1-1/4	10	20-1/4	3-11/16	2-11/16

High Velocity/ High Aspiration Air Outlet

Distinctive Architectural Design
Adjustable Horizontal / Vertical Air Pattern

Construction

Heavy gauge aluminum

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat finish
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity (FPM) / Velocity Pressure ("WG)	400 / 0.010	600 / 0.023	800 / 0.040	1000 / 0.062	1200 / 0.089	1400 / 0.122
UPD-06	CFM	78	118	157	196	235	274
	Total Pressure (Horizontal)	0.022	0.050	0.087	0.137	0.168	0.270
	NC (Horizontal)	<15	<15	<15	<15	20	26
	Radius of Diffusion (Horizontal)	1-2-5	2-4-7	3-5-8	4-6-9	5-7-11	4-8-12
	Total Pressure (Vertical)	0.038	0.085	0.133	0.240	0.250	0.340
	NC (Vertical)	<15	<15	<15	18	24	30
	Vertical Projection	2-4	5-10	7-14	9-18	13-26	15-30
UPD-08	CFM	140	209	279	349	419	489
	Total Pressure (Horizontal)	0.025	0.055	0.098	0.152	0.220	0.300
	NC (Horizontal)	<15	<15	<15	16	23	28
	Radius of Diffusion (Horizontal)	2-3-6	3-5-8	4-6-9	5-8-11	6-10-13	7-11-16
	Total Pressure (Vertical)	0.040	0.090	0.162	0.250	0.360	0.500
	NC (Vertical)	<15	<15	<15	23	29	34
	Vertical Projection	3-6	6-12	10-20	13-26	16-32	19-38
UPD-10	CFM	218	327	436	545	654	764
	Total Pressure (Horizontal)	0.027	0.058	0.105	0.160	0.230	0.320
	NC (Horizontal)	<15	<15	<15	19	26	32
	Radius of Diffusion (Horizontal)	2-4-7	3-5-9	5-7-13	6-9-14	7-11-16	8-12-19
	Total Pressure (Vertical)	0.043	0.096	0.172	0.270	0.390	0.530
	NC (Vertical)	<15	<15	16	24	30	36
	Vertical Projection	5-10	9-18	12-24	15-30	20-40	22-44
UPD-12	CFM	314	471	628	785	942	1100
	Total Pressure (Horizontal)	0.028	0.062	0.110	0.170	0.250	0.340
	NC (Horizontal)	<15	<15	<15	23	30	35
	Radius of Diffusion (Horizontal)	3-5-10	5-7-11	7-10-15	8-12-17	10-14-19	11-15-22
	Total Pressure (Vertical)	0.048	0.109	0.194	0.300	0.430	0.590
	NC (Vertical)	<15	<15	18	26	33	38
	Vertical Projection	6-12	10-20	14-28	19-38	23-46	25-50

performance data based on ASHRAE 70-91

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Airflow CFM: Standard air density and isothermal conditions.

Terminal Velocity: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

Radius of Diffusion: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

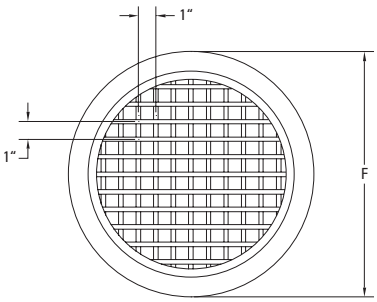
Vertical Projection: Projection distance [THROW] in feet -minimum value is 20-degree heating to 0 fpm terminal velocity and maximum value is 20-degree cooling to 100 fpm terminal velocity.

Total Pressure: Inches of water gauge required.

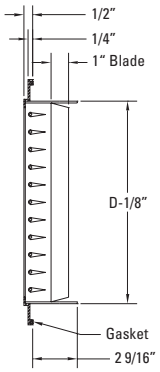
RDD

RDD
Wall/Ceiling Mount

US Patent



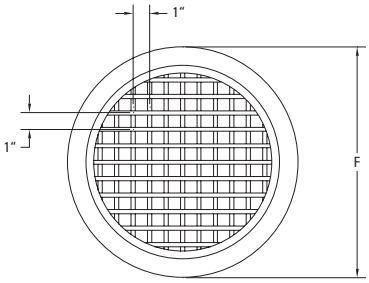
*Concealed mounting system
*Optional flex duct collar available

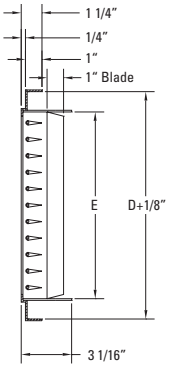


RDD Dimensions in Inches

MODEL	SIZE	D	F
RDD-06	6	6	8 1/4
RDD-08	8	8	10 1/4
RDD-10	10	10	12 1/4
RDD-12	12	12	14 1/4
RDD-14	14	14	16 1/4
RDD-16	16	16	18 1/4
RDD-18	18	18	20 1/4
RDD-20	20	20	22 1/4
RDD-22	22	22	24 1/4
RDD-24	24	24	26 1/4

RDD-RD
Exposed Round Duct

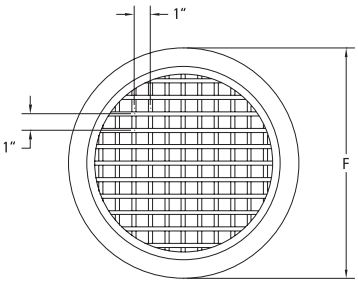


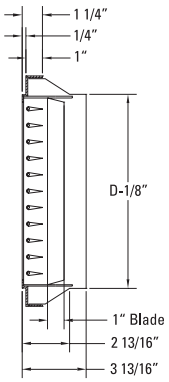


RDD-RD Dimensions in Inches

MODEL	SIZE	D	E	F
RDD-06-RD	6	8	6	8 1/4
RDD-08-RD	8	10	8	10 1/4
RDD-10-RD	10	12	10	12 1/4
RDD-12-RD	12	14	12	14 1/4
RDD-14-RD	14	16	14	16 1/4
RDD-16-RD	16	18	16	18 1/4
RDD-18-RD	18	20	18	20 1/4
RDD-20-RD	20	22	20	22 1/4
RDD-22-RD	22	24	22	24 1/4
RDD-24-RD	24	26	24	26 1/4

RDD-RR
Exposed Round Duct





RDD-RR Dimensions is Inches

MODEL	SIZE	D	F
RDD-06-RR	6	6	8 1/4
RDD-08-RR	8	8	10 1/4
RDD-10-RR	10	10	12 1/4
RDD-12-RR	12	12	14 1/4
RDD-14-RR	14	14	16 1/4
RDD-16-RR	16	16	18 1/4
RDD-18-RR	18	18	20 1/4
RDD-20-RR	20	20	22 1/4
RDD-22-RR	22	22	24 1/4
RDD-24-RR	24	24	26 1/4

High Velocity Air Outlet

Double deflection design
Adjustable vertical and horizontal blades
Long air throws
Wide dispersion patterns

Construction

Heavy gauge aluminum
1" Extruded blades, 1" spacing

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RDD-06	CFM	79	118	157	196	236	275	314
	Static Pressure	0.023	0.052	0.081	0.148	0.205	0.282	0.358
	NC	<15	<15	18	26	32	38	43
	Projection	6-12-24	8-16-32	10-18-30	12-20-36	16-26-38	20-28-42	22-30-44
RDD-08	CFM	140	209	279	349	419	489	559
	Static Pressure	0.018	0.042	0.074	0.117	0.167	0.228	0.295
	NC	<15	<15	16	24	30	36	41
	Projection	7-14-28	10-20-34	14-28-42	18-32-46	22-36-50	26-38-52	26-42-58
RDD-10	CFM	218	327	436	545	655	764	873
	Static Pressure	0.016	0.037	0.065	0.102	0.146	0.200	0.260
	NC	<15	<15	15	23	29	35	39
	Projection	8-16-30	10-20-40	18-34-48	22-40-58	26-44-60	32-48-66	38-52-72
RDD-12	CFM	314	471	628	786	943	1100	1257
	Static Pressure	0.015	0.034	0.059	0.094	0.133	0.183	0.237
	NC	<15	<15	15	22	28	34	38
	Projection	9-18-36	15-30-52	20-40-60	26-48-68	32-52-76	36-58-84	42-62-96
RDD-14	CFM	428	641	855	1069	1283	1497	1711
	Static Pressure	0.014	0.032	0.056	0.085	0.127	0.171	0.223
	NC	<15	<15	15	22	28	34	38
	Projection	10-20-40	18-36-60	22-44-70	30-56-78	38-62-90	44-66-96	48-72-106
RDD-16	CFM	559	838	1117	1396	1676	1955	2234
	Static Pressure	0.014	0.030	0.053	0.084	0.120	0.163	0.212
	NC	<15	<15	15	22	28	34	38
	Projection	12-24-48	18-36-68	28-56-84	36-65-92	44-70-104	52-78-110	58-82-116
RDD-18	CFM	707	1060	1414	1767	2121	2474	2828
	Static Pressure	0.013	0.030	0.051	0.080	0.115	0.158	0.205
	NC	<15	<15	16	23	29	35	39
	Projection	14-28-56	22-44-78	32-64-92	40-74-104	52-80-114	58-86-122	65-92-130
RDD-20	CFM	873	1309	1746	2182	2618	3055	3491
	Static Pressure	0.013	0.029	0.050	0.078	0.112	0.152	0.197
	NC	<15	<15	16	23	29	35	39
	Projection	16-32-64	26-52-88	35-68-104	45-80-114	56-88-128	66-96-136	72-100-145
RDD-22	CFM	1056	1584	2112	2640	3168	3696	4224
	Static Pressure	0.012	0.028	0.048	0.076	0.108	0.148	0.192
	NC	<15	<15	17	24	30	36	40
	Projection	16-34-68	28-56-96	38-74-110	48-88-126	60-98-142	74-110-156	78-112-160
RDD-24	CFM	1257	1885	2514	3142	3770	4399	5027
	Static Pressure	0.012	0.027	0.047	0.075	0.107	0.144	0.189
	NC	<15	<15	18	25	32	37	41
	Projection	18-36-72	30-60-105	42-86-122	52-96-136	65-108-150	75-114-160	84-122-168

performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

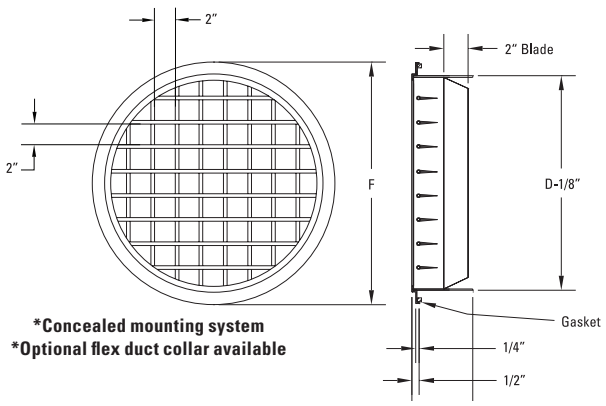
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

RDDW

RDDW
Wall/Ceiling Mount

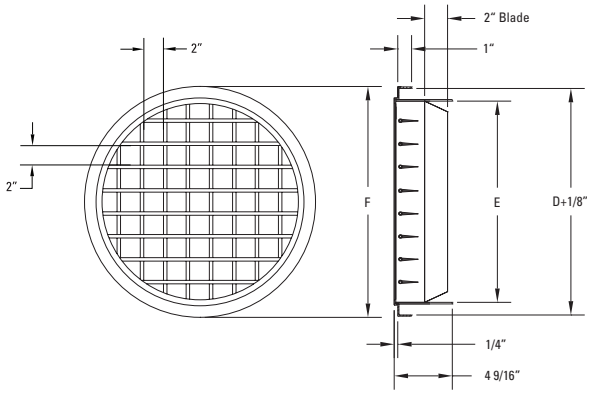


*Concealed mounting system
*Optional flex duct collar available

RDDW Dimensions in Inches

MODEL	SIZE	D	F
RDDW-08	8	8	10 1/4
RDDW-10	10	10	12 1/4
RDDW-12	12	12	14 1/4
RDDW-14	14	14	16 1/4
RDDW-16	16	16	18 1/4
RDDW-18	18	18	20 1/4
RDDW-20	20	20	22 1/4
RDDW-22	22	22	24 1/4
RDDW-24	24	24	26 1/4

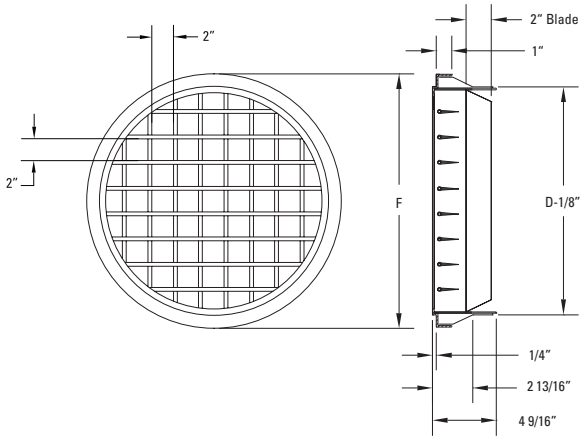
RDDW-RD
Exposed Round Duct



RDDW-RD Dimensions in Inches

MODEL	SIZE	D	E	F
RDDW-08	8	10	8	10 1/4
RDDW-10	10	12	10	12 1/4
RDDW-12	12	14	12	14 1/4
RDDW-14	14	16	14	16 1/4
RDDW-16	16	18	16	18 1/4
RDDW-18	18	20	18	20 1/4
RDDW-20	20	22	20	22 1/4
RDDW-22	22	24	22	24 1/4
RDDW-24	24	26	24	26 1/4

RDDW-RR
Exposed Round Duct



RDDW-RR Dimensions in Inches

MODEL	SIZE	D	F
RDDW-08	8	8	10 1/4
RDDW-10	10	10	12 1/4
RDDW-12	12	12	14 1/4
RDDW-14	14	14	16 1/4
RDDW-16	16	16	18 1/4
RDDW-18	18	18	20 1/4
RDDW-20	20	20	22 1/4
RDDW-22	22	22	24 1/4
RDDW-24	24	24	26 1/4

High Velocity Air Outlet

Double deflection design
Adjustable vertical and horizontal blades
Long air throws
Wide dispersion patterns

Construction

Heavy gauge aluminum
2" Extruded blades, 2" spacing

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RDDW-08	CFM	140	209	279	349	419	489	559
	Static Pressure	0.015	0.035	0.062	0.099	0.141	0.193	0.250
	NC	<15	<15	<15	20	26	32	37
	Projection	5-10-20	8-16-27	11-21-32	14-25-36	17-28-39	20-30-41	21-32-45
RDDW-10	CFM	218	327	436	545	655	764	873
	Static Pressure	0.013	0.031	0.055	0.086	0.124	0.170	0.221
	NC	<15	<15	15	19	25	31	35
	Projection	6-12-24	9-17-32	14-26-37	17-31-45	21-34-47	25-37-52	29-40-56
RDDW-12	CFM	314	471	628	786	943	1100	1257
	Static Pressure	0.013	0.029	0.051	0.081	0.115	0.159	0.206
	NC	<15	<15	15	19	25	31	35
	Projection	7-15-30	12-24-40	16-33-47	20-37-53	25-41-59	29-45-65	33-48-74
RDDW-14	CFM	428	641	855	1069	1283	1497	1711
	Static Pressure	0.012	0.028	0.050	0.076	0.114	0.153	0.200
	NC	<15	<15	<15	20	26	32	36
	Projection	8-18-37	14-28-47	18-38-55	23-44-61	30-48-70	34-52-74	38-56-83
RDDW-16	CFM	559	838	1117	1396	1676	1955	2234
	Static Pressure	0.013	0.027	0.049	0.078	0.111	0.151	0.197
	NC	<15	<15	<15	21	27	33	37
	Projection	10-20-40	15-30-53	22-44-65	28-50-72	34-54-80	40-60-85	45-64-90
RDDW-18	CFM707	1060	1414	1767	2121	2474	2828	
	Static Pressure	0.012	0.028	0.048	0.076	0.109	0.150	0.194
	NC	<15	<15	16	23	29	35	39
	Projection	11-22-44	18-36-61	25-50-72	31-57-80	40-63-89	45-67-95	50-71-101
RDDW-20	CFM	873	1309	1746	2182	2618	3055	3491
	Static Pressure	0.012	0.027	0.047	0.074	0.106	0.144	0.187
	NC	<15	<15	16	23	29	35	39
	Projection	12-24-49	20-40-68	27-53-80	35-63-89	44-68-99	51-74-105	56-78-112
RDDW-22	CFM	1056	1584	2112	2640	3168	3696	4224
	Static Pressure	0.011	0.026	0.045	0.072	0.102	0.140	0.182
	NC	<15	<15	17	24	30	36	40
	Projection	13-27-54	22-44-74	30-57-85	37-68-98	47-76-110	57-85-120	60-87-123
RDDW-24	CFM	1257	1885	2514	3142	3770	4399	5027
	Static Pressure	0.011	0.025	0.044	0.071	0.101	0.136	0.179
	NC	<15	<15	18	25	32	37	41
	Projection	14-29-60	24-48-81	33-66-95	41-75-106	50-84-116	58-88-124	66-95-130

performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

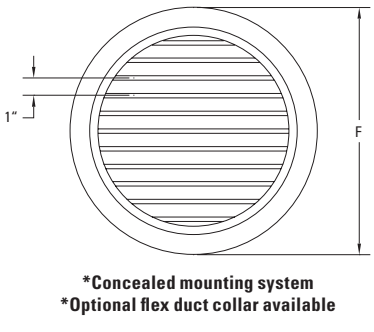
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

performance values for various deflection angles

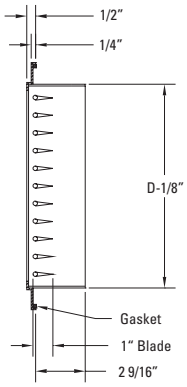
Deflection Angle	0°	10°	20°	30°	40°
Static Pressure [times]	1.0	1.1	1.2	1.7	2.1
Throw-Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+2	+5	+8	+12

RSD

RSD
Wall/Ceiling Mount



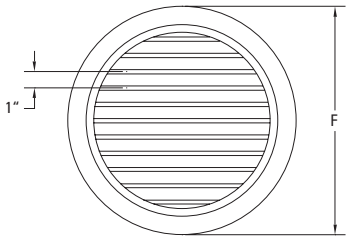
*Concealed mounting system
*Optional flex duct collar available

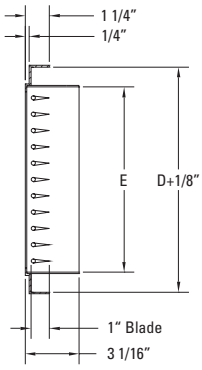


RSD Dimensions in Inches

MODEL	SIZE	D	F
RSD-06	6	6	8¼
RSD-08	8	8	10¼
RSD-10	10	10	12¼
RSD-12	12	12	14¼
RSD-14	14	14	16¼
RSD-16	16	16	18¼
RSD-18	18	18	20¼
RSD-20	20	20	22¼
RSD-22	22	22	24¼
RSD-24	24	24	26¼

RSD-RD
Exposed Round Duct

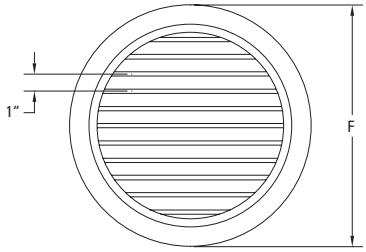


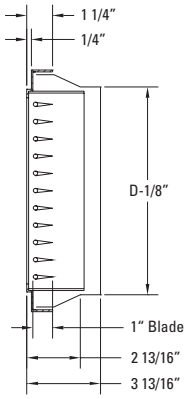


RSD-RD Dimensions in Inches

MODEL	SIZE	D	E	F
RSD-06-RD	6	8	6	8¼
RSD-08-RD	8	10	8	10¼
RSD-10-RD	10	12	10	12¼
RSD-12-RD	12	14	12	14¼
RSD-14-RD	14	16	14	16¼
RSD-16-RD	16	18	16	18¼
RSD-18-RD	18	20	18	20¼
RSD-20-RD	20	22	20	22¼
RSD-22-RD	22	24	22	24¼
RSD-24-RD	24	26	24	26¼

RSD-RR
Exposed Round Duct





RSD-RR Dimensions in Inches

MODEL	SIZE	D	F
RSD-06-RR	6	6	8¼
RSD-08-RR	8	8	10¼
RSD-10-RR	10	10	12¼
RSD-12-RR	12	12	14¼
RSD-14-RR	14	14	16¼
RSD-16-RR	16	16	18¼
RSD-18-RR	18	18	20¼
RSD-20-RR	20	20	22¼
RSD-22-RR	22	22	24¼
RSD-24-RR	24	24	26¼

High Velocity Air Outlet
Single deflection design
Adjustable air pattern
Long air throws
Wide dispersion patterns

Construction
Heavy gauge aluminum
1" Extruded blades, 1" spacing

Finishes
Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RSD-06	CFM	79	118	157	196	236	275	314
	Static Pressure	0.021	0.047	0.073	0.133	0.185	0.254	0.322
	NC	<15	<15	15	23	29	35	40
	Projection	4-8-15	6-12-21	8-14-24	10-16-28	13-21-30	15-22-32	17-24-34
RSD-08	CFM	140	209	279	349	419	489	559
	Static Pressure	0.016	0.038	0.067	0.105	0.150	0.205	0.266
	NC	<15	<15	<15	21	27	33	38
	Projection	5-10-20	8-16-27	11-21-32	14-25-36	17-28-39	20-30-41	21-32-45
RSD-10	CFM	218	327	436	545	655	764	873
	Static Pressure	0.014	0.033	0.059	0.092	0.131	0.180	0.234
	NC	<15	<15	<15	20	26	32	36
	Projection	6-12-24	9-17-32	14-26-37	17-31-45	21-34-47	25-37-52	29-40-56
RSD-12	CFM	314	471	628	786	943	1100	1257
	Static Pressure	0.014	0.031	0.053	0.085	0.120	0.165	0.213
	NC	<15	<15	<15	19	25	31	35
	Projection	7-15-30	12-24-40	16-33-47	20-37-53	25-41-59	29-45-65	33-48-74
RSD-14	CFM	428	641	855	1069	1283	1497	1711
	Static Pressure	0.013	0.029	0.050	0.077	0.114	0.154	0.201
	NC	<15	<15	<15	19	25	31	35
	Projection	8-18-37	14-28-47	18-38-55	23-44-61	30-48-70	34-52-74	38-56-83
RSD-16	CFM	559	838	1117	1396	1676	1955	2234
	Static Pressure	0.013	0.027	0.048	0.076	0.108	0.147	0.191
	NC	<15	<15	<15	19	25	31	35
	Projection	10-20-40	15-30-53	22-44-65	28-50-72	34-54-80	40-60-85	45-64-90
RSD-18	CFM	707	1060	1414	1767	2121	2474	2828
	Static Pressure	0.012	0.027	0.046	0.072	0.104	0.142	0.185
	NC	<15	<15	<15	20	26	32	36
	Projection	11-22-44	18-36-61	25-50-72	31-57-80	40-63-89	45-67-95	50-71-101
RSD-20	CFM	873	1309	1746	2182	2618	3055	3491
	Static Pressure	0.012	0.026	0.045	0.070	0.101	0.137	0.177
	NC	<15	<15	<15	20	26	32	36
	Projection	12-24-49	20-40-68	27-53-80	35-63-89	44-68-99	51-74-105	56-78-112
RSD-22	CFM	1056	1584	2112	2640	3168	3696	4224
	Static Pressure	0.011	0.025	0.043	0.068	0.097	0.133	0.173
	NC	<15	<15	<15	21	27	33	37
	Projection	13-27-54	22-44-74	30-57-85	37-68-98	47-76-110	57-85-120	60-87-123
RSD-24	CFM	1257	1885	2514	3142	3770	4399	5027
	Static Pressure	0.011	0.024	0.042	0.068	0.096	0.130	0.170
	NC	<15	<15	15	22	29	34	38
	Projection	14-29-60	24-48-81	33-66-95	41-75-106	50-84-116	58-88-124	66-95-130

performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

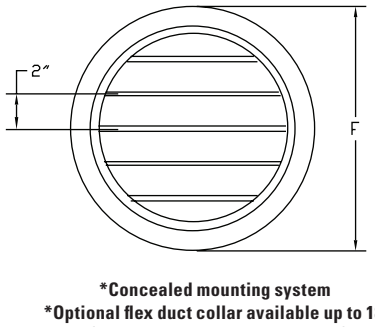
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

performance values for various deflection angles

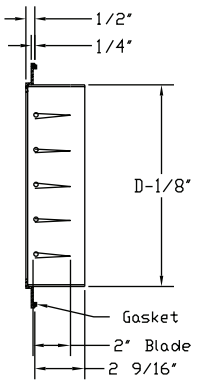
Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

RSDW

RSDW
Wall/Ceiling Mount



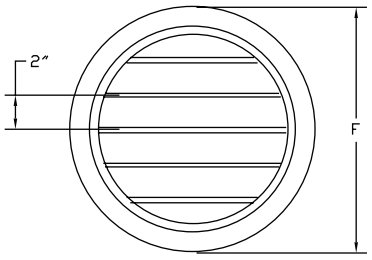
*Concealed mounting system
*Optional flex duct collar available up to 18"
(Contact factory for larger sizes)

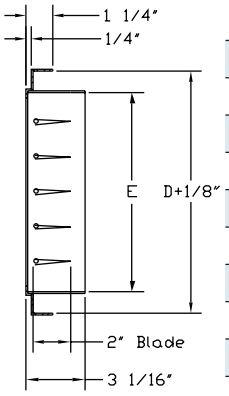


RSDW Dimensions in Inches

MODEL	SIZE	D	F
RSDW-08	8	8	10 1/4
RSDW-10	10	10	12 1/4
RSDW-12	12	12	14 1/4
RSDW-14	14	14	16 1/4
RSDW-16	16	16	18 1/4
RSDW-18	18	18	20 1/4
RSDW-20	20	20	22 1/4
RSDW-22	22	22	24 1/4
RSDW-24	24	24	26 1/4
RSDW-30	30	30	30 1/4

RSDW-RD
Exposed Round Duct

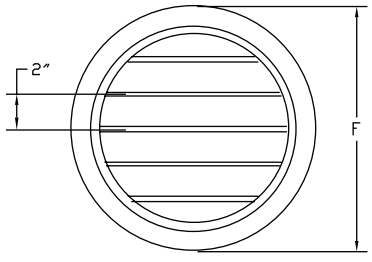


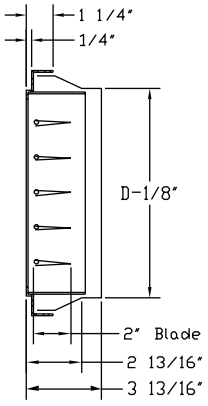


RSDW-RD Dimensions in Inches

MODEL	SIZE	D	E	F
RSDW-08-RD	8	10	8	10 1/4
RSDW-10-RD	10	12	10	12 1/4
RSDW-12-RD	12	14	12	14 1/4
RSDW-14-RD	14	16	14	16 1/4
RSDW-16-RD	16	18	16	18 1/4
RSDW-18-RD	18	20	18	20 1/4
RSDW-20-RD	20	22	20	22 1/4
RSDW-22-RD	22	24	22	24 1/4
RSDW-24-RD	24	26	24	26 1/4
RSDW-30-RD	30	32	30	32 1/4

RSDW-RR
Exposed Round Duct





RSDW-RR Dimensions in Inches

MODEL	SIZE	D	F
RSDW-08-RR	8	8	10 1/4
RSDW-10-RR	10	10	12 1/4
RSDW-12-RR	12	12	14 1/4
RSDW-14-RR	14	14	16 1/4
RSDW-16-RR	16	16	18 1/4
RSDW-18-RR	18	18	20 1/4
RSDW-20-RR	20	20	22 1/4
RSDW-22-RR	22	22	24 1/4
RSDW-24-RR	24	24	26 1/4

High Velocity Air Outlet
Single deflection design
Adjustable air pattern
Long air throws
Wide dispersion patterns

Construction
Heavy gauge aluminum
2" Extruded blades, 2" spacing

Finishes
Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RSDW-08	CFM	140	209	279	349	419	489	559
	Static Pressure	0.014	0.034	0.060	0.094	0.135	0.184	0.239
	NC	<15	<15	<15	20	26	32	37
	Projection	5-10-20	8-16-27	11-21-32	14-25-36	17-28-39	20-30-41	21-32-45
RSDW-10	CFM	218	327	436	545	655	764	873
	Static Pressure	0.013	0.029	0.053	0.083	0.118	0.162	0.210
	NC	<15	<15	<15	19	25	31	35
	Projection	6-12-24	9-17-32	14-26-37	17-31-45	21-34-47	25-37-52	29-40-56
RSDW-12	CFM	314	471	628	786	943	1100	1257
	Static Pressure	0.013	0.028	0.048	0.076	0.108	0.148	0.192
	NC	<15	<15	<15	18	24	30	34
	Projection	7-15-30	12-24-40	16-33-47	20-37-53	25-41-59	29-45-65	33-48-74
RSDW-14	CFM	428	641	855	1069	1283	1497	1711
	Static Pressure	0.012	0.026	0.045	0.069	0.103	0.139	0.181
	NC	<15	<15	<15	18	24	30	34
	Projection	8-18-37	14-28-47	18-38-55	23-44-61	30-48-70	34-52-74	38-56-83
RSDW-16	CFM	559	838	1117	1396	1676	1955	2234
	Static Pressure	0.012	0.024	0.043	0.068	0.097	0.132	0.172
	NC	<15	<15	<15	18	24	30	34
	Projection	10-20-40	15-30-53	22-44-65	28-50-72	34-54-80	40-60-85	45-64-90
RSDW-18	CFM	707	1060	1414	1767	2121	2474	2828
	Static Pressure	0.011	0.024	0.041	0.065	0.094	0.128	0.166
	NC	<15	<15	<15	19	25	31	35
	Projection	11-22-44	18-36-61	25-50-72	31-57-80	40-63-89	45-67-95	50-71-101
RSDW-20	CFM	873	1309	1746	2182	2618	3055	3491
	Static Pressure	0.011	0.023	0.040	0.063	0.091	0.123	0.159
	NC	<15	<15	<15	19	25	31	35
	Projection	12-24-49	20-40-68	27-53-80	35-63-89	44-68-99	51-74-105	56-78-112
RSDW-22	CFM	1056	1584	2112	2640	3168	3696	4224
	Static Pressure	0.010	0.022	0.039	0.061	0.087	0.120	0.156
	NC	<15	<15	<15	20	26	32	36
	Projection	13-27-54	22-44-74	30-57-85	37-68-98	47-76-110	57-85-120	60-87-123
RSDW-24	CFM	1257	1885	2514	3142	3770	4399	5027
	Static Pressure	0.010	0.022	0.038	0.061	0.086	0.117	0.153
	NC	<15	<15	<15	21	28	33	37
	Projection	14-29-60	24-48-81	33-66-95	41-75-106	50-84-116	58-88-124	66-95-130
RSDW-30	CFM	1960	2940	3920	4900	5880	6860	7840
	Static Pressure	0.009	0.023	0.039	0.067	0.096	0.126	0.155
	NC	<15	<15	<15	20	26	31	36
	Projection	17-34-69	30-60-102	41-82-123	50-90-129	60-101-141	69-107-150	78-116-157

performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

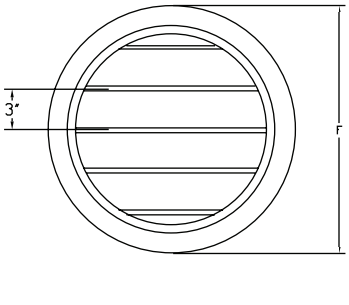
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

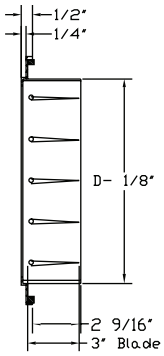
performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

RSDX

RSDX
Wall/Ceiling Mount

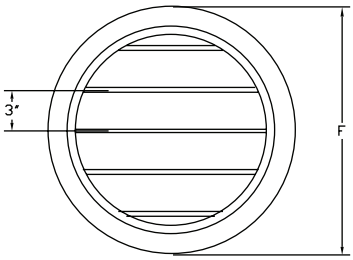


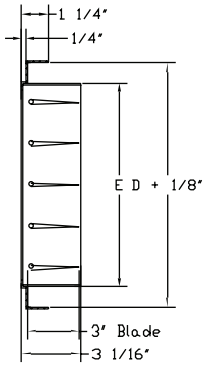


RSDX Dimensions in Inches

MODEL	SIZE	D	F
RSDX-16	16	16	18¼
RSDX-18	18	18	20¼
RSDX-20	20	20	22¼
RSDX-22	22	22	24¼
RSDX-24	24	24	26¼
RSDX-30	30	30	30¼

RSDX-RD
Exposed Round Duct

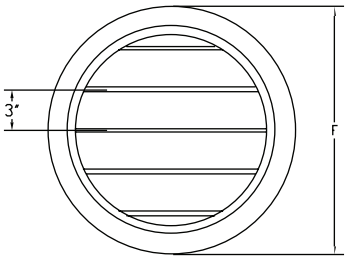


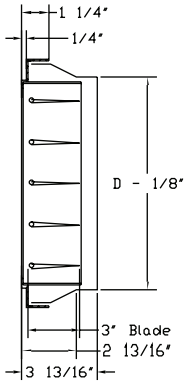


RSDX-RD Dimensions in Inches

MODEL	SIZE	D	E	F
RSDX-16-RD	16	18	16	18¼
RSDX-18-RD	18	20	18	20¼
RSDX-20-RD	20	22	20	22¼
RSDX-22-RD	22	24	22	24¼
RSDX-24-RD	24	26	24	26¼
RSDX-30-RD	30	32	30	32¼

RSDX-RR
Exposed Round Duct





RSDX-RR Dimensions in Inches

MODEL	SIZE	D	F
RSDX-16-RR	16	16	18¼
RSDX-18-RR	18	18	20¼
RSDX-20-RR	20	20	22¼
RSDX-22-RR	22	22	24¼
RSDX-24-RR	24	24	26¼

High Velocity Air Outlet
Single deflection design
Adjustable air pattern
Long air throws
Wide dispersion patterns

Construction
Heavy gauge aluminum
3" Extruded blades, 3" spacing

Finishes
Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RSDX-16	CFM	559	838	1117	1396	1676	1955	2234
	Static Pressure	0.011	0.023	0.041	0.065	0.092	0.125	0.163
	NC	<15	<15	<15	17	23	29	33
	Projection	10-20-40	15-30-53	22-44-65	28-50-72	34-54-80	40-60-85	45-64-90
RSDX-18	CFM	707	1060	1414	1767	2121	2474	2828
	Static Pressure	0.010	0.023	0.039	0.062	0.089	0.122	0.158
	NC	<15	<15	<15	18	24	30	34
	Projection	11-22-44	18-36-61	25-50-72	31-57-80	40-63-89	45-67-95	50-71-101
RSDX-20	CFM	873	1309	1746	2182	2618	3055	3491
	Static Pressure	0.010	0.022	0.038	0.060	0.086	0.117	0.151
	NC	<15	<15	<15	18	24	30	34
	Projection	12-24-49	20-40-68	27-53-80	35-63-89	44-68-99	51-74-105	56-78-112
RSDX-22	CFM	1056	1584	2112	2640	3168	3696	4224
	Static Pressure	0.009	0.021	0.037	0.058	0.083	0.114	0.148
	NC	<15	<15	<15	19	25	31	35
	Projection	13-27-54	22-44-74	30-57-85	37-68-98	47-76-110	57-85-120	60-87-123
RSDX-24	CFM	1257	1885	2514	3142	3770	4399	5027
	Static Pressure	0.009	0.021	0.036	0.058	0.082	0.111	0.145
	NC	<15	<15	<15	20	27	32	36
	Projection	14-29-60	24-48-81	33-66-95	41-75-106	50-84-116	58-88-124	66-95-130
RSDX-30	CFM	1960	2940	3920	4900	5880	6860	7840
	Static Pressure	0.009	0.022	0.037	0.064	0.091	0.119	0.147
	NC	<15	<15	<15	20	26	31	36
	Projection	17-34-69	30-60-102	41-82-123	50-90-129	60-101-141	69-107-150	78-116-157

performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

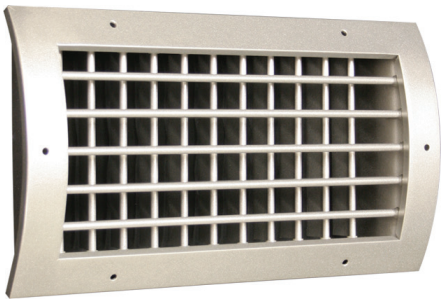
performance values for various deflection angles

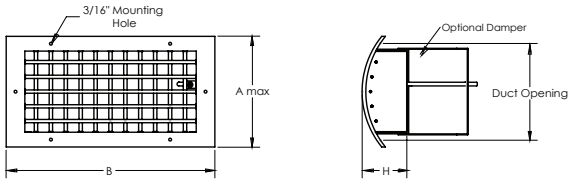
Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

RGDD-C/F

RGDD-C

Rectangular Grille Double Deflection - Curved Frame



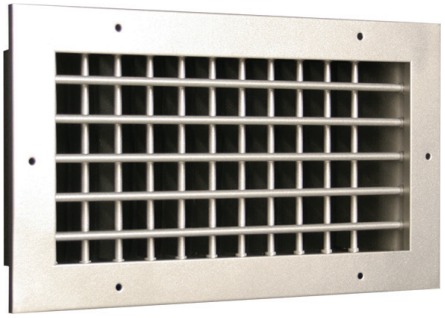


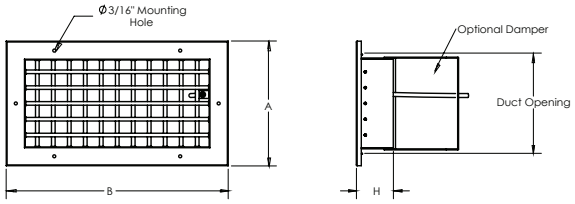
RGDD-C Dimensions in Inches

MODEL	A-MAX	B	H	DUCT OPENING	MIN DUCT DIAMETER	MOUNT HOLES
RGDD-1204-C	5 7/8	13 7/8	3	12 x 4	8	6
RGDD-1804-C	5 7/8	19 7/8	3	18 x 4	8	8
RGDD-2404-C	5 7/8	25 7/8	3	24 x 4	8	10
RGDD-3004-C	5 7/8	31 7/8	3	30 x 4	8	10
RGDD-1206-C	7 7/8	13 7/8	3	12 x 6	10	6
RGDD-1806-C	7 7/8	19 7/8	3	18 x 6	10	8
RGDD-2406-C	7 7/8	25 7/8	3	24 x 6	10	10
RGDD-3006-C	7 7/8	31 7/8	3	30 x 6	10	10
RGDD-1208-C	9 7/8	13 7/8	3	12 x 8	14	6
RGDD-1808-C	9 7/8	19 7/8	3	18 x 8	14	8
RGDD-2408-C	9 7/8	25 7/8	3	24 x 8	14	10
RGDD-3008-C	9 7/8	31 7/8	3	30 x 8	14	10
RGDD-1210-C	11 7/8	13 7/8	4	12 x 10	16	6
RGDD-1810-C	11 7/8	19 7/8	4	18 x 10	16	8
RGDD-2410-C	11 7/8	25 7/8	4	24 x 10	16	10
RGDD-3010-C	11 7/8	31 7/8	4	30 x 10	16	10
RGDD-1212-C	13 7/8	13 7/8	4 1/4	12 x 12	18	8
RGDD-1812-C	13 7/8	19 7/8	4 1/4	18 x 12	18	10
RGDD-2412-C	13 7/8	25 7/8	4 1/4	24 x 12	18	12
RGDD-3012-C	13 7/8	31 7/8	4 1/4	30 x 12	18	12

RGDD-F

Rectangular Grille Double Deflection - Flat Frame





RGDD-F Dimensions in Inches

MODEL	A	B	H	DUCT OPENING	MOUNT HOLES
RGDD-1204-F	5 7/8	13 7/8	3	12 x 4	6
RGDD-1804-F	5 7/8	19 7/8	3	18 x 4	8
RGDD-2404-F	5 7/8	25 7/8	3	24 x 4	10
RGDD-3004-F	5 7/8	31 7/8	3	30 x 4	10
RGDD-1206-F	7 7/8	13 7/8	3	12 x 6	6
RGDD-1806-F	7 7/8	19 7/8	3	18 x 6	8
RGDD-2406-F	7 7/8	25 7/8	3	24 x 6	10
RGDD-3006-F	7 7/8	31 7/8	3	30 x 6	10
RGDD-1208-F	9 7/8	13 7/8	3	12 x 8	6
RGDD-1808-F	9 7/8	19 7/8	3	18 x 8	8
RGDD-2408-F	9 7/8	25 7/8	3	24 x 8	10
RGDD-3008-F	9 7/8	31 7/8	3	30 x 8	10
RGDD-1210-F	11 7/8	13 7/8	4	12 x 10	6
RGDD-1810-F	11 7/8	19 7/8	4	18 x 10	8
RGDD-2410-F	11 7/8	25 7/8	4	24 x 10	10
RGDD-3010-F	11 7/8	31 7/8	4	30 x 10	10
RGDD-1212-F	13 7/8	13 7/8	4 1/4	12 x 12	8
RGDD-1812-F	13 7/8	19 7/8	4 1/4	18 x 12	10
RGDD-2412-F	13 7/8	25 7/8	4 1/4	24 x 12	12
RGDD-3012-F	13 7/8	31 7/8	4 1/4	30 x 12	12

Construction

Heavy gauge aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard:
#00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RGDD-1204	CFM	110	170	220	280	340	390	450
	Static Pressure	0.018	0.041	0.072	0.115	0.165	0.227	0.290
	NC	<15	<15	<15	22	29	35	40
	Projection	7-15-28	10-20-35	15-29-43	19-33-47	23-37-52	27-39-54	28-44-60
RGDD-1804	CFM	170	260	340	430	520	600	690
	Static Pressure	0.016	0.037	0.065	0.101	0.145	0.200	0.260
	NC	<15	<15	15	23	29	35	39
	Projection	8-16-32	11-22-40	18-34-48	22-40-59	26-44-61	32-48-66	37-51-70
RGDD-2404	CFM	230	340	460	570	680	800	910
	Static Pressure	0.015	0.035	0.061	0.096	0.141	0.186	0.244
	NC	<15	<15	15	21	27	33	38
	Projection	9-18-35	13-25-49	19-38-56	25-46-66	30-50-74	34-53-77	40-57-84
RGDD-3004	CFM	290	430	580	720	860	1010	1150
	Static Pressure	0.015	0.033	0.058	0.091	0.131	0.178	0.228
	NC	<15	<15	15	22	28	34	38
	Projection	9-19-38	14-28-55	21-42-65	28-52-70	36-58-82	39-62-88	46-68-101
RGDD-1206	CFM	180	260	350	440	530	620	700
	Static Pressure	0.016	0.037	0.065	0.101	0.144	0.200	0.257
	NC	<15	<15	15	23	28	35	39
	Projection	8-16-32	11-23-41	18-34-48	22-41-59	27-45-61	33-49-68	39-53-73
RGDD-1806	CFM	270	400	540	670	800	940	1070
	Static Pressure	0.015	0.034	0.058	0.092	0.132	0.180	0.234
	NC	<15	<15	15	22	28	34	38
	Projection	9-19-37	14-27-53	21-41-61	27-50-69	34-54-80	38-60-86	44-64-99
RGDD-2406	CFM	360	540	720	900	1080	1260	1440
	Static Pressure	0.014	0.032	0.056	0.085	0.127	0.171	0.222
	NC	<15	<15	15	22	28	34	38
	Projection	10-21-42	16-32-60	23-44-70	30-56-72	38-62-91	44-66-98	48-72-106
RGDD-3006	CFM	450	680	900	1130	1360	1580	1810
	Static Pressure	0.014	0.030	0.054	0.084	0.122	0.165	0.215
	NC	<15	<15	15	22	28	34	38
	Projection	12-23-47	18-36-65	27-54-82	35-64-90	42-64-100	50-76-106	57-80-114

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

Performance data based on ASHRAE 70-06

performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

[Performance Data] RGDD

MODEL	Duct Velocity Velocity Pressure	400 0.010	600 0.022	800 0.040	1000 0.062	1200 0.090	1400 0.122	1600 0.160
RGDD-1208	CFM	240	360	480	600	720	840	960
	Static Pressure	0.015	0.034	0.060	0.096	0.134	0.185	0.240
	NC	<15	<15	15	22	28	34	38
	Projection	9-18-35	13-26-51	20-39-59	25-47-67	31-51-75	35-57-82	41-62-93
RGDD-1808	CFM	360	550	730	910	1090	1270	1460
	Static Pressure	0.014	0.032	0.056	0.085	0.126	0.170	0.222
	NC	<15	<15	15	22	28	34	38
	Projection	11-21-42	16-32-60	22-44-71	30-56-69	39-63-92	44-67-98	49-73-108
RGDD-2408	CFM	490	730	980	1220	1460	1710	1950
	Static Pressure	0.014	0.030	0.053	0.083	0.120	0.161	0.210
	NC	<15	<15	15	22	28	34	38
	Projection	12-24-49	19-38-69	28-56-84	37-66-93	45-71-106	53-79-112	59-84-118
RGDD-3008	CFM	620	920	1230	1540	1850	2160	2460
	Static Pressure	0.013	0.030	0.051	0.080	0.115	0.158	0.205
	NC	<15	<15	16	23	29	35	39
	Projection	14-28-56	22-44-78	32-64-92	40-74-103	52-80-114	58-86-123	65-92-130
RGDD-1210	CFM	300	460	610	760	910	1060	1220
	Static Pressure	0.015	0.033	0.058	0.090	0.130	0.180	0.234
	NC	<15	<15	15	22	28	34	38
	Projection	10-20-39	14-29-56	21-43-66	28-52-70	36-56-82	40-62-90	45-67-101
RGDD-1810	CFM	460	690	920	1150	1380	1610	1840
	Static Pressure	0.014	0.031	0.053	0.084	0.120	0.164	0.213
	NC	<15	<15	15	22	28	34	38
	Projection	12-24-47	18-37-66	27-55-83	35-64-91	43-68-101	50-77-107	56-80-113
RGDD-2410	CFM	620	930	1240	1550	1860	2170	2480
	Static Pressure	0.013	0.030	0.051	0.080	0.115	0.157	0.204
	NC	<15	<15	16	23	29	35	39
	Projection	14-28-56	22-44-77	32-63-91	40-73-103	52-80-115	58-86-123	65-92-131
RGDD-3010	CFM	780	1170	1560	1950	2340	2730	3120
	Static Pressure	0.013	0.029	0.050	0.078	0.111	0.151	0.196
	NC	<15	<15	16	23	29	35	39
	Projection	16-32-64	26-52-88	35-68-104	45-81-115	57-88-129	67-97-138	73-101-146

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

Performance data based on ASHRAE 70-06

performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RGDD-1212	CFM	370	550	740	920	1100	1290	1470
	Static Pressure	0.014	0.032	0.056	0.085	0.126	0.170	0.221
	NC	<15	<15	15	22	28	34	38
	Projection	11-21-42	16-32-60	22-45-70	31-56-73	39-63-92	45-67-98	49-73-107
RGDD-1812	CFM	560	840	1120	1400	1680	1960	2240
	Static Pressure	0.013	0.030	0.051	0.082	0.117	0.160	0.207
	NC	<15	<15	16	23	29	35	39
	Projection	13-26-53	21-41-75	31-62-90	38-71-99	47-76-108	55-82-117	62-88-124
RGDD-2412	CFM	750	1130	1500	1880	2260	2630	3010
	Static Pressure	0.013	0.029	0.050	0.079	0.113	0.153	0.198
	NC	<15	<15	16	23	29	35	39
	Projection	16-31-63	25-51-85	34-65-102	45-79-112	55-85-125	65-94-132	70-98-142
RGDD-3012	CFM	940	1420	1890	2360	2830	3300	3780
	Static Pressure	0.012	0.028	0.048	0.076	0.108	0.148	0.192
	NC	<15	<15	17	24	30	36	40
	Projection	18-36-73	30-60-97	38-74-110	48-88-126	60-98-142	74-110-155	78-111-158

Performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

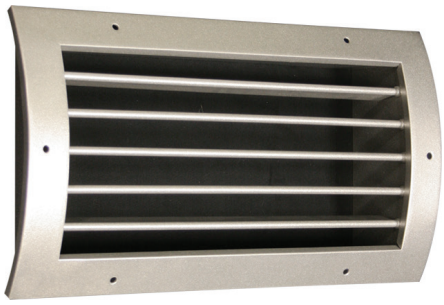
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

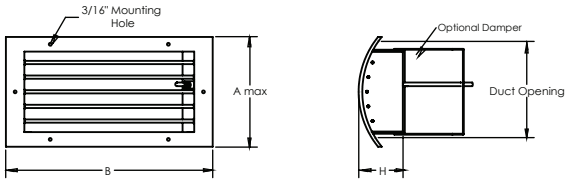
performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

RGSD-C

Rectangular Grille Single Deflection - Curved Frame



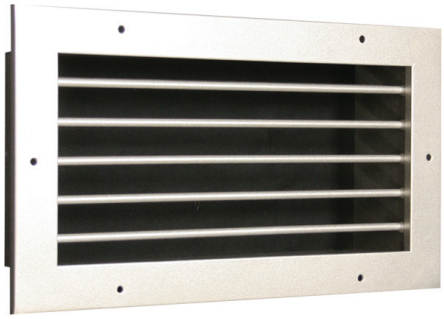


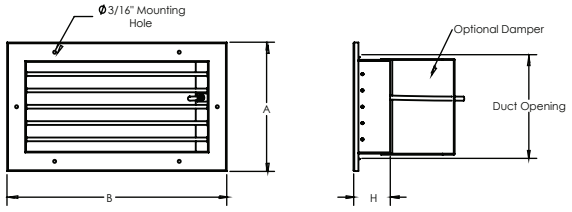
RGDD-C Dimensions in Inches

MODEL	A-MAX	B	H	DUCT OPENING	MIN DUCT DIAMETER	MOUNT HOLES
RGSD-1204-C	5 7/8	13 7/8	3	12 x 4	8	6
RGSD-1804-C	5 7/8	19 7/8	3	18 x 4	8	8
RGSD-2404-C	5 7/8	25 7/8	3	24 x 4	8	10
RGSD-3004-C	5 7/8	31 7/8	3	30 x 4	8	10
RGSD-1206-C	7 7/8	13 7/8	3	12 x 6	10	6
RGSD-1806-C	7 7/8	19 7/8	3	18 x 6	10	8
RGSD-2406-C	7 7/8	25 7/8	3	24 x 6	10	10
RGSD-3006-C	7 7/8	31 7/8	3	30 x 6	10	10
RGSD-1208-C	9 7/8	13 7/8	3	12 x 8	14	6
RGSD-1808-C	9 7/8	19 7/8	3	18 x 8	14	8
RGSD-2408-C	9 7/8	25 7/8	3	24 x 8	14	10
RGSD-3008-C	9 7/8	31 7/8	3	30 x 8	14	10
RGSD-1210-C	11 7/8	13 7/8	3	12 x 10	16	6
RGSD-1810-C	11 7/8	19 7/8	3	18 x 10	16	8
RGSD-2410-C	11 7/8	25 7/8	3	24 x 10	16	10
RGSD-3010-C	11 7/8	31 7/8	3	30 x 10	16	10
RGSD-1212-C	13 7/8	13 7/8	3	12 x 12	18	8
RGSD-1812-C	13 7/8	19 7/8	3	18 x 12	18	10
RGSD-2412-C	13 7/8	25 7/8	3	24 x 12	18	12
RGSD-3012-C	13 7/8	31 7/8	3	30 x 12	18	12

RGSD-F

Rectangular Grille Single Deflection - Flat Frame





RGDD-F Dimensions in Inches

MODEL	A	B	DUCT H	MOUNT OPENING	HOLES
RGSD-1204-F	5 7/8	13 7/8	3	12 x 4	6
RGSD-1804-F	5 7/8	19 7/8	3	18 x 4	8
RGSD-2404-F	5 7/8	25 7/8	3	24 x 4	10
RGSD-3004-F	5 7/8	31 7/8	3	30 x 4	10
RGSD-1206-F	7 7/8	13 7/8	3	12 x 6	6
RGSD-1806-F	7 7/8	19 7/8	3	18 x 6	8
RGSD-2406-F	7 7/8	25 7/8	3	24 x 6	10
RGSD-3006-F	7 7/8	31 7/8	3	30 x 6	10
RGSD-1208-F	9 7/8	13 7/8	3	12 x 8	6
RGSD-1808-F	9 7/8	19 7/8	3	18 x 8	8
RGSD-2408-F	9 7/8	25 7/8	3	24 x 8	10
RGSD-3008-F	9 7/8	31 7/8	3	30 x 8	10
RGSD-1210-F	11 7/8	13 7/8	3	12 x 10	6
RGSD-1810-F	11 7/8	19 7/8	3	18 x 10	8
RGSD-2410-F	11 7/8	25 7/8	3	24 x 10	10
RGSD-3010-F	11 7/8	31 7/8	3	30 x 10	10
RGSD-1212-F	13 7/8	13 7/8	3	12 x 12	8
RGSD-1812-F	13 7/8	19 7/8	3	18 x 12	10
RGSD-2412-F	13 7/8	25 7/8	3	24 x 12	12
RGSD-3012-F	13 7/8	31 7/8	3	30 x 12	12

Construction

Heavy gauge aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard:
#00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RGSD-1204	CFM	110	170	220	280	340	390	450
	Static Pressure	0.016	0.037	0.066	0.103	0.148	0.201	0.260
	NC	<15	<15	<15	21	27	33	38
	Projection	7-15-28	10-20-35	15-29-43	19-33-47	23-37-52	27-39-54	28-44-60
RGSD-1804	CFM	170	260	340	430	520	600	690
	Static Pressure	0.014	0.033	0.059	0.092	0.131	0.180	0.234
	NC	<15	<15	<15	20	26	32	36
	Projection	8-16-32	11-22-40	18-34-48	22-40-59	26-44-61	32-48-66	37-51-70
RGSD-2404	CFM	230	340	460	570	680	800	910
	Static Pressure	0.014	0.032	0.055	0.087	0.123	0.170	0.220
	NC	<15	<15	<15	19	25	32	36
	Projection	9-18-35	13-25-49	19-38-56	25-46-66	30-50-74	34-53-77	40-57-84
RGSD-3004	CFM	290	430	580	720	860	1010	1150
	Static Pressure	0.014	0.031	0.052	0.083	0.118	0.162	0.210
	NC	<15	<15	<15	19	25	31	35
	Projection	9-19-38	14-28-55	21-42-65	28-52-70	36-58-82	39-62-88	46-68-101
RGSD-1206	CFM	180	260	350	440	530	620	700
	Static Pressure	0.014	0.033	0.058	0.091	0.130	0.178	0.232
	NC	<15	<15	<15	20	26	32	36
	Projection	8-16-32	11-23-41	18-34-48	22-41-59	27-45-61	33-49-68	39-53-73
RGSD-1806	CFM	270	400	540	670	800	940	1070
	Static Pressure	0.014	0.031	0.053	0.084	0.119	0.163	0.211
	NC	<15	<15	<15	19	25	31	35
	Projection	9-19-37	14-27-53	21-41-61	27-50-69	34-54-80	38-60-86	44-64-99
RGSD-2406	CFM	360	540	720	900	1080	1260	1440
	Static Pressure	0.013	0.029	0.050	0.077	0.114	0.154	0.201
	NC	<15	<15	<15	19	25	31	35
	Projection	10-21-42	16-32-60	23-44-70	30-56-72	38-62-91	44-66-98	48-72-106
RGSD-3006	CFM	450	680	900	1130	1360	1580	1810
	Static Pressure	0.013	0.027	0.048	0.076	0.109	0.149	0.193
	NC	<15	<15	<15	19	25	31	35
	Projection	12-23-47	18-36-65	27-54-82	35-64-90	42-64-100	50-76-106	57-80-114

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

Performance data based on ASHRAE 70-06

performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

RGSD [Performance Data]

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RGSD-1208	CFM	240	360	480	600	720	840	960
	Static Pressure	0.014	0.031	0.054	0.086	0.122	0.167	0.215
	NC	<15	<15	<15	19	25	31	35
	Projection	9-18-35	13-26-51	20-39-59	25-47-67	31-51-75	35-57-82	41-62-93
RGSD-1808	CFM	360	550	730	910	1090	1270	1460
	Static Pressure	0.013	0.029	0.050	0.077	0.114	0.153	0.200
	NC	<15	<15	<15	19	25	31	35
	Projection	11-21-42	16-32-60	22-44-71	30-56-69	39-63-92	44-67-98	49-73-108
RGSD-2408	CFM	490	730	980	1220	1460	1710	1950
	Static Pressure	0.013	0.027	0.048	0.076	0.108	0.147	0.191
	NC	<15	<15	<15	19	25	31	35
	Projection	12-24-49	19-38-69	28-56-84	37-66-93	45-71-106	53-79-112	59-84-118
RGSD-3008	CFM	620	920	1230	1540	1850	2160	2460
	Static Pressure	0.012	0.027	0.046	0.072	0.104	0.142	0.185
	NC	<15	<15	<15	20	26	32	36
	Projection	14-28-56	22-44-78	32-64-92	40-74-103	52-80-114	58-86-123	65-92-130
RGSD-1210	CFM	300	460	610	760	910	1060	1220
	Static Pressure	0.014	0.030	0.052	0.081	0.117	0.160	0.207
	NC	<15	<15	<15	19	25	31	35
	Projection	10-20-39	14-29-56	21-43-66	28-52-70	36-56-82	40-62-90	45-67-101
RGSD-1810	CFM	460	690	920	1150	1380	1610	1840
	Static Pressure	0.013	0.027	0.048	0.076	0.109	0.148	0.192
	NC	<15	<15	<15	19	25	31	35
	Projection	12-24-47	18-37-66	27-55-83	35-64-91	43-68-101	50-77-107	56-80-113
RGSD-2410	CFM	620	930	1240	1550	1860	2170	2480
	Static Pressure	0.012	0.027	0.046	0.072	0.104	0.142	0.185
	NC	<15	<15	<15	20	26	32	36
	Projection	14-28-56	22-44-77	32-63-91	40-73-103	52-80-115	58-86-123	65-92-131
RGSD-3010	CFM	780	1170	1560	1950	2340	2730	3120
	Static Pressure	0.012	0.026	0.045	0.070	0.101	0.137	0.177
	NC	<15	<15	<15	20	26	32	36
	Projection	16-32-64	26-52-88	35-68-104	45-81-115	57-88-129	67-97-138	73-101-146

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

Performance data based on ASHRAE 70-06

performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
RGSD-1212	CFM	370	550	740	920	1100	1290	1470
	Static Pressure	0.013	0.029	0.050	0.077	0.113	0.153	0.200
	NC	<15	<15	<15	19	25	31	35
	Projection	11-21-42	16-32-60	22-45-70	31-56-73	39-63-92	45-67-98	49-73-107
RGSD-1812	CFM	560	840	1120	1400	1680	1960	2240
	Static Pressure	0.013	0.027	0.047	0.074	0.106	0.145	0.188
	NC	<15	<15	<15	20	26	32	36
	Projection	13-26-53	21-41-75	31-62-90	38-71-99	47-76-108	55-82-117	62-88-124
RGSD-2412	CFM	750	1130	1500	1880	2260	2630	3010
	Static Pressure	0.012	0.026	0.045	0.070	0.101	0.137	0.178
	NC	<15	<15	<15	20	26	32	36
	Projection	16-31-63	25-51-85	34-65-102	45-79-112	55-85-125	65-94-132	70-98-142
RGSD-3012	CFM	940	1420	1890	2360	2830	3300	3780
	Static Pressure	0.011	0.025	0.043	0.068	0.097	0.133	0.173
	NC	<15	<15	<15	21	27	33	37
	Projection	18-36-73	30-60-97	38-74-110	48-88-126	60-98-142	74-110-155	78-111-158

Performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

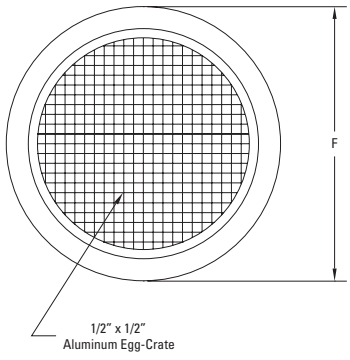
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

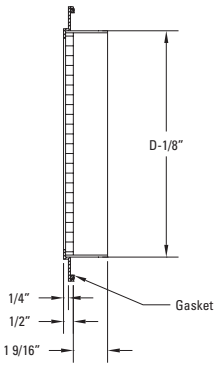
performance values for various deflection angles

Deflection Angle	0°	10°	20°	30°	40°
Total Pressure [times]	1.0	1.2	1.4	1.9	2.4
Throw Projection [times]	1.0	0.9	0.8	0.7	0.6
Noise Criteria – NC [add]	+0	+3	+7	+11	+16

REC

REC
Wall/Ceiling Mount



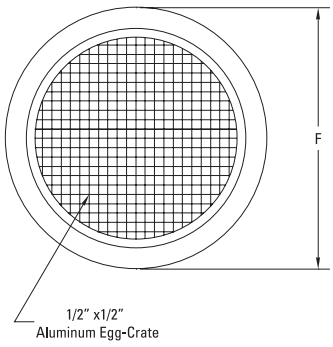


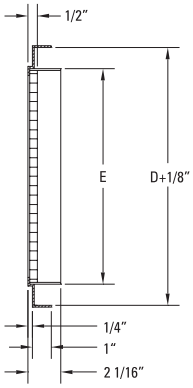
***Concealed mounting system**
***Optional flex duct collar available**

REC Dimensions in Inches

MODEL	SIZE	D	F
REC-06	6	6	8¼
REC-08	8	8	10¼
REC-10	10	10	12¼
REC-12	12	12	14¼
REC-14	14	14	16¼
REC-16	16	16	18¼
REC-18	18	18	20¼
REC-20	20	20	22¼
REC-22	22	22	24¼
REC-24	24	24	26¼
REC-30	30	30	32¼

REC-RD
Exposed Round Duct

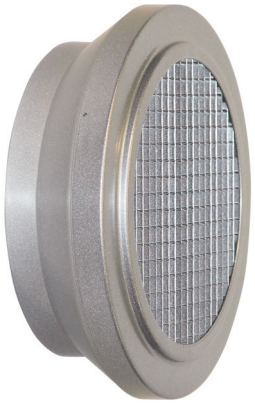


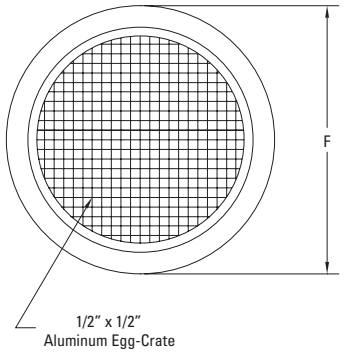


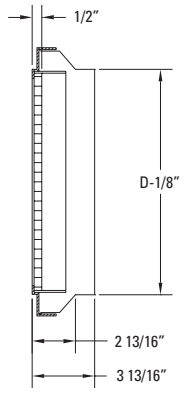
REC-RD Dimensions in Inches

MODEL	SIZE	D	E	F
REC-06-RD	6	8	6	8¼
REC-08-RD	8	10	8	10¼
REC-10-RD	10	12	10	12¼
REC-12-RD	12	14	12	14¼
REC-14-RD	14	16	14	16¼
REC-16-RD	16	18	16	18¼
REC-18-RD	18	20	18	20¼
REC-20-RD	20	22	20	22¼
REC-22-RD	22	24	22	24¼
REC-24-RD	24	26	24	26¼
REC-30-RD	30	32	30	32¼

REC-RR
Exposed Round Duct







REC-RR Dimensions in Inches

MODEL	SIZE	D	F
REC-06-RR	6	6	8¼
REC-08-RR	8	8	10¼
REC-10-RR	10	10	12¼
REC-12-RR	12	12	14¼
REC-14-RR	14	14	16¼
REC-16-RR	16	16	18¼
REC-18-RR	18	18	20¼
REC-20-RR	20	20	22¼
REC-22-RR	22	22	24¼
REC-24-RR	24	24	26¼

Architectural Grille

Can be utilized for supply, return, or exhaust air

Construction

½" x ½" aluminum egg crate
Heavy gauge aluminum

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

performance data based on ASHRAE 70-91

MODEL	Duct Velocity / Velocity Pressure	400 / 0.010	600 / 0.022	800 / 0.040	1000 / 0.062	1200 / 0.090	1400 / 0.122	1600 / 0.160
REC-06	CFM	79	118	157	196	236	275	314
	Static Pressure [exhaust]	-0.040	-0.091	-0.162	-0.255	-0.363	-0.500	-0.652
	NC [exhaust]	<15	22	32	39	45	50	54
	Static Pressure [supply]	0.015	0.034	0.053	0.096	0.133	0.183	0.233
	NC [supply]	<15	<15	21	29	35	41	46
	Projection [supply]	4-8-15	6-12-21	8-14-24	10-16-28	13-21-30	15-22-32	17-24-34
REC-08	CFM	140	209	279	349	419	489	559
	Static Pressure [exhaust]	-0.036	-0.080	-0.142	-0.223	-0.320	-0.432	-0.568
	NC [exhaust]	<15	22	31	38	44	49	53
	Static Pressure [supply]	0.012	0.027	0.048	0.076	0.109	0.148	0.192
	NC [supply]	<15	<15	19	27	33	39	44
	Projection [supply]	5-10-20	8-16-27	11-21-32	14-25-36	17-28-39	20-30-41	21-32-45
REC-10	CFM	218	327	436	545	655	764	873
	Static Pressure [exhaust]	-0.033	-0.073	-0.130	-0.203	-0.293	-0.397	-0.522
	NC [exhaust]	<15	22	31	38	44	48	52
	Static Pressure [supply]	0.010	0.024	0.042	0.066	0.095	0.130	0.169
	NC [supply]	<15	<15	18	26	32	38	42
	Projection [supply]	6-12-24	9-17-32	14-26-37	17-31-45	21-34-47	25-37-52	29-40-56
REC-12	CFM	314	471	628	786	943	1100	1257
	Static Pressure [exhaust]	-0.031	-0.070	-0.123	-0.194	-0.278	-0.384	-0.495
	NC [exhaust]	<15	22	32	38	45	49	53
	Static Pressure [supply]	0.010	0.022	0.038	0.061	0.086	0.119	0.154
	NC [supply]	<15	<15	18	25	31	37	41
	Projection [supply]	7-15-30	12-24-40	16-33-47	20-37-53	25-41-59	29-45-65	33-48-74
REC-14	CFM	428	641	855	1069	1283	1497	1711
	Static Pressure [exhaust]	-0.030	-0.067	-0.119	-0.186	-0.267	-0.365	-0.475
	NC [exhaust]	<15	23	32	39	45	50	54
	Static Pressure [supply]	0.009	0.021	0.036	0.055	0.083	0.111	0.145
	NC [supply]	<15	<15	18	25	31	37	41
	Projection [supply]	8-18-37	14-28-47	18-38-55	23-44-61	30-48-70	34-52-74	38-56-83
REC-16	CFM	559	838	1117	1396	1676	1955	2234
	Static Pressure [exhaust]	-0.029	-0.065	-0.116	-0.181	-0.260	-0.354	-0.465
	NC [exhaust]	<15	23	33	40	45	50	54
	Static Pressure [supply]	0.009	0.020	0.034	0.055	0.078	0.106	0.138
	NC [supply]	<15	<15	18	25	31	37	41
	Projection [supply]	10-20-40	15-30-53	22-44-65	28-50-72	34-54-80	40-60-85	45-64-90
REC-18	CFM	707	1060	1414	1767	2121	2474	2828
	Static Pressure [exhaust]	-0.028	-0.064	-0.114	-0.177	-0.255	-0.346	-0.454
	NC [exhaust]	<15	23	33	40	45	50	54
	Static Pressure [supply]	0.008	0.020	0.033	0.052	0.075	0.103	0.133
	NC [supply]	<15	<15	19	26	32	38	42
	Projection [supply]	11-22-44	18-36-61	25-50-72	31-57-80	40-63-89	45-67-95	50-71-101
REC-20	CFM	873	1309	1746	2182	2618	3055	3491
	Static Pressure [exhaust]	-0.028	-0.063	-0.111	-0.174	-0.250	-0.342	-0.446
	NC [exhaust]	<15	25	35	41	47	52	56
	Static Pressure [supply]	0.008	0.019	0.033	0.051	0.073	0.099	0.128
	NC [supply]	<15	<15	19	26	32	38	42
	Projection [supply]	12-24-49	20-40-68	27-53-80	35-63-89	44-68-99	51-74-105	56-78-112
REC-22	CFM	1056	1584	2112	2640	3168	3696	4224
	Static Pressure [exhaust]	-0.027	-0.061	-0.110	-0.171	-0.246	-0.336	-0.439
	NC [exhaust]	<15	25	35	41	47	52	56
	Static Pressure [supply]	0.008	0.018	0.031	0.049	0.070	0.096	0.125
	NC [supply]	<15	<15	20	27	33	39	43
	Projection [supply]	13-27-54	22-44-74	30-57-85	37-68-98	47-76-110	57-85-120	60-87-123
REC-24	CFM	1257	1885	2514	3142	3770	4399	5027
	Static Pressure [exhaust]	-0.027	-0.061	-0.108	-0.170	-0.244	-0.331	-0.435
	NC [exhaust]	<15	25	35	41	47	52	56
	Static Pressure [supply]	0.008	0.018	0.031	0.049	0.070	0.094	0.123
	NC [supply]	<15	<15	21	28	35	40	44
	Projection [supply]	14-29-60	24-48-81	33-66-95	41-75-106	50-84-116	58-88-124	66-95-130
REC-30	CFM	1960	2940	3920	4900	5880	6860	7840
	Static Pressure [exhaust]	-0.040	-0.086	-0.160	-0.252	-0.344	-0.492	-0.640
	NC [exhaust]	<15	27	36	43	48	54	58
	Static Pressure [supply]	0.010	0.024	0.041	0.068	0.096	0.130	0.164
	NC [supply]	<15	<15	20	27	33	38	42
	Projection [supply]	17-34-69	30-60-102	41-82-123	50-90-129	60-101-141	69-107-150	78-116-157

performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

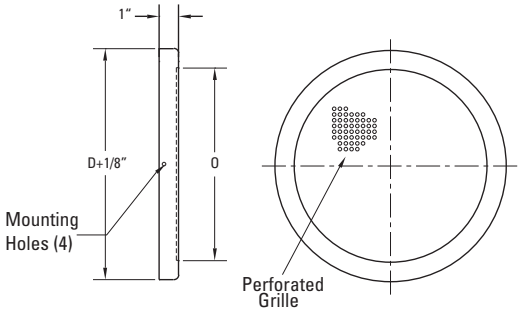
Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

RPG

RPG-RD
Exposed Round Duct

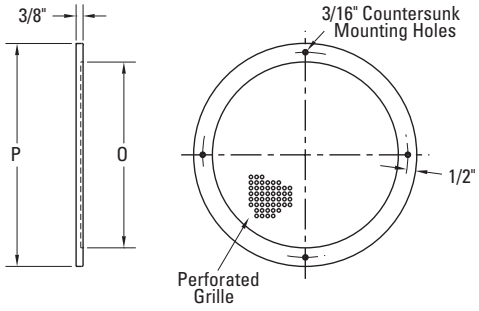


RPG-RD Dimensions in Inches

MODEL	OPENING SIZE DIAMETER "O"	DUCT SIZE DIAMETER "D"
RPG-04-RD	4	6
RPG-05-RD	5	6
RPG-06-RD	6	8
RPG-08-RD	8	10
RPG-10-RD	10	12
RPG-12-RD	12	14
RPG-14-RD	14	16
RPG-16-RD	16	18

*Custom sizes available

RPG-RP
Wall/Ceiling Mount

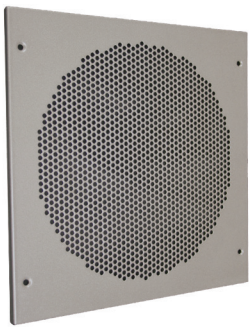


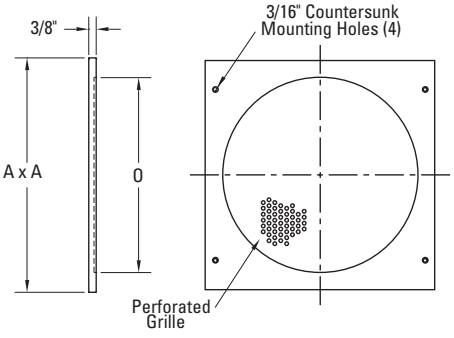
RPG-RP Dimensions in Inches

MODEL	OPENING SIZE DIAMETER "O"	DUCT SIZE DIAMETER "D"	PANEL SIZE DIAMETER "P"
RPG-04-RP	4	4	6
RPG-05-RP	5	5	8
RPG-06-RP	6	6	8
RPG-08-RP	8	8	10
RPG-10-RP	10	10	12
RPG-12-RP	12	12	14
RPG-14-RP	14	14	16
RPG-16-RP	16	16	18

*Custom sizes available

RPG-SP
Wall/Ceiling Mount





RPG-SP Dimensions in Inches

MODEL	OPENING SIZE DIAMETER "O"	DUCT SIZE "D" x "D"	PANEL SIZE "A" x "A"
RPG-04-SP	4	4x4	6x6
RPG-05-SP	5	5x5	8x8
RPG-06-SP	6	6x6	8x8
RPG-08-SP	8	8x8	10x10
RPG-10-SP	10	10x10	12x12
RPG-12-SP	12	12x12	14x14
RPG-14-SP	14	14x14	16x16
RPG-16-SP	16	16x16	18x18

*Custom sizes available

Standard Construction

Heavy gauge steel construction
Also available in aluminum
or stainless steel
Contact factory for details

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill (Alum)
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

Extract Air Flow Data

Model Size	Opening Size Diameter "O"	Duct Velocity Static Pressure	400 -0.05	500 -0.08	600 -0.12	700 -0.16	800 -0.21	1000 -0.32	1200 -0.48
04	4	CFM	35	44	52	61	70	87	105
		NC	•	•	•	•	22	28	34
05	5	CFM	55	68	82	95	109	136	164
		NC	•	•	•	21	24	30	36
06	6	CFM	79	98	118	137	157	196	236
		NC	•	•	•	23	26	32	38
08	8	CFM	140	175	209	244	279	349	419
		NC	•	•	20	25	28	34	40
10	10	CFM	218	273	327	382	436	545	655
		NC	•	•	23	27	30	36	42
12	12	CFM	314	393	471	550	628	786	943
		NC	•	•	24	29	32	38	44
14	14	CFM	428	535	641	748	855	1069	1283
		NC	•	20	25	30	33	39	45
16	16	CFM	559	698	838	978	1117	1396	1676
		NC	•	21	26	31	34	40	46

Performance data based on ASHRAE 70-06

Supply Air Flow Data

Model Size	Opening Size Diameter "O"	Duct Velocity Static Pressure	400 0.06	500 0.09	600 0.13	700 0.17	800 0.22	1000 0.35	1200 0.5
04	4	CFM	35	44	52	61	70	87	105
		NC	•	•	•	•	•	23	28
		Projection	2-4-8	3-6-10	4-8-13	4-10-14	5-11-16	7-12-16	8-13-19
05	5	CFM	55	68	82	95	109	136	164
		NC	•	•	•	•	•	25	30
		Projection	3-6-11	4-9-14	5-10-15	6-12-17	7-14-19	8-15-21	10-17-24
06	6	CFM	79	98	118	137	157	196	236
		NC	•	•	•	•	20	27	32
		Projection	4-9-13	5-11-16	6-13-18	8-15-20	9-16-23	10-18-26	12-21-29
08	8	CFM	140	175	209	244	279	349	419
		NC	•	•	•	•	22	29	34
		Projection	5-11-19	7-13-21	8-15-24	10-19-26	11-22-30	14-25-34	16-28-38
10	10	CFM	218	273	327	382	436	545	655
		NC	•	•	•	20	24	31	36
		Projection	6-12-22	9-16-29	11-20-32	12-24-35	13-27-38	17-31-43	20-34-48
12	12	CFM	314	393	471	550	628	786	943
		NC	•	•	•	22	26	33	37
		Projection	7-14-28	10-19-33	12-24-36	14-27-39	18-31-45	20-34-48	24-40-55
14	14	CFM	428	535	641	748	855	1069	1283
		NC	•	•	•	24	28	34	39
		Projection	8-17-33	12-22-37	15-28-44	16-32-48	18-37-56	23-42-60	28-45-62
16	16	CFM	559	698	838	978	1117	1396	1676
		NC	•	•	20	25	29	35	40
		Projection	9-20-38	14-28-46	17-32-52	20-37-58	23-40-62	27-45-65	30-50-70

Performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

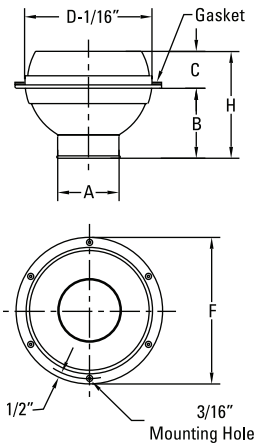
Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

APL

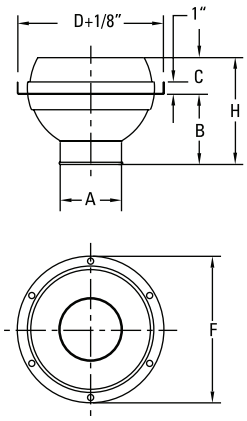
APL
Wall/Ceiling Mount



APL Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
APL-03	3	1 5/8	1 3/4	15/16	3 1/8	5	2 11/16
APL-04	4	2	2 9/16	3/4	4	6	3 5/16
APL-06	6	3	3 1/16	1 7/16	6	8	4 1/2
APL-08	8	4 3/8	4 1/4	1 3/4	8	10	6
APL-10	10	5 3/4	5 1/2	2 7/8	10	12	8 3/8
APL-12	12	7 3/8	6	3	12	14	9
APL-14	14	8 5/8	7 1/8	4 1/8	14	16	11 1/4
APL-16	16	9 3/4	8 1/4	4 3/4	16	18	13
APL-18	18	10 1/2	9 1/2	4 1/4	18	20	13 3/4
APL-20	20	12 3/8	10 7/8	4 7/8	20	22	15 3/4
MOUNTING HOLES	3-[3"-4"]	4-[6"-8"]	6-[10"-16"]	8-[18"-20"]			

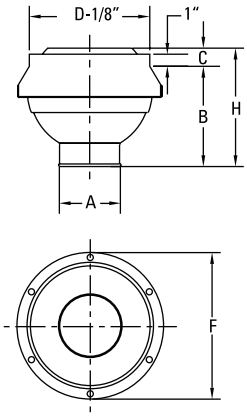
APL-RD
Exposed Round Duct



APL-RD Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
APL-04-RD	4	2	2 9/16	3/4	6	6	3 5/16
APL-06-RD	6	3	3 1/16	1 7/16	8	8	4 1/2
APL-08-RD	8	4 3/8	4 1/4	1 3/4	10	10	6
APL-10-RD	10	5 3/4	5 1/2	2 7/8	12	12	8 3/8
APL-12-RD	12	7 3/8	6	3	14	14	9
APL-14-RD	14	8 5/8	7 1/8	4 1/8	16	16	11 1/4
APL-16-RD	16	9 3/4	8 1/4	4 3/4	18	18	13
APL-18-RD	18	10 1/2	9 1/2	4 1/4	20	20	13 3/4
APL-20-RD	20	12 3/8	10 7/8	4 7/8	22	22	15 3/4

APL-RR
Exposed Round Duct



APL-RR Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
APL-04-RR	4	2	5 1/16	1	4	6	6 1/16
APL-06-RR	6	3	5 9/16	1	6	8	6 9/16
APL-08-RR	8	4 3/8	6 3/4	1	8	10	7 3/4
APL-10-RR	10	5 3/4	8	1	10	12	9
APL-12-RR	12	7 3/8	8 1/2	1	12	14	9 1/2
APL-14-RR	14	8 5/8	9 5/8	1 5/8	14	16	11 1/4
APL-16-RR	16	9 3/4	10 3/4	2 1/4	16	18	13
APL-18-RR	18	10 1/2	12	1 3/4	18	20	13 3/4
APL-20-RR	20	12 3/8	13 3/8	2 3/8	20	22	15 3/4

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

Construction

Aluminum
Foam Gasket

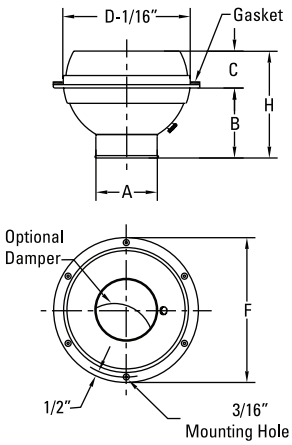
Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#10 Clear anodized
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

APL-A

APL-A Dimensions in Inches

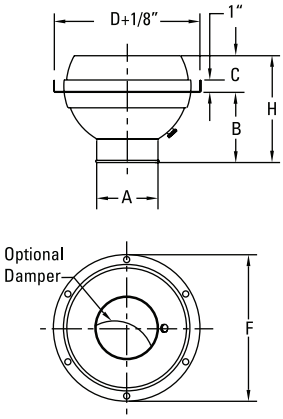
MODEL	SIZE	A	B	C	D	F	H
APL-04A	4	2	2 9/16	3/4	4	6	3 5/16
APL-06A	6	3	3 1/16	1 7/16	6	8	4 1/2
APL-08A	8	4 3/8	4 1/4	1 3/4	8	10	6
APL-10A	10	5 3/4	5 1/2	2 7/8	10	12	8 3/8
APL-12A	12	7 3/8	6	3	12	14	9
APL-14A	14	8 5/8	7 1/8	4 1/8	14	16	11 1/4
APL-16A	16	9 3/4	8 1/4	4 3/4	16	18	13
APL-18A	18	10 1/2	9 1/2	4 1/4	18	20	13 3/4
APL-20A	20	12 3/8	10 7/8	4 7/8	20	22	15 3/4
MOUNTING HOLES		3-[4"]	4-[6"-8"]	6-[10"-16"]		8-[18"-20"]	



APL-A
Wall/Ceiling Mount

APL-A-RD Dimensions in Inches

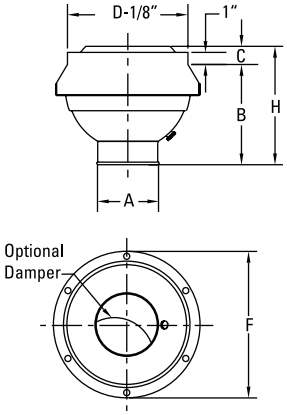
MODEL	SIZE	A	B	C	D	F	H
APL-04-RD	4	2	2 9/16	3/4	6	6	3 5/16
APL-06A-RD	6	3	3 1/16	1 7/16	8	8	4 1/2
APL-08A-RD	8	4 3/8	4 1/4	1 3/4	10	10	6
APL-10A-RD	10	5 3/4	5 1/2	2 7/8	12	12	8 3/8
APL-12A-RD	12	7 3/8	6	3	14	14	9
APL-14A-RD	14	8 5/8	7 1/8	4 1/8	16	16	11 1/4
APL-16A-RD	16	9 3/4	8 1/4	4 3/4	18	18	13
APL-18A-RD	18	10 1/2	9 1/2	4 1/4	20	20	13 3/4
APL-20A-RD	20	12 3/8	10 7/8	4 7/8	22	22	15 3/4



APL-A-RD
Exposed Round Duct

APL-A-RR Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
APL-04A-RR	4	2	5 1/16	1	4	6	6 1/16
APL-06A-RR	6	3	5 9/16	1	6	8	6 9/16
APL-08A-RR	8	4 3/8	6 3/4	1	8	10	7 3/4
APL-10A-RR	10	5 3/4	8	1	10	12	9
APL-12A-RR	12	7 3/8	8 1/2	1	12	14	9 1/2
APL-14A-RR	14	8 5/8	9 5/8	1 5/8	14	16	11 1/4
APL-16A-RR	16	9 3/4	10 3/4	2 1/4	16	18	13
APL-18A-RR	18	10 1/2	12	1 3/4	18	20	13 3/4
APL-20A-RR	20	12 3/8	13 3/8	2 3/8	20	22	15 3/4



APL-A-RR
Exposed Round Duct

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

Construction

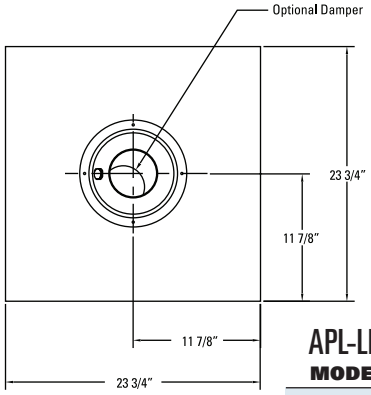
Aluminum
Stainless Steel Damper Hardware
Foam Gasket

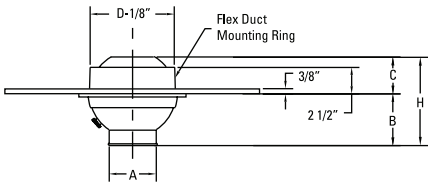
Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#10 Clear anodized
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

APL-Panel

APL-LI
Lay In Panel

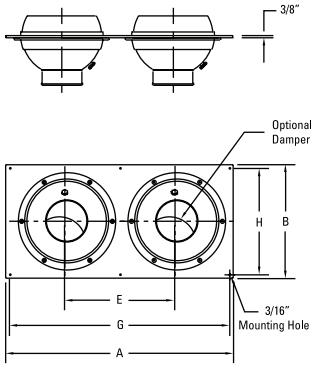


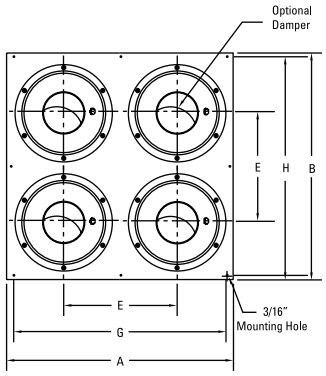


APL-LI Dimensions in Inches

MODEL	SIZE	A	B	C	D	H
APL-06 / 06A-LI	6	3	3 3/8	2 1/2	6	5 7/8
APL-08 / 08A-LI	8	4 3/8	4 9/16	2 1/2	8	7 1/16
APL-10 / 10A-LI	10	5 3/4	5 13/16	2 9/16	10	8 3/8
APL-12 / 12A-LI	12	7 3/8	6 5/16	2 11/16	12	9
APL-14 / 14A-LI	14	8 5/8	7 7/16	3 13/16	14	11 1/4
APL-16 / 16A-LI	16	9 3/4	8 9/16	4 7/16	16	13
APL-18 / 18A-LI	18	10 1/2	9 13/16	3 15/16	18	13 3/4
APL-20 / 20A-LI	20	12 3/8	11 3/16	4 9/16	20	15 3/4

APL-P2R
Panel Wall/Ceiling Mount





APL-P4S
Panel Wall/Ceiling Mount

APL-Panel Dimensions in Inches

MODEL	SIZE	#PER PANEL	A	B	DUCT SIZE	E	G	H
APL-06 / 06A-P2R	6	2	18	10	16 X 8	9 1/2	15	9
APL-08 / 08A-P2R	8	2	24	12	22 X 10	11 1/2	21	11
APL-10 / 10A-P2R	10	2	28	14	26 X 12	13 1/2	25	13
APL-12 / 12A-P2R	12	2	32	16	30 X 14	15 1/2	29	15
APL-06 / 06A-P4S	6	4	18	18	16 X 16	9 1/2	15	17
APL-08 / 08A-P4S	8	4	24	24	22 X 22	11 1/2	21	23
APL-10 / 10A-P4S	10	4	28	28	26 X 26	13 1/2	25	27
APL-12 / 12A-P4S	12	4	32	32	30 X 30	15 1/2	29	31

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

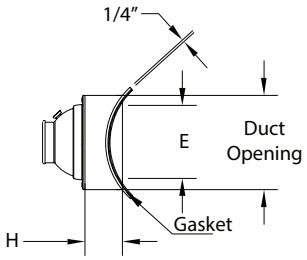
Construction

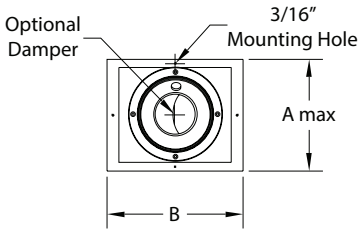
Aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#10 Clear anodized
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

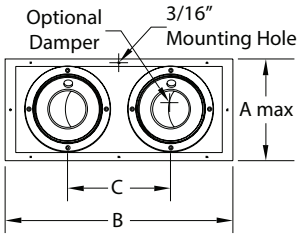
APL-C

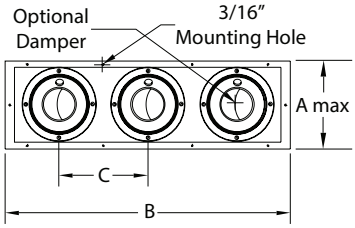


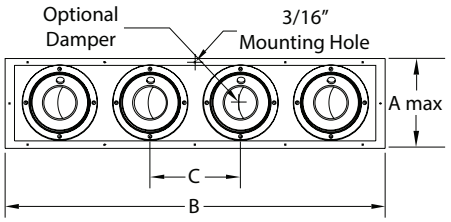


APL-C Dimensions in Inches

MODEL	E	#PER PANEL	C	A-MAX	B	H	DUCT OPENING	MIN. DUCT DIA.
APL-04C-1	4	1	-	9	9	2	7 x 7	8
APL-04C-2	4	2	6	9	17 ½	2	7 x 15 ½	8
APL-04C-3	4	3	6	9	22 ½	2	7 x 20 ½	8
APL-04C-4	4	4	6	9	28 ½	2	7 x 26 ½	8
APL-06C-1	6	1	-	11	11	2	9 x 9	10
APL-06C-2	6	2	9	11	21 ½	2	9 x 19 ½	10
APL-06C-3	6	3	9	11	30 ½	2	9 x 28 ½	10
APL-06C-4	6	4	9	11	39 ½	2	9 x 37 ½	10
APL-08C-1	8	1	-	13	13	4	11 x 11	12
APL-08C-2	8	2	12	13	26 ½	4	11 x 24 ½	12
APL-08C-3	8	3	12	13	38 ½	4	11 x 36 ½	12
APL-08C-4	8	4	12	13	50 ½	4	11 x 48 ½	12
APL-10C-1	10	1	-	15	15	4	13 x 13	14
APL-10C-2	10	2	13	15	29 ½	4	13 x 27 ½	14
APL-10C-3	10	3	13	15	42 ½	4	13 x 40 ½	14
APL-10C-4	10	4	13	15	55 ½	4	13 x 53 ½	14
APL-12C-1	12	1	-	17	17	4	15 x 15	18
APL-12C-2	12	2	15	17	33 ½	4	15 x 31 ½	18
APL-12C-3	12	3	15	17	48 ½	4	15 x 46 ½	18
APL-12C-4	12	4	15	17	63 ½	4	15 x 61 ½	18







Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

Construction

Aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard:
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

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MODEL	Nozzle Velocity (FPM)	1000	1500	2000	2500	3000	3500	4000
APL-03	CFM	14	22	29	36	43	50	58
	Static Pressure	0.03	0.07	0.13	0.20	0.28	0.39	0.50
	NC	<15	<15	<15	19	23	26	30
	Projection	2-4-8	3-6-13	4-8-15	5-11-16	6-12-17	7-13-20	8-14-21
APL-04	CFM	22	33	44	55	66	77	88
	Static Pressure	0.03	0.07	0.13	0.20	0.28	0.39	0.50
	NC	<20	<20	<20	<20	23	26	30
	Projection	3-6-12	4-8-17	6-12-23	8-16-24	9-18-27	10-21-30	12-22-32
APL-04-2	CFM	44	66	88	110	132	154	176
(2 NOZZLES)	Static Pressure	0.03	0.07	0.13	0.20	0.28	0.39	0.50
	NC	<20	<20	<20	22	26	29	33
	Projection	4-8-16	6-12-23	8-16-32	11-22-34	13-26-38	14-28-42	16-31-45
APL-04-3	CFM	66	99	132	165	198	231	264
(3 NOZZLES)	Static Pressure	0.03	0.07	0.13	0.20	0.28	0.39	0.50
	NC	<20	<20	20	24	28	31	35
	Projection	5-10-20	7-14-27	10-20-40	13-26-41	15-30-46	17-36-51	20-37-54
APL-04-4	CFM	88	132	176	220	264	308	352
(4 NOZZLES)	Static Pressure	0.03	0.07	0.13	0.20	0.28	0.39	0.50
	NC	<20	<20	21	25	29	32	36
	Projection	6-12-24	8-16-34	12-24-46	16-32-48	18-36-54	20-41-60	24-44-64
APL-06	CFM	49	74	98	123	147	172	196
	Static Pressure	0.05	0.12	0.22	0.34	0.49	0.66	0.86
	NC	<15	<15	15	21	25	29	33
	Projection	4-8-16	6-12-23	8-16-27	10-20-30	12-21-32	14-25-36	16-26-38
APL-06-2	CFM	98	148	196	246	294	344	392
(2 NOZZLES)	Static Pressure	0.05	0.12	0.22	0.34	0.49	0.66	0.86
	NC	<20	<20	20	24	28	32	36
	Projection	6-12-24	8-16-31	11-22-38	14-28-42	17-29-45	19-35-50	22-36-53
APL-06-3	CFM	147	222	294	369	441	516	588
(3 NOZZLES)	Static Pressure	0.05	0.12	0.22	0.34	0.49	0.66	0.86
	NC	<20	<20	22	26	30	34	38
	Projection	7-14-28	10-20-39	14-28-46	17-34-51	20-36-54	24-42-61	27-44-65
APL-06-4	CFM	196	296	392	492	588	688	784
(4 NOZZLES)	Static Pressure	0.05	.012	0.22	0.34	0.49	0.66	0.86
	NC	<20	<20	23	27	31	35	39
	Projection	8-16-32	12-24-46	16-32-54	20-40-60	24-42-64	28-50-72	32-52-76

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power LevelRe: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

APL [Performance Data]

MODEL	Nozzle Velocity (FPM)	1000	1500	2000	2500	3000	3500	4000
APL-08	CFM	104	157	209	261	313	365	418
	Static Pressure	0.06	0.14	0.24	0.38	0.53	0.70	0.92
	NC	<20	<20	<20	24	30	35	38
	Projection	6-11-23	8-17-34	11-23-39	14-28-44	17-31-46	20-35-52	23-38-55
APL-08-2	CFM	208	314	418	522	626	730	836
(2 NOZZLES)	Static Pressure	0.06	0.14	0.24	0.38	0.53	0.70	0.92
	NC	<20	<20	20	27	33	38	41
	Projection	8-16-32	11-22-44	15-30-55	19-39-62	24-43-64	28-49-73	32-53-77
APL-08-3	CFM	312	471	627	783	939	1095	1254
(3 NOZZLES)	Static Pressure	0.06	0.14	0.24	0.38	0.53	0.70	0.92
	NC	<20	<20	22	29	35	40	43
	Projection	10-20-39	13-26-58	18-36-66	23-47-75	29-53-78	34-60-88	54-65-94
APL-08-4	CFM	416	628	836	1044	1252	1460	1672
(4 NOZZLES)	Static Pressure	0.06	0.14	0.24	0.38	0.53	0.70	0.92
	NC	<20	<20	23	30	36	41	44
	Projection	12-22-46	16-34-68	22-45-78	28-56-88	34-62-92	40-70-104	46-76-110
APL-10	CFM	180	270	361	451	541	631	721
	Static Pressure	0.07	0.15	0.25	0.39	0.56	0.74	0.96
	NC	<20	<20	21	29	35	40	45
	Projection	7-15-30	11-22-45	15-30-51	19-37-57	22-41-61	26-47-69	30-50-72
APL-10-2	CFM	360	540	722	902	1082	1262	1442
(2 NOZZLES)	Static Pressure	0.07	0.15	0.25	0.39	0.56	0.74	0.96
	NC	<20	<20	24	32	38	43	48
	Projection	9-18-36	15-30-61	21-42-71	27-63-80	31-57-85	36-66-97	42-70-11
APL-10-3	CFM	540	810	1083	1353	1623	1893	2163
(3 NOZZLES)	Static Pressure	0.07	0.15	0.25	0.39	0.56	0.74	0.96
	NC	<20	<20	26	34	40	45	50
	Projection	12-24-48	18-36-73	25-50-87	32-63-97	37-70-104	44-80-117	51-85-122
APL-10-4	CFM	720	1080	1444	1804	2164	2524	2884
(4 NOZZLES)	Static Pressure	0.07	0.15	0.25	0.39	0.56	0.74	0.96
	NC	<20	20	27	35	41	46	51
	Projection	14-30-60	22-44-90	30-60-102	38-74-114	44-82-122	52-94-138	60-100-144

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power LevelRe: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

MODEL	Nozzle Velocity (FPM)	1000	1500	2000	2500	3000	3500	4000
APL-12	CFM	297	445	593	742	890	1038	1187
	Static Pressure	0.07	0.15	0.26	0.40	0.58	0.78	1.01
	NC	<20	<20	24	32	38	44	47
	Projection	10-19-38	14-29-57	19-38-65	24-48-74	29-52-78	33-60-88	38-64-93
APL-12-2	CFM	594	890	1186	1484	1780	2076	2374
(2 NOZZLES)	Static Pressure	0.07	0.15	0.26	0.40	0.58	0.78	1.01
	NC	<20	<20	27	35	41	47	50
	Projection	14-27-53	20-41-80	27-53-91	34-67-104	41-73-109	46-84-123	53-90-130
APL-12-3	CFM	891	1335	1779	4452	2670	3114	3561
(3 NOZZLES)	Static Pressure	0.07	0.15	0.26	0.40	0.58	0.78	1.01
	NC	<20	20	29	37	43	49	52
	Projection	17-32-65	24-50-80	32-65-110	41-81-126	49-88-133	56-102-150	65-109-158
APL-12-4	CFM	1188	1780	2372	2968	3560	4152	4748
(4 NOZZLES)	Static Pressure	0.07	0.15	0.26	0.40	0.58	0.78	1.01
	NC	<20	21	30	38	44	50	53
	Projection	20-38-76	28-58-114	38-76-130	48-96-148	58-104-156	66-120-176	76-128-186
APL-14	CFM	406	609	811	1014	1217	1420	1623
	Static Pressure	0.07	0.15	0.26	0.41	0.58	0.79	1.02
	NC	<15	15	25	33	39	44	48
	Projection	11-22-45	17-33-67	22-45-76	28-56-86	33-61-91	39-70-103	45-75-108
APL-16	CFM	518	778	1036	1296	1555	1815	2074
	Static Pressure	0.07	0.14	0.26	0.41	0.58	0.80	1.03
	NC	<15	16	26	33	39	44	49
	Projection	13-25-50	19-38-76	25-50-86	32-63-97	38-69-103	44-79-117	50-84-122
APL-18	CFM	601	902	1202	1503	1804	2105	2406
	Static Pressure	0.06	0.13	0.24	0.37	0.54	0.74	0.96
	NC	<15	16	26	33	39	44	49
	Projection	14-27-54	20-41-81	27-54-110	34-68-105	41-74-111	47-85-126	54-91-132
APL-20	CFM	835	1253	1670	2088	2506	2924	3341
	Static Pressure	0.06	0.12	0.22	0.34	0.49	0.68	0.88
	NC	<15	17	27	34	40	46	51
	Projection	16-32-64	24-48-96	32-64-110	40-80-123	48-87-131	56-100-148	64-107-155

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power LevelRe: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

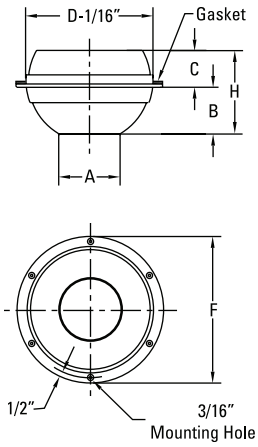
Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

APLS

APLS
Wall/Ceiling Mount

*Available in panel series

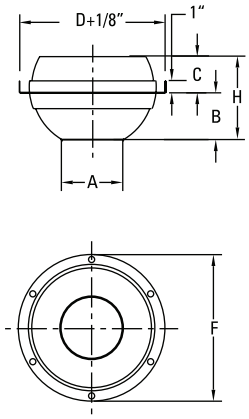


APLS Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
APLS-04	4	2	1 13/16	3/4	4	6	2 9/16
APLS-06	6	3	2 5/8	1 1/8	6	8	3 3/4
APLS-08	8	4 3/8	3 5/8	1 3/4	8	10	5 3/8
APLS-10	10	5 3/4	4 3/4	2 1/2	10	12	7 1/4
APLS-12	12	7 3/8	5	3	12	14	8
APLS-14	14	8 5/8	5 3/4	4 1/8	14	16	9 7/8
APLS-16	16	9 3/4	6 1/2	4 5/8	16	18	11 1/8
APLS-18	18	10 1/2	8	4 5/8	18	20	12 5/8
APLS-20	20	12 3/8	7 1/2	5	20	22	12 1/2

MOUNTING HOLES 3-[4"] 4-[6"-8"] 6-[10"-16"] 8-[18"-20"]

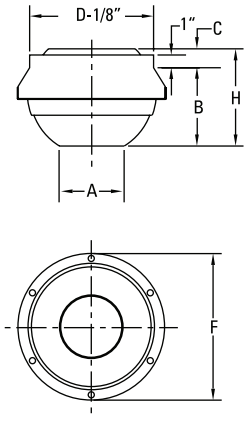
APLS-RD
Exposed Round Duct



APLS-RD Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
APLS-06-RD	6	3	2 1/16	1 7/16	8	8	3 1/2
APLS-08-RD	8	4 3/8	3 1/16	1 3/4	10	10	4 13/16
APLS-10-RD	10	5 3/4	4 1/16	2 7/8	12	12	6 15/16
APLS-12-RD	12	7 3/8	4 1/4	3	14	14	7 1/4
APLS-14-RD	14	8 5/8	5 1/8	4 1/8	16	16	9 1/4
APLS-16-RD	16	9 3/4	6 1/8	4 3/4	18	18	10 7/8
APLS-18-RD	18	10 1/2	7 1/8	4 1/4	20	20	11 3/8
APLS-20-RD	20	12 3/8	7 3/8	4 7/8	22	22	12 1/4

APLS-RR
Exposed Round Duct



APLS-RR Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
APLS-06-RR	6	3	4 9/16	1	6	8	5 9/16
APLS-08-RR	8	4 3/8	5 9/16	1	8	10	6 9/16
APLS-10-RR	10	5 3/4	6 9/16	1	10	12	7 9/16
APLS-12-RR	12	7 3/8	6 3/4	1	12	14	7 3/4
APLS-14-RR	14	8 5/8	7 5/8	1 5/8	14	16	9 1/4
APLS-16-RR	16	9 3/4	8 5/8	2 1/4	16	18	10 7/8
APLS-18-RR	18	10 1/2	9 5/8	1 3/4	18	20	11 3/8
APLS-20-RR	20	12 3/8	9 7/8	2 3/8	20	22	12 1/4

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

Construction

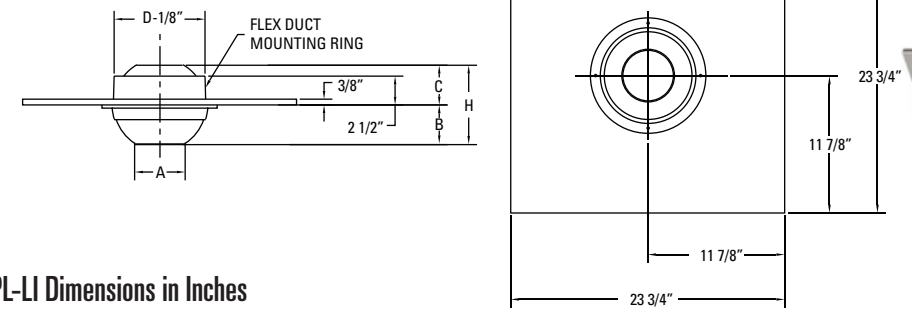
Aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#10 Clear anodized
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

APLS-Panel

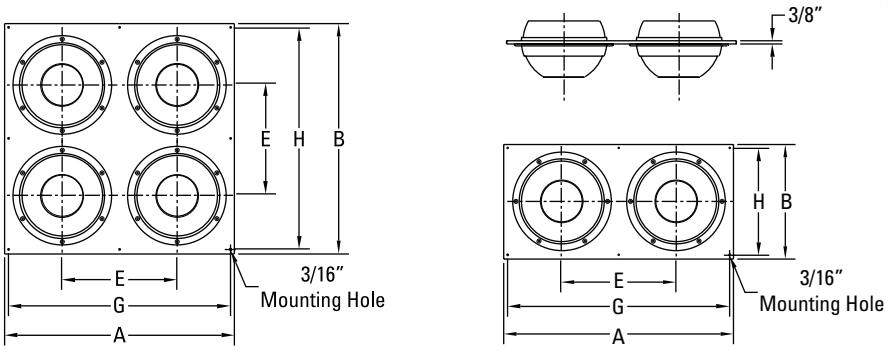
APLS-LI
Lay In Panel



APL-LI Dimensions in Inches

MODEL	SIZE	A	B	C	D	H
APLS-06-LI	6	3	2 1/4	2 1/2	6	4 3/4
APLS-08-LI	8	4 3/8	3 7/16	2 1/2	8	5 15/16
APLS-10-LI	10	5 3/4	4 5/16	2 9/16	10	6 7/8
APLS-12-LI	12	7 3/8	4 13/16	2 11/16	12	7 1/2
APLS-14-LI	14	8 5/8	5 7/16	3 13/16	14	9 1/4
APLS-16-LI	16	9 3/4	5 7/8	4 7/16	16	10 3/8
APLS-18-LI	18	10 1/2	6 7/8	3 15/16	18	10 7/8
APLS-20-LI	20	12 3/8	6 7/8	4 9/16	20	10 7/8

APLS-P2R
Panel Wall/Ceiling Mount



APLS-P4S
Panel Wall/Ceiling Mount

APL-Panel Dimensions in Inches

MODEL	SIZE	#PER PANEL	A	B	DUCT SIZE	E	G	H
APLS-06-P2R	6	2	18	10	16 X 8	9 1/2	15	9
APLS-08-P2R	8	2	24	12	22 X 10	11 1/2	21	11
APLS-10-P2R	10	2	28	14	26 X 12	13 1/2	25	13
APLS-12-P2R	12	2	32	16	30 X 14	15 1/2	29	15
APLS-06-P4S	6	4	18	18	16 X 16	9 1/2	15	17
APLS-08-P4S	8	4	24	24	22 X 22	11 1/2	21	23
APLS-10-P4S	10	4	28	28	26 X 26	13 1/2	25	27
APLS-12-P4S	12	4	32	32	30 X 30	15 1/2	29	31

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

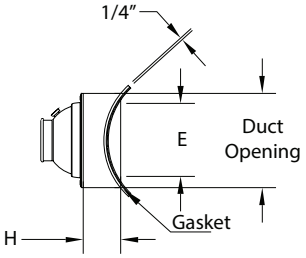
Construction

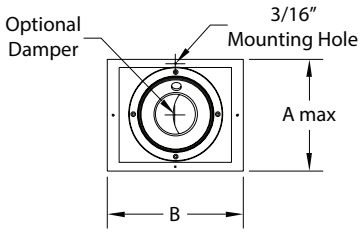
Aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#10 Clear anodized
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

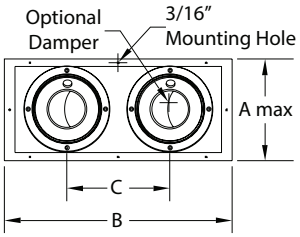
APLS-C

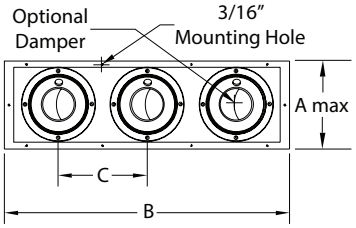


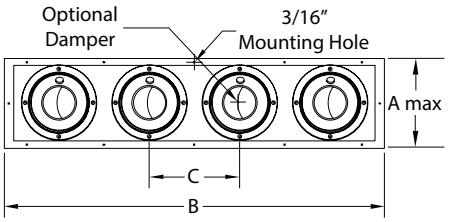


APL-C Dimensions in Inches

MODEL	E	#PER PANEL	C	A-MAX	B	H	DUCT OPENING	MIN. DUCT DIA.
APLS-04C-1	4	1	-	9	9	3	7 x 7	8
APLS-04C-2	4	2	6	9	17 1/2	3	7 x 15 1/2	8
APLS-04C-3	4	3	6	9	22 1/2	3	7 x 20 1/2	8
APLS-04C-4	4	4	6	9	28 1/2	3	7 x 26 1/2	8
APLS-06C-1	6	1	-	11	11	3	9 x 9	10
APLS-06C-2	6	2	9	11	21 1/2	3	9 x 19 1/2	10
APLS-06C-3	6	3	9	11	30 1/2	3	9 x 28 1/2	10
APLS-06C-4	6	4	9	11	39 1/2	3	9 x 37 1/2	10
APLS-08C-1	8	1	-	13	13	4	11 x 11	12
APLS-08C-2	8	2	12	13	26 1/2	4	11 x 24 1/2	12
APLS-08C-3	8	3	12	13	38 1/2	4	11 x 36 1/2	12
APLS-08C-4	8	4	12	13	50 1/2	4	11 x 48 1/2	12
APLS-10C-1	10	1	-	15	15	4	13 x 13	14
APLS-10C-2	10	2	13	15	29 1/2	4	13 x 27 1/2	14
APLS-10C-3	10	3	13	15	42 1/2	4	13 x 40 1/2	14
APLS-10C-4	10	4	13	15	55 1/2	4	13 x 53 1/2	14
APLS-12C-1	12	1	-	17	17	4	15 x 15	18
APLS-12C-2	12	2	15	17	33 1/2	4	15 x 31 1/2	18
APLS-12C-3	12	3	15	17	48 1/2	4	15 x 46 1/2	18
APLS-12C-4	12	4	15	17	63 1/2	4	15 x 61 1/2	18







Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

Construction

Aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard:
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Nozzle Velocity (FPM)	1000	1500	1750	2000	2250	2500	3000
APLS-04	CFM	22	33	38	44	49	55	66
	Static Pressure	0.05	0.11	0.15	0.21	0.26	0.31	0.46
	NC	<15	<15	17	21	24	27	29
	Projection	3-6-12	4-8-17	5-10-20	6-12-23	7-14-24	8-16-24	9-18-27
APLS-04-2	CFM	44	66	76	88	98	110	132
(2 NOZZLES)	Static Pressure	0.05	0.11	0.15	0.21	0.26	0.31	0.46
	NC	<20	<20	20	24	27	30	32
	Projection	4-8-16	6-12-23	7-14-28	8-16-32	9-18-33	11-22-34	13-26-38
APLS-04-3	CFM	66	99	114	132	147	165	198
(3 NOZZLES)	Static Pressure	0.05	0.11	0.15	0.21	0.26	0.31	0.46
	NC	<20	<20	22	26	29	32	34
	Projection	5-10-20	7-14-27	9-18-36	10-20-40	11-22-40	13-26-41	15-30-46
APLS-04-4	CFM	88	132	152	176	196	220	264
(4 NOZZLES)	Static Pressure	0.05	0.11	0.15	0.21	0.26	0.31	0.46
	NC	<20	<20	23	27	30	33	35
	Projection	6-12-24	8-16-34	10-20-40	12-24-46	14-28-47	16-32-48	18-36-54
APLS-06	CFM	49	74	86	98	110	123	147
	Static Pressure	0.06	0.15	0.20	0.27	0.34	0.42	0.58
	NC	<15	17	20	23	25	27	31
	Projection	4-8-16	6-12-23	7-14-27	8-16-27	9-18-29	10-20-30	12-21-32
APLS-06-2	CFM	98	148	172	196	220	246	294
(2 NOZZLES)	Static Pressure	0.06	0.15	0.20	0.27	0.34	0.42	0.58
	NC	<20	20	23	26	28	30	34
	Projection	6-12-24	8-16-31	10-20-35	11-22-38	13-26-40	14-28-42	17-29-45
APLS-06-3	CFM	147	222	258	294	330	369	441
(3 NOZZLES)	Static Pressure	0.06	0.15	0.20	0.27	0.34	0.42	0.58
	NC	<20	22	25	28	30	32	36
	Projection	7-14-28	10-20-39	12-24-43	14-28-46	16-32-49	17-34-51	20-36-54
APLS-06-4	CFM	196	296	344	392	440	492	588
(4 NOZZLES)	Static Pressure	0.06	0.15	0.20	0.27	0.34	0.42	0.58
	NC	20	23	26	29	31	33	37
	Projection	8-16-32	12-24-46	14-28-50	16-32-54	18-36-57	20-40-60	24-42-64

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

APLS [Performance Data]

MODEL	Nozzle Velocity (FPM)	1000	1500	1750	2000	2250	2500	3000
APLS-08	CFM	104	157	183	209	236	261	313
	Static Pressure	0.07	0.17	0.23	0.31	0.39	0.47	0.67
	NC	<15	17	20	23	26	30	36
	Projection	6-11-23	8-17-34	9-19-38	11-23-39	12-24-42	14-28-44	17-31-46
APLS-08-2	CFM	208	314	366	418	472	522	626
(2 NOZZLES)	Static Pressure	0.07	0.17	0.23	0.31	0.39	0.47	0.67
	NC	<20	20	23	26	29	33	39
	Projection	8-16-32	11-22-44	13-26-52	15-30-55	17-34-58	19-39-62	24-43-64
APLS-08-3	CFM	312	471	549	627	708	783	939
(3 NOZZLES)	Static Pressure	0.07	0.17	0.23	0.31	0.39	0.47	0.67
	NC	<20	22	25	28	31	35	41
	Projection	10-20-39	13-26-58	15-30-60	18-36-66	21-42-70	23-47-75	29-53-78
APLS-08-4	CFM	416	628	732	836	944	1044	1252
(4 NOZZLES)	Static Pressure	0.07	0.17	0.23	0.31	0.39	0.47	0.67
	NC	20	23	26	29	32	36	42
	Projection	12-22-46	16-34-68	19-38-73	22-45-78	25-50-83	28-56-88	34-62-92
APLS-10	CFM	180	270	315	361	405	451	541
	Static Pressure	0.07	0.18	0.25	0.33	0.42	0.51	0.73
	NC	<15	19	22	26	30	34	39
	Projection	7-15-30	11-22-45	13-26-52	15-30-51	17-34-55	19-37-57	22-41-61
APLS-10-2	CFM	360	540	630	722	810	902	1082
(2 NOZZLES)	Static Pressure	0.07	0.18	0.25	0.33	0.42	0.51	0.73
	NC	<20	22	25	29	33	37	42
	Projection	9-18-36	15-30-61	18-36-67	21-42-71	24-48-76	27-63-80	31-57-85
APLS-10-3	CFM	540	810	945	1083	1215	1353	1623
(3 NOZZLES)	Static Pressure	0.07	0.18	0.25	0.33	0.42	0.51	0.73
	NC	21	24	27	31	35	39	44
	Projection	12-24-48	18-36-73	22-44-80	25-50-87	28-56-93	32-63-97	37-70-104
APLS-10-4	CFM	720	1080	1260	1444	1620	1804	2164
(4 NOZZLES)	Static Pressure	0.07	0.18	0.25	0.33	0.42	0.51	0.73
	NC	22	25	28	32	36	40	45
	Projection	14-30-60	22-44-90	26-52-96	30-60-102	34-68-109	38-74-114	44-82-122

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

MODEL	Nozzle Velocity (FPM)	1000	1500	1750	2000	2250	2500	3000
APLS-12	CFM	297	445	519	593	668	742	890
	Static Pressure	0.08	0.19	0.26	0.34	0.44	0.53	0.75
	NC	<15	20	25	31	34	38	43
	Projection	10-19-38	14-29-57	16-33-66	19-38-65	21-42-70	24-48-74	29-52-78
APLS-12-2	CFM	594	890	1038	1186	1336	1484	1780
(2 NOZZLES)	Static Pressure	0.08	0.19	0.26	0.34	0.44	0.53	0.75
	NC	<20	23	28	34	37	41	46
	Projection	14-27-53	20-41-80	24-48-85	27-53-91	30-60-96	34-67-104	41-73-109
APLS-12-3	CFM	891	1335	1557	1779	2004	2226	2670
(3 NOZZLES)	Static Pressure	0.08	0.19	0.26	0.34	0.44	0.53	0.75
	NC	20	25	30	36	39	43	48
	Projection	17-32-65	24-50-80	27-54-95	32-65-110	36-72-117	41-81-126	49-88-133
APLS-12-4	CFM	1188	1780	2076	2372	2672	2968	3560
(4 NOZZLES)	Static Pressure	0.08	0.19	0.26	0.34	0.44	0.53	0.75
	NC	21	26	31	37	40	44	49
	Projection	20-38-76	28-58-114	33-66-122	38-76-130	43-86-139	48-96-148	58-104-156
APLS-14	CFM	406	609	711	811	915	1014	1217
	Static Pressure	0.08	0.20	0.28	0.36	0.46	0.56	0.78
	NC	<15	24	28	33	36	39	44
	Projection	11-22-45	17-33-67	20-39-78	22-45-76	25-50-82	28-56-86	33-61-91
APLS-16	CFM	518	778	908	1036	1167	1296	1555
	Static Pressure	0.08	0.20	0.28	0.36	0.46	0.56	0.78
	NC	<15	24	28	33	36	39	44
	Projection	13-25-50	19-38-76	22-44-87	25-50-86	28-56-92	32-63-97	38-69-103
APLS-18	CFM	601	902	1052	1202	1353	1503	1804
	Static Pressure	0.07	0.19	0.26	0.33	0.43	0.52	0.74
	NC	16	25	29	34	36	39	45
	Projection	14-27-54	20-41-81	23-47-93	27-54-105	30-60-107	34-68-110	41-74-111
APLS-20	CFM	835	1253	1492	1670	1880	2088	2506
	Static Pressure	0.07	0.18	0.23	0.31	0.39	0.48	0.70
	NC	16	25	29	34	36	39	45
	Projection	16-32-64	24-48-96	28-56-112	32-64-110	36-72-115	40-80-123	48-87-131

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Static Pressure: Inches of water gauge required.

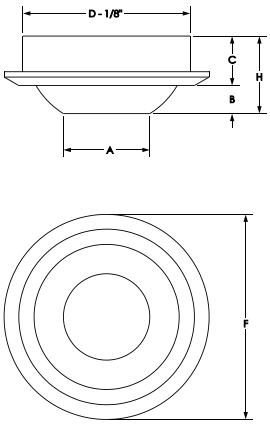
Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

HV

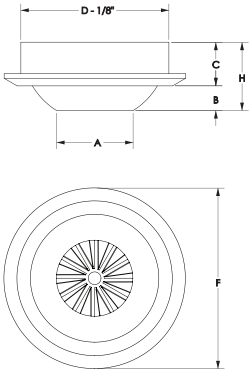
HVA
Wall/Ceiling Mount



HVA Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
HVA-08	8	3 1/4	1	2 9/16	8	10 1/4	3 9/16
HVA-10	10	4 5/8	1 5/8	2 3/4	10	12 1/4	4 3/8
HVA-12	12	6	2	3 1/2	12	14 1/4	5 1/2
HVA-14	14	7	2 3/8	3 11/16	14	16 1/4	6 1/16
HVA-16	16	8	2 7/16	4 1/2	16	18 1/4	6 15/16
HVA-20	20	10	3 3/16	5 1/2	20	22 1/4	8 11/16

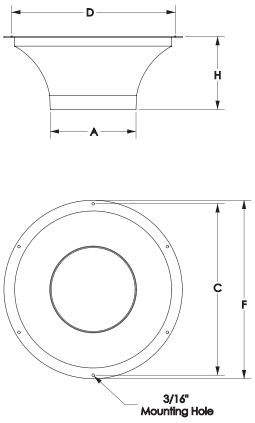
HVT
Wall/Ceiling Mount



HVT Dimensions in Inches

MODEL	SIZE	A	B	C	D	F	H
HVT-08	8	3 1/4	1	2 9/16	8	10 1/4	3 9/16
HVT-10	10	4 5/8	1 5/8	2 3/4	10	12 1/4	4 3/8
HVT-12	12	6	2	3 1/2	12	14 1/4	5 1/2
HVT-14	14	7	2 3/8	3 11/16	14	16 1/4	6 1/16
HVT-16	16	8	2 7/16	4 1/2	16	18 1/4	6 15/16
HVT-20	20	10	3 3/16	5 1/2	20	22 1/4	8 11/16

HVN
Wall/Ceiling Mount



HVN Dimensions in Inches

MODEL	SIZE	A	C	D	F	H
HVN-08	8	3 1/4	8 1/4	8	8 3/4	3 1/2
HVN-10	10	4 5/8	10 1/4	10	10 3/4	4 7/16
HVN-12	12	6	12 1/4	12	12 3/4	5 1/4
HVN-14	14	7	14 1/4	14	14 3/4	6 1/16
HVN-16	16	8	16 1/4	16	16 3/4	6 15/16
HVN-20	20	10	20 1/4	20	20 3/4	8 5/8

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
Minimum ±30° Deflection
-360° Global Rotation
(HVN non-adjustable)

Construction

Aluminum

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Nozzle Velocity (FPM)	1000	1500	1750	2000	2250	2500	3000
HVA-08	CFM	58	87	101.5	116	130.5	145	174
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	<15	<15	17	19	23
	Projection	4-8-16	6-12-24	7-14-28	8-16-32	9-18-36	10-20-40	12-24-48
HVA-10	CFM	136	204	238	272	306	340	408
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	<15	15	17	20	24
	Projection	6-12-24	8-17-33	10-20-38	11-22-40	13-26-44	14-29-48	16-34-54
HVA-12	CFM	196	294	343	392	441	490	588
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	<15	16	18	21	25
	Projection	8-16-32	11-22-44	13-26-47	15-30-50	17-34-53	19-38-56	22-44-60
HVA-14	CFM	267	401	467	534	601	668	801
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	15	18	20	22	26
	Projection	9-19-38	13-27-53	15-31-56	18-36-60	20-41-64	23-46-68	27-51-74
HVA-16	CFM	349	524	611	698	785	873	1047
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	16	19	21	24	27
	Projection	11-22-44	16-32-64	18-37-67	21-42-71	24-48-77	27-54-82	32-59-88
HVA-20	CFM	545	818	955	1091	1227	1364	1636
	Static Pressure	0.07	0.14	0.20	0.26	0.33	0.41	0.58
	NC	<15	<15	17	20	22	26	29
	Projection	12-24-48	18-36-72	21-42-82	24-48-92	28-56-104	31-62-114	36-72-130

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

HVT [Performance Data]

MODEL	Nozzle Velocity (FPM)	1000	1500	1750	2000	2250	2500
HVT-08	CFM	58	87	101.5	116	130.5	145
	Static Pressure	0.08	0.19	0.26	0.35	0.44	0.55
	NC	17	26	29	33	36	38
	Projection	2-4-8	3-6-12	4-7-14	4-8-16	5-9-18	5-10-20
HVT-10	CFM	136	204	238	272	306	340
	Static Pressure	0.10	0.21	0.29	0.38	0.48	0.58
	NC	20	27	33	36	39	41
	Projection	3-6-12	4-8-16	5-10-19	6-11-20	7-13-22	7-15-24
HVT-12	CFM	196	294	343	392	441	490
	Static Pressure	0.11	0.23	0.33	0.42	0.52	0.64
	NC	22	31	35	38	41	43
	Projection	4-8-16	6-11-22	7-13-23	8-15-25	8-17-26	10-19-28
HVT-14	CFM	267	401	467	534	601	668
	Static Pressure	0.11	0.26	0.35	0.46	0.58	0.72
	NC	23	32	36	39	41	43
	Projection	5-10-19	6-13-26	8-15-28	9-18-30	10-20-32	11-23-34
HVT-16	CFM	349	524	611	698	785	873
	Static Pressure	0.14	0.32	0.42	0.55	0.69	0.87
	NC	24	34	37	40	43	45
	Projection	6-11-22	8-16-32	9-18-33	10-21-35	12-24-38	14-27-41
HVT-20	CFM	545	818	955	1091	1227	1364
	Static Pressure	0.16	0.36	0.49	0.63	0.80	1.00
	NC	25	36	39	42	45	47
	Projection	6-12-24	9-18-36	10-21-41	12-24-46	14-28-52	15-31-57

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

MODEL	Nozzle Velocity (FPM)	1000	1500	1750	2000	2250	2500	3000
HVN-08	CFM	58	87	101.5	116	130.5	145	174
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	<15	<15	17	19	23
	Projection	4-8-16	6-12-24	7-14-28	8-16-32	9-18-36	10-20-40	12-24-48
HVN-10	CFM	136	204	238	272	306	340	408
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	<15	15	17	20	24
	Projection	6-12-24	8-17-33	10-20-38	11-22-40	13-26-44	14-29-48	16-34-54
HVN-12	CFM	196	294	343	392	441	490	588
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	<15	16	18	21	25
	Projection	8-16-32	11-22-44	13-26-47	15-30-50	17-34-53	19-38-56	22-44-60
HVN-14	CFM	267	401	467	534	601	668	801
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	15	18	20	22	26
	Projection	9-19-38	13-27-53	15-31-56	18-36-60	20-41-64	23-46-68	27-51-74
HVN-16	CFM	349	524	611	698	785	873	1047
	Static Pressure	0.06	0.13	0.18	0.24	0.30	0.37	0.53
	NC	<15	<15	16	19	21	24	27
	Projection	11-22-44	16-32-64	18-37-67	21-42-71	24-48-77	27-54-82	32-59-88
HVN-20	CFM	545	818	955	1091	1227	1364	1636
	Static Pressure	0.07	0.14	0.20	0.26	0.33	0.41	0.58
	NC	<15	<15	17	20	22	26	29
	Projection	12-24-48	18-36-72	21-42-82	24-48-92	28-56-104	31-62-114	36-72-130

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Static Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

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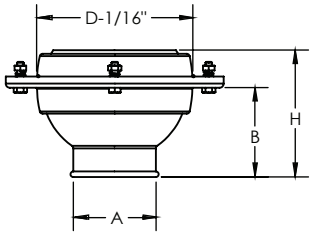
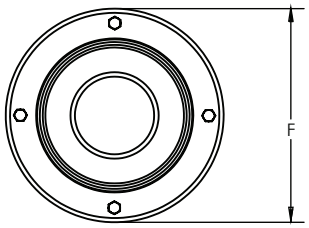
HTO

High Temperature Outlet



Swirl Diffuser Dimensions in Inches

MODEL	A	B	D	F	H
HTO-03	1 5/8	1 3/4	3 1/8	5	2 11/16
HTO-04	2	2 9/16	4	6	3 5/16
HTO-05	2 1/2	2 5/8	5	7	4
HTO-06	3	3 1/16	6	8	4 1/2



High Velocity/ High Aspiration Air Outlet

No adhesives, silicones or felt gasket
Suitable for labs, clean rooms, air showers, spray booths & ovens
Up to 500° F operating temperature

Construction

Heavy gauge aluminum face

Finishes

Standard: #00 Mill
#10 Clear Anodized

Adjustability

Lock down adjustment
70° global rotation minumum
± 35° deflection
360° rotation

MODEL	Nozzle Velocity (FPM)	1000	1500	2000	2500	3000	3500	4000
HTO-03	CFM	14	22	29	36	43	50	58
	Static Pressure	0.03	0.07	0.13	0.20	0.28	0.39	0.50
	NC	<15	<15	<15	19	23	26	30
	Projection	2-4-8	3-6-13	4-8-15	5-11-16	6-12-17	7-13-20	8-14-21
HTO-04	CFM	22	33	44	55	66	77	88
	Static Pressure	0.03	0.07	0.13	0.20	0.28	0.39	0.50
	NC	<15	<15	<15	19	23	26	30
	Projection	3-6-12	4-8-17	6-12-23	8-16-24	9-18-27	10-21-30	12-22-32
HTO-05	CFM	34	51	68	85	102	119	136
	Static Pressure	0.04	0.10	0.16	0.28	0.40	0.52	0.64
	NC	<15	<15	<15	20	24	28	32
	Projection	4-7-14	5-10-20	7-14-28	9-18-27	11-22-33	13-26-37	15-27-39
HTO-06	CFM	49	74	98	123	147	172	196
	Static Pressure	0.05	0.12	0.22	0.34	0.49	0.66	0.86
	NC	<15	<15	15	21	25	29	33
	Projection	4-8-16	6-12-23	8-16-27	10-20-30	12-21-32	14-25-36	16-26-38

Performance data based on ASHRAE 70-06

PROJECTION: Projection distance (THROW) in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity (Vt).

TERMINAL VELOCITY: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 400 fpm, 200 fpm and 100 fpm respectively.

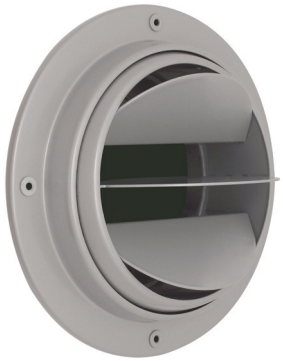
AIRFLOW CFM: Standard air density and isothermal conditions.

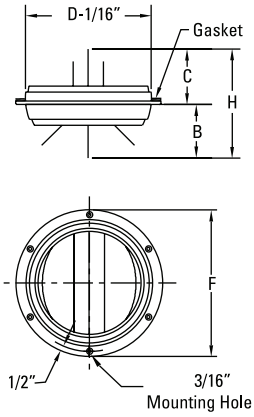
STATIC PRESSURE: Inches of water gauge required.

NOISE CRITERIA: Noise criteria (NC) curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

APLD

APLD
Wall/Ceiling Mount





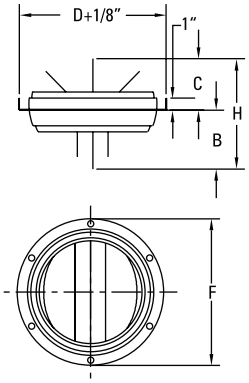
* Diffused Air Pattern Shown

*Available in panel series

APLD Dimensions in Inches

MODEL	SIZE	B	C	D	F	H	MTG HOLES
APLD-08	8	3 5/8	3 5/8	8	10	7 1/4	4
APLD-10	10	4 5/8	4 5/8	10	12	9 1/4	6
APLD-12	12	5 3/8	5 3/8	12	14	10 3/4	6

APLD-RD
Exposed Round Duct

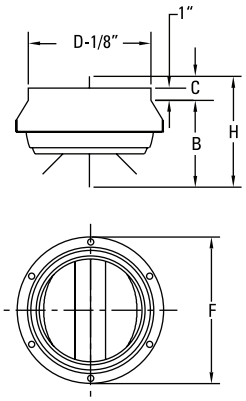


* Jet Air Pattern Shown

APLD-RD Dimensions in Inches

MODEL	SIZE	B	C	D	F	H
APLD-08-RD	8	3 5/8	3 5/8	10	10	7 1/4
APLD-10-RD	10	4 5/8	4 5/8	12	12	9 1/4
APLD-12-RD	12	5 3/8	5 3/8	14	14	10 3/4

APLD-RR
Exposed Round Duct



* Diffused Air Pattern Shown

APLD-RR Dimensions in Inches

MODEL	SIZE	B	C	D	F	H
APLD-08-RR	8	6 1/8	1 1/8	8	10	7 1/4
APLD-10-RR	10	7 1/8	2 1/8	10	12	9 1/4
APLD-12-RR	12	7 7/8	2 7/8	12	14	10 3/4

Adjustability

Easy Finger Tip Adjustment
Reversible Air Pattern
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

Construction

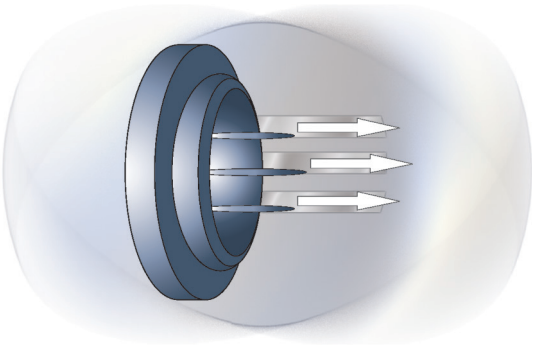
Aluminum
Foam Gasket

Finishes

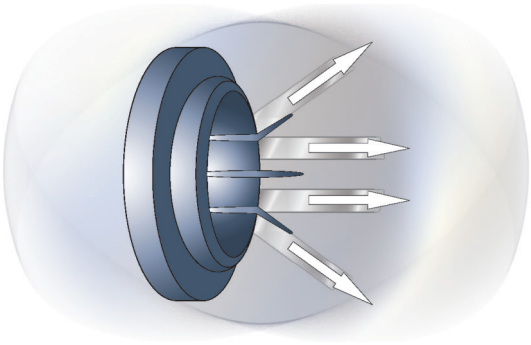
Standard: #52 White powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

Reversible Air Pattern

The **APLD-Series** has a reversible air pattern that is easily adjusted to provide a jet air pattern or a diffused air pattern.



Jet Pattern



Diffused Pattern

MODEL	Nozzle Velocity (FPM)	400	600	800	1000	1200
APLD-08	CFM	140	209	279	349	419
	Static Pressure	0.08	0.18	0.31	0.49	0.71
	NC	16	24	34	38	43
	Projection [Jet]	15-23-34	19-28-43	23-34-52	26-40-60	28-44-67
	Projection [Diffused]	6-13-21	9-17-25	11-21-31	15-23-35	17-25-39
APLD-10	CFM	222	331	443	553	664
	Static Pressure	0.08	0.18	0.31	0.48	0.70
	NC	17	28	34	41	44
	Projection [Jet]	19-28-46	23-35-56	28-46-65	31-50-75	35-54-84
	Projection [Diffused]	8-16-26	12-22-32	16-27-39	20-30-44	22-33-49
APLD-12	CFM	314	471	628	785	942
	Static Pressure	0.08	0.17	0.30	0.47	0.68
	NC	19	30	36	43	46
	Projection [Jet]	23-34-54	28-42-63	34-54-77	38-60-89	42-64-102
	Projection [Diffused]	9-19-32	15-28-42	19-32-48	24-36-56	28-43-62

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

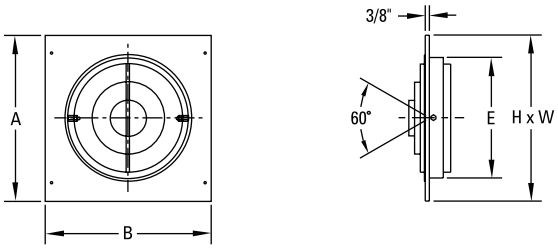
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

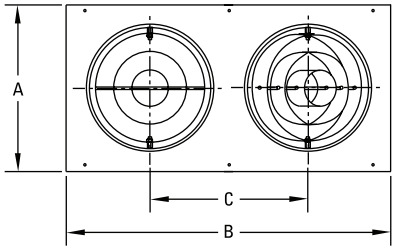
Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

ANC-Panel

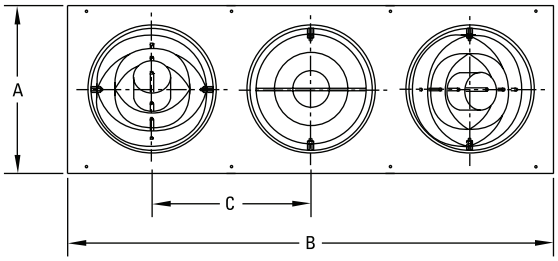
ANC-1



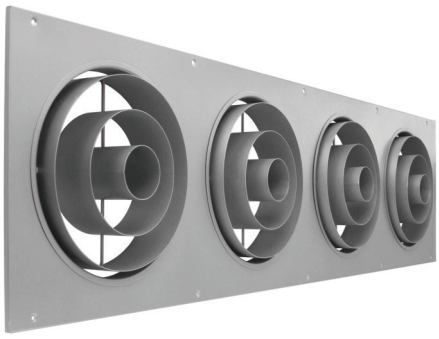
ANC-2

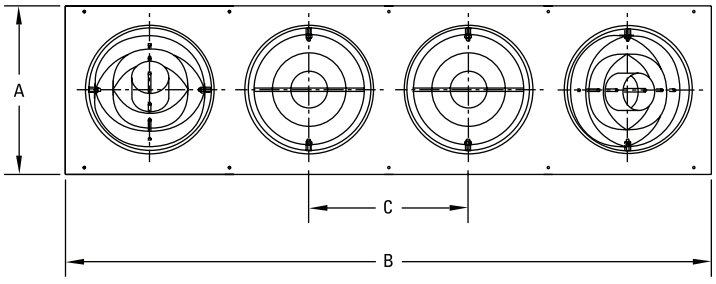


ANC-3



ANC-4





Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±30° Degree Deflection
360° Degree Rotation

Construction

Standard Construction:
Heavy Gauge Metal Construction
Special Construction:
Aluminum Construction
Stainless Steel Construction

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill (Alum)
#10 Clear anodized (Alum)
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

ANC-Panel Dimensions in Inches

MODEL	E	#PER PANEL	C	#PER RINGS	A	B	H	W
ANC-04-1	4	1	-	3	8	8	6	6
ANC-04-2	4	2	6	3	8	15	6	12
ANC-04-3	4	3	6	3	8	20	6	18
ANC-04-4	4	4	6	3	8	26	6	24
ANC-05-1	5	1	-	3	10	10	8	8
ANC-05-2	5	2	8	3	10	18	8	16
ANC-05-3	5	3	8	3	10	24	8	22
ANC-05-4	5	4	8	3	10	32	8	30
ANC-06-1	6	1	-	3	10	10	8	8
ANC-06-2	6	2	9	3	10	19	8	17
ANC-06-3	6	3	9	3	10	28	8	26
ANC-06-4	6	4	9	3	10	37	8	35
ANC-08-1	8	1	-	3	12	12	10	10
ANC-08-2	8	2	12	3	12	24	10	22
ANC-08-3	8	3	12	3	12	36	10	34
ANC-08-4	8	4	12	3	12	48	10	46
ANC-10-1	10	1	-	3	14	14	12	12
ANC-10-2	10	2	13	3	14	27	12	25
ANC-10-3	10	3	13	3	14	40	12	38
ANC-10-4	10	4	13	3	14	53	12	51
ANC-12-1	12	1	-	3	16	16	14	14
ANC-12-2	12	2	15	3	16	31	14	29
ANC-12-3	12	3	15	3	16	46	14	44
ANC-12-4	12	4	15	3	16	61	14	59
ANC-14-1	14	1	-	4	18	18	16	16
ANC-14-2	14	2	17	4	18	35	16	33
ANC-14-3	14	3	17	4	18	52	16	50
ANC-14-4	14	4	17	4	18	69	16	67
ANC-16-1	16	1	-	4	20	20	18	18
ANC-16-2	16	2	20	4	20	40	18	38
ANC-16-3	16	3	20	4	20	60	18	58
ANC-16-4 *	16	4	20	4	20	80	18	78
ANC-18-1	18	1	-	4	22	22	20	20
ANC-18-2	18	2	22	4	22	46	20	44
ANC-18-3	18	3	22	4	22	67	20	64
ANC-18-4 *	18	4	22	4	22	90	20	88
ANC-20-1	20	1	-	5	24	24	22	22
ANC-22-1	22	1	-	5	26	26	24	24
ANC-24-1	24	1	-	5	28	28	26	26

* Unit shipped in two sections - Assembly bolts supplied.

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Static Pressure: Inches of water gauge required.

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

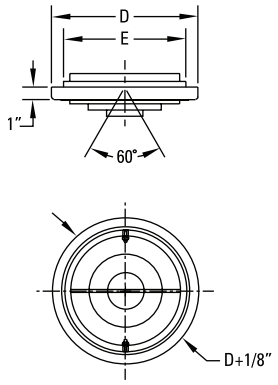
Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

ANC-RD/RP/RR

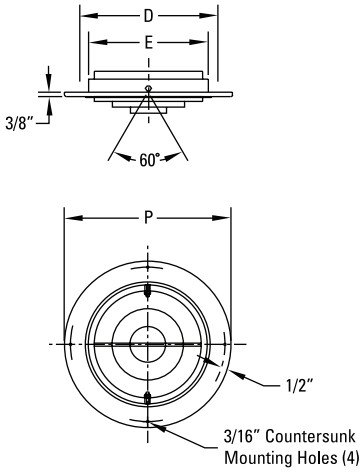
ANC-RD
Exposed Round Duct



ANC-RD Dimensions in Inches

MODEL	E	RINGS	D
ANC-04-RD	4	3	6
ANC-05-RD	5	3	6
ANC-06-RD	6	3	8
ANC-08-RD	8	3	10
ANC-10-RD	10	3	12
ANC-12-RD	12	3	14
ANC-14-RD	14	4	16
ANC-16-RD	16	4	18
ANC-18-RD	18	4	20
ANC-20-RD	20	5	22
ANC-22-RD	22	5	24
ANC-24-RD	24	5	26

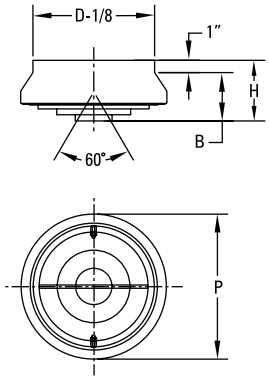
ANC-RP
Wall/Ceiling Mount



ANC-RP Dimensions in Inches

MODEL	E	RINGS	D	P
ANC-04-RP	4	3	6	8
ANC-06-RP	6	3	8	10
ANC-08-RP	8	3	10	12
ANC-10-RP	10	3	12	14
ANC-12-RP	12	3	14	16
ANC-14-RP	14	4	16	18
ANC-16-RP	16	4	18	20
ANC-18-RP	18	4	20	22
ANC-20-RP	20	5	22	24
ANC-22-RP	22	5	24	26
ANC-24-RP	24	5	26	28

ANC-RR
Exposed Round Duct



ANC-RR Dimensions in Inches

MODEL	E	RINGS	D	P
ANC-04-RR	4	3	4	6
ANC-06-RR	6	3	6	8
ANC-08-RR	8	3	8	10
ANC-10-RR	10	3	10	12
ANC-12-RR	12	3	12	14
ANC-14-RR	14	4	14	16
ANC-16-RR	16	4	16	18
ANC-18-RR	18	4	18	20
ANC-20-RR	20	5	20	22
ANC-22-RR	22	5	22	24
ANC-24-RR	24	5	24	26

Adjustability

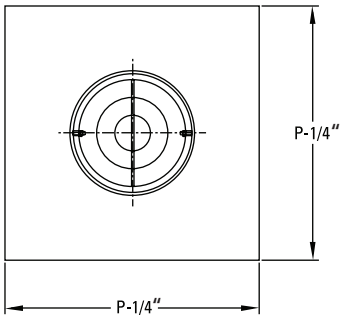
Easy Finger Tip Adjustment
Directional Air Pattern Control:
±30° Degree Deflection
360° Degree Rotation

Construction

Standard Construction:
Heavy Gauge Metal Construction
Special Construction:
Aluminum Construction
Stainless Steel Construction

Finishes

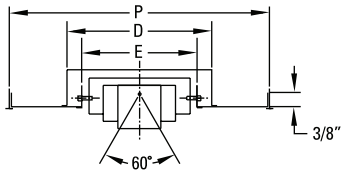
Standard: #52 White powder coat
Optional standard: #00 Mill (Alum)
#10 Clear anodized (Alum)
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

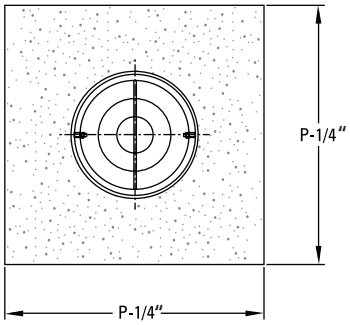


ANC-LI Dimensions in Inches

MODEL	E	Element	D	P
ANC-04-LI	4	3	6	24
ANC-05-LI	5	3	6	24
ANC-06-LI	6	3	8	24
ANC-08-LI	8	3	10	24
ANC-10-LI	10	3	12	24
ANC-12-LI	12	3	14	24
ANC-14-LI	14	4	16	24
ANC-16-LI	16	4	18	24

ANC-LI
Lay In Panel



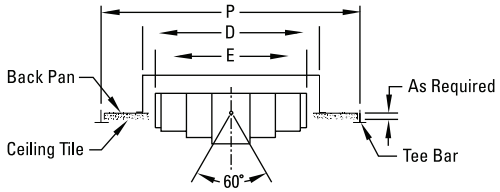


ANC-AT Dimensions in Inches

MODEL	E	Rings Per Element	D	P
ANC-06-AT	6	3	8	24
ANC-08-AT	8	3	10	24
ANC-10-AT	10	3	12	24
ANC-12-AT	12	3	14	24
ANC-14-AT	14	4	16	24
ANC-16-AT	16	4	18	24

ANC-AT
Lay In Panel

* Acoustical Tile Must Be Supplied To Factory From Jobsite.



Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±30° Degree Deflection
360° Degree Rotation

Construction

Standard Construction:
Heavy Gauge Metal Construction
Special Construction:
Aluminum Construction
Stainless Steel Construction

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill (Alum)
#10 Clear anodized (Alum)
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

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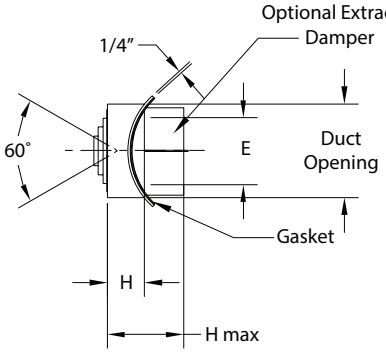
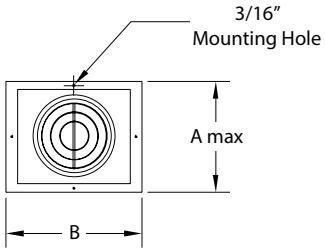
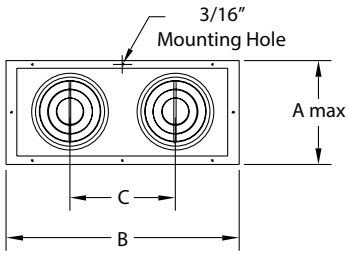
ANC-C

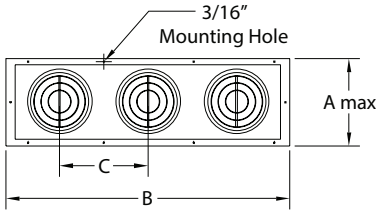


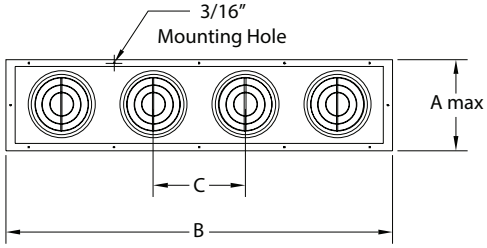


Dimensions in Inches

MODEL	E	#PER PANEL	C	A-MAX	B	H	H-MAX	DUCT OPENING	MIN. DUCT DIA.
ANC-04C-1	4	1	-	9	9	2	9 3/16	7 x 7	8
ANC-04C-2	4	2	6	9	17 1/2	2	9 3/16	7 x 15 1/2	8
ANC-04C-3	4	3	6	9	22 1/2	2	9 3/16	7 x 20 1/2	8
ANC-04C-4	4	4	6	9	28 1/2	2	9 3/16	7 x 26 1/2	8
ANC-05C-1	5	1	-	10	10	2	10 1/16	8 x 8	8
ANC-05C-2	5	2	8	10	20 1/2	2	10 1/16	8 x 18 1/2	8
ANC-05C-3	5	3	8	10	26 1/2	2	10 1/16	8 x 24 1/2	8
ANC-05C-4	5	4	8	10	34 1/2	2	10 1/16	8 x 32 1/2	8
ANC-06C-1	6	1	-	11	11	2	11	9 x 9	10
ANC-06C-2	6	2	9	11	21 1/2	2	11	9 x 19 1/2	10
ANC-06C-3	6	3	9	11	30 1/2	2	11	9 x 28 1/2	10
ANC-06C-4	6	4	9	11	39 1/2	2	11	9 x 37 1/2	10
ANC-08C-1	8	1	-	13	13	4	12 3/4	11 x 11	12
ANC-08C-2	8	2	12	13	26 1/2	4	12 3/4	11 x 24 1/2	12
ANC-08C-3	8	3	12	13	38 1/2	4	12 3/4	11 x 36 1/2	12
ANC-08C-4	8	4	12	13	50 1/2	4	12 3/4	11 x 48 1/2	12
ANC-10C-1	10	1	-	15	15	4	14 1/2	13 x 13	14
ANC-10C-2	10	2	13	15	29 1/2	4	14 1/2	13 x 27 1/2	14
ANC-10C-3	10	3	13	15	42 1/2	4	14 1/2	13 x 40 1/2	14
ANC-10C-4	10	4	13	15	55 1/2	4	14 1/2	13 x 53 1/2	14
ANC-12C-1	12	1	-	17	17	4	16 1/8	15 x 15	18
ANC-12C-2	12	2	15	17	33 1/2	4	16 1/8	15 x 31 1/2	18
ANC-12C-3	12	3	15	17	48 1/2	4	16 1/8	15 x 46 1/2	18
ANC-12C-4	12	4	15	17	63 1/2	4	16 1/8	15 x 61 1/2	18







Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
70° Degree Global Rotation
±35° Degree Deflection
360° Degree Rotation

Construction

Aluminum
Foam Gasket

Finishes

Standard: #52 White powder coat
Optional standard:
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

ANC [Performance Data]

MODEL	Nozzle Velocity (FPM)	573	860	1147	1433	1720	2007	2294
ANC-04	CFM	50	75	100	125	150	175	200
	Projection	4-8-13	6-12-16	8-13-19	10-15-21	12-16-23	13-18-25	13-19-27
	Total Pressure	0.036	0.081	0.144	0.225	0.324	0.441	0.576
	NC	<20	<20	<20	25	30	35	39
ANC-04-2	CFM	100	150	200	250	300	350	400
(2 NOZZLES)	Projection	6-11-19	9-16-23	11-19-27	14-21-30	16-23-33	18-25-36	19-27-38
	Total Pressure	0.036	0.081	0.144	0.225	0.324	0.441	0.576
	NC	<20	<20	21	28	33	38	42
ANC-04-3	CFM	150	225	300	375	450	525	600
(3 NOZZLES)	Projection	7-14-23	11-20-29	14-23-33	18-26-37	20-29-40	22-31-44	23-33-47
	Total Pressure	0.036	0.081	0.144	0.225	0.324	0.441	0.576
	NC	<20	<20	23	30	35	40	44
ANC-04-4	CFM	200	300	400	500	600	700	800
(4 NOZZLES)	Projection	8-16-27	12-23-33	16-27-38	20-30-43	23-33-47	25-36-50	27-38-54
	Total Pressure	0.036	0.081	0.144	0.225	0.324	0.441	0.576
	NC	<20	<20	24	31	36	41	45
MODEL	**Nozzle Velocity (FPM)**	**807**	**1028**	**1248**	**1468**	**1688**	**1908**	**2128**
ANC-05	CFM	110	140	170	200	230	260	290
	Projection	7-14-20	9-16-23	11-18-25	13-19-27	14-20-29	15-22-31	16-23-32
	Total Pressure	0.071	0.116	0.170	0.236	0.312	0.399	0.496
	NC	<20	<20	23	28	32	36	39
ANC-05-2	CFM	220	280	340	400	460	520	580
(2 NOZZLES)	Projection	10-20-28	13-23-32	16-25-35	18-27-38	20-29-41	22-31-43	23-32-46
	Total Pressure	0.071	0.116	0.170	0.236	0.312	0.399	0.496
	NC	<20	20	26	31	35	39	42
ANC-05-3	CFM	330	420	510	600	690	780	870
(3 NOZZLES)	Projection	12-24-35	16-28-39	19-30-43	22-33-47	25-35-50	27-38-53	28-40-56
	Total Pressure	0.071	0.116	0.170	0.236	0.312	0.399	0.496
	NC	<20	22	27	32	37	40	44
ANC-05-4	CFM	440	560	680	800	920	1040	1160
(4 NOZZLES)	Projection	14-28-40	18-32-45	22-35-50	26-38-54	29-41-58	31-43-61	32-46-65
	Total Pressure	0.071	0.116	0.170	0.236	0.312	0.399	0.496
	NC	<20	23	29	34	38	42	45

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

MODEL	Nozzle Velocity (FPM)	714	917	1121	1352	1529	1733	1937
ANC-06	CFM	140	180	220	260	300	340	380
	Projection	8-15-23	10-18-26	12-20-28	14-22-31	16-23-33	18-25-35	19-26-37
	Total Pressure	0.056	0.092	0.138	0.192	0.256	0.329	0.411
	NC	<20	<20	21	26	30	34	38
ANC-06-2	CFM	280	360	440	520	600	680	760
(2 NOZZLES)	Projection	11-21-32	14-26-36	17-28-40	20-31-43	23-33-47	25-35-50	26-37-53
	Total Pressure	0.056	0.092	0.138	0.192	0.256	0.329	0.411
	NC	<20	<20	24	29	33	37	41
ANC-06-3	CFM	420	540	660	780	900	1020	1140
(3 NOZZLES)	Projection	13-26-39	17-31-44	21-35-49	24-38-53	28-40-57	30-43-61	32-45-64
	Total Pressure	0.056	0.092	0.138	0.192	0.256	0.329	0.411
	NC	<20	20	26	31	35	39	42
ANC-06-4	CFM	560	720	880	1040	1200	1360	1520
(4 NOZZLES)	Projection	15-30-45	19-36-51	24-40-57	28-43-61	32-47-66	35-50-70	37-53-74
	Total Pressure	0.056	0.092	0.138	0.192	0.256	0.329	0.411
	NC	<20	21	27	32	36	40	44
MODEL	**Nozzle Velocity (FPM)**	**573**	**717**	**860**	**1003**	**1147**	**1290**	**1433**
ANC-08	CFM	200	250	300	350	400	450	500
	Projection	8-16-27	10-20-30	12-23-33	14-25-36	16-27-38	18-29-40	20-30-43
	Total Pressure	0.036	0.056	0.081	0.110	0.144	0.182	0.225
	NC	<20	<20	<20	20	24	28	31
ANC-08-2	CFM	400	500	600	700	800	900	1000
(2 NOZZLES)	Projection	11-23-38	14-29-43	17-33-47	20-36-50	23-38-54	26-40-57	29-43-60
	Total Pressure	0.036	0.056	0.081	0.110	0.144	0.182	0.225
	NC	<20	<20	<20	23	27	31	34
ANC-08-3	CFM	600	750	900	1050	1200	1350	1500
(3 NOZZLES)	Projection	14-28-47	18-35-52	21-40-57	25-44-62	28-47-66	32-49-70	35-52-74
	Total Pressure	0.036	0.056	0.081	0.110	0.144	0.182	0.225
	NC	<20	<20	20	25	29	32	36
ANC-08-4	CFM	800	1000	1200	1400	1600	1800	2000
(4 NOZZLES)	Projection	16-32-54	20-40-60	24-47-66	28-50-71	32-54-76	36-57-81	40-60-85
	Total Pressure	0.036	0.056	0.081	0.110	0.144	0.182	0.225
	NC	<20	<20	21	26	30	34	37

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

ANC [Performance Data]

MODEL	Nozzle Velocity (FPM)	550	734	917	1101	1284	1468	1651
ANC-10	CFM	300	400	500	600	700	800	900
	Projection	10-19-33	13-26-38	16-30-43	19-33-47	23-36-50	26-38-54	29-40-57
	Total Pressure	0.033	0.059	0.092	0.133	0.181	0.236	0.299
	NC	<20	<20	<20	25	30	34	37
ANC-10-2	CFM	600	800	1000	1200	1400	1600	1800
(2 NOZZLES)	Projection	14-27-47	18-37-54	23-43-60	27-47-66	32-50-71	37-54-76	40-57-81
	Total Pressure	0.033	0.059	0.092	0.133	0.181	0.236	0.299
	NC	<20	<20	22	28	32	37	40
ANC-10-3	CFM	900	1200	1500	1800	2100	2400	2700
(3 NOZZLES)	Projection	17-34-57	22-45-66	28-52-74	34-57-81	39-62-87	45-66-93	49-70-99
	Total Pressure	0.033	0.059	0.092	0.133	0.181	0.236	0.299
	NC	<20	<20	24	30	34	38	42
ANC-10-4	CFM	1200	1600	2000	2400	2800	3200	3600
(4 NOZZLES)	Projection	19-39-66	26-52-76	32-60-85	39-66-93	45-71-101	52-76-108	57-81-114
	Total Pressure	0.033	0.059	0.092	0.133	0.181	0.236	0.299
	NC	<20	20	25	31	35	40	43
MODEL	**Nozzle Velocity (FPM)**	**573**	**765**	**956**	**1147**	**1338**	**1529**	**1720**
ANC-12	CFM	450	600	750	900	1050	1200	1350
	Projection	12-24-40	16-32-47	20-37-52	24-40-57	28-44-62	32-47-66	35-49-70
	Total Pressure	0.036	0.064	0.100	0.144	0.196	0.256	0.324
	NC	<20	<20	22	28	32	39	40
ANC-12-2	CFM	900	1200	1500	1800	2100	2400	2700
(2 NOZZLES)	Projection	17-34-57	23-46-66	29-52-74	34-57-81	40-62-87	46-66-93	49-70-99
	Total Pressure	0.036	0.064	0.100	0.144	0.196	0.256	0.324
	NC	<20	<20	25	31	35	39	43
ANC-12-3	CFM	1350	1800	2250	2700	3150	3600	4050
(3 NOZZLES)	Projection	21-42-70	28-56-81	35-64-90	42-70-99	49-76-107	56-81-114	61-86-121
	Total Pressure	0.036	0.064	0.100	0.144	0.196	0.256	0.324
	NC	<20	21	27	32	37	41	45
ANC-12-4	CFM	1800	2400	3000	3600	4200	4800	5400
(4 NOZZLES)	Projection	24-49-81	32-65-93	40-74-104	49-81-114	57-87-123	65-93-132	70-99-140
	Total Pressure	0.036	0.064	0.100	0.144	0.196	0.256	0.324
	NC	<20	22	28	34	38	42	46

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

MODEL	Nozzle Velocity (FPM)	562	749	936	1123	1311	1498	1685
ANC-14	CFM	600	800	1000	1200	1400	1600	1800
	Projection	14-28-47	18-37-54	23-43-60	28-47-66	32-50-71	37-54-76	40-57-81
	Total Pressure	0.035	0.061	0.096	0.138	0.188	0.246	0.311
	NC	<20	<20	23	28	33	37	41
ANC-14-2	CFM	1200	1600	2000	2400	2800	3200	3600
(2 NOZZLES)	Projection	20-39-66	26-52-76	33-60-85	39-66-93	46-71-101	52-76-108	57-81-114
	Total Pressure	0.035	0.061	0.096	0.138	0.188	0.246	0.311
	NC	<20	20	26	31	36	40	44
ANC-14-3	CFM	1800	2400	3000	3600	4200	4800	5400
(3 NOZZLES)	Projection	24-48-81	32-64-93	40-74-104	48-81-114	56-87-123	64-93-132	70-99-140
	Total Pressure	0.035	0.061	0.096	0.138	0.188	0.246	0.311
	NC	<20	22	28	33	38	42	45
ANC-14-4	CFM	2400	3200	4000	4800	5600	6400	7200
(4 NOZZLES)	Projection	28-55-93	37-74-108	46-85-120	55-93-132	65-101-143	74-108-152	81-114-162
	Total Pressure	0.035	0.061	0.096	0.138	0.188	0.246	0.311
	NC	<20	23	29	34	39	43	47
MODEL	**Nozzle Velocity (FPM)**	**538**	**717**	**896**	**1075**	**1245**	**1433**	**1613**
ANC-16	CFM	750	1000	1250	1500	1750	2000	2250
	Projection	15-30-52	20-40-60	25-48-67	30-52-74	35-56-80	40-60-85	45-64-90
	Total Pressure	0.032	0.056	0.088	0.127	0.172	0.225	0.285
	NC	<20	<20	23	28	33	37	40
ANC-16-2	CFM	1500	2000	2500	3000	3500	4000	4500
(2 NOZZLES)	Projection	21-43-74	29-57-85	36-67-95	43-74-104	50-80-113	57-85-120	64-90-128
	Total Pressure	0.032	0.056	0.088	0.127	0.172	0.225	0.285
	NC	<20	20	26	31	36	40	43
ANC-16-3	CFM	2250	3000	3750	4500	5250	6000	6750
(3 NOZZLES)	Projection	26-53-90	35-70-104	44-82-117	53-90-128	61-98-138	70-104-148	78-111-157
	Total Pressure	0.032	0.056	0.088	0.127	0.172	0.225	0.285
	NC	<20	22	27	33	38	42	45
ANC-16-4	CFM	3000	4000	5000	6000	7000	8000	9000
(4 NOZZLES)	Projection	30-61-104	40-81-120	51-95-135	61-104-148	71-113-159	81-120-170	90-128-181
	Total Pressure	0.032	0.056	0.088	0.127	0.172	0.225	0.285
	NC	<20	23	29	34	39	43	46

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

ANC [Performance Data]

MODEL	Nozzle Velocity (FPM)	566	736	906	1076	1246	1416	1586
ANC-18	CFM	1000	1300	1600	1900	2200	2500	2800
	Projection	18-36-60	23-47-69	29-54-76	34-59-83	40-63-89	45-67-95	50-71-101
	Total Pressure	0.035	0.059	0.090	0.127	0.170	0.219	0.275
	NC	<20	<20	<20	29	34	38	41
ANC-18-2	CFM	2000	2600	3200	3800	4400	5000	5600
(2 NOZZLES)	Projection	25-51-85	33-66-97	41-76-108	48-83-117	56-89-126	64-95-135	71-101-143
	Total Pressure	0.035	0.059	0.090	0.127	0.170	0.219	0.275
	NC	<20	22	27	32	34	41	44
ANC-18-3	CFM	3000	3900	4800	5700	6600	7500	8400
(3 NOZZLES)	Projection	31-62-104	40-81-119	50-93-132	59-102-144	68-109-155	78-117-165	87-123-175
	Total Pressure	0.035	0.059	0.090	0.127	0.170	0.219	0.275
	NC	<20	24	29	34	38	42	46
ANC-18-4	CFM	4000	5200	6400	7600	8800	10000	11200
(4 NOZZLES)	Projection	36-72-120	47-93-137	57-108-152	68-117-166	79-126-179	90-135-190	101-143-202
	Total Pressure	0.035	0.059	0.090	0.127	0.170	0.219	0.275
	NC	<20	25	30	35	40	44	47
MODEL	**Nozzle Velocity (FPM)**	**458**	**596**	**733**	**871**	**1008**	**1146**	**1283**
ANC-20	CFM	1000	1300	1600	1900	2200	2500	2800
	Projection	16-33-60	21-42-69	26-52-76	31-59-83	36-63-89	41-67-95	46-71-101
	Total Pressure	0.025	0.042	0.064	0.090	0.120	0.160	0.200
	NC	<20	<20	<20	23	26	28	31
MODEL	**Nozzle Velocity (FPM)**	**454**	**606**	**758**	**909**	**1061**	**1212**	**1364**
ANC-22	CFM	1200	1600	2000	2400	2800	3200	3600
	Projection	17-34-66	23-46-76	29-57-85	34-66-93	40-71-101	46-76-108	51-81-114
	Total Pressure	0.025	0.042	0.068	0.096	0.130	0.170	0.220
	NC	<20	<20	21	25	30	34	39
MODEL	**Nozzle Velocity (FPM)**	**477**	**636**	**796**	**955**	**1114**	**1273**	**1432**
ANC-24	CFM	1500	2000	2500	3000	3500	4000	4500
	Projection	20-40-74	27-53-85	33-67-95	40-74-104	47-80-113	53-85-120	60-90-128
	Total Pressure	0.028	0.046	0.070	0.110	0.140	0.190	0.230
	NC	<20	<20	22	27	32	37	42

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

Jet Pattern

Diffused Pattern

Performance values for various deflection angles

Deflection Angle	Total Pressure	Noise Criteria	Throw (Projection)
0	1.1	+2	1.0
20	1.1	+2	0.9
40	1.2	+3	0.8
60	1.4	+4	0.7
80	1.6	+6	0.6
100	2.0	+8	0.5

Total Pressure, Noise Criteria and Throw factor increases are based on standard ANC data tables.

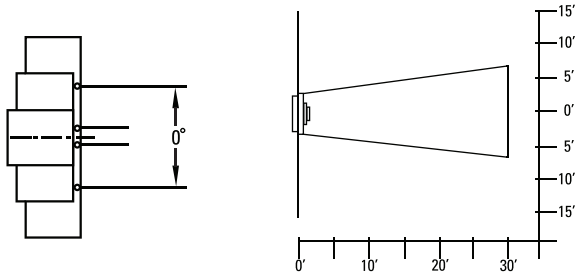
Reversible Air Pattern

***Available in -RD, -RP, & panel series**
***Sizes: 6", 8", 10", 12", 14", 16", 18"**

Example:
Model: ANC/ADV-10-1
CFM = 500

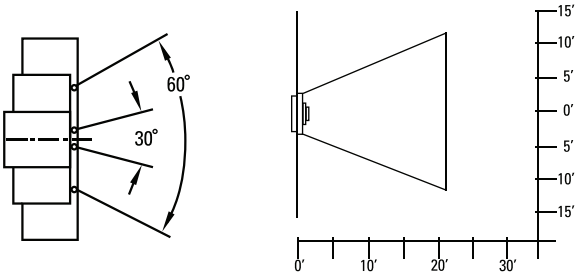
The ADV Blades set to a 0° Degree deflection jet pattern

Projection = 30ft. @ 100 fpm terminal velocity
Pressure Required = 0.092 "W.G.
Noise Criteria = <20 NC



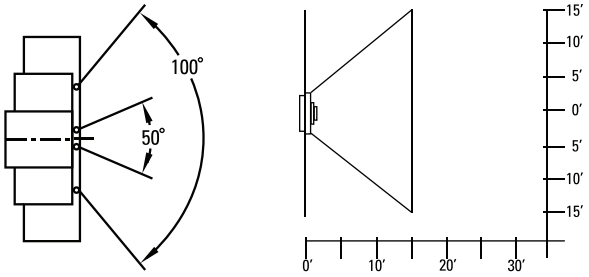
The ADV Blades set to a 60° Degree deflection spread pattern

Projection = 21ft. @ 100 fpm terminal velocity
Pressure Required = 0.128 "W.G.
Noise Criteria = <24 NC



The ADV Blades set to a 100° Degree deflection spread pattern

Projection = 15ft. @ 100 fpm terminal velocity
Pressure Required = 0.184 "W.G.
Noise Criteria = <28 NC



Adjustability

Easy Finger Tip Adjustment
Reversible Air Pattern
Directional Air Pattern Control:
±30° Degree Deflection
360° Degree Rotation
Diffusing Position
Adjustable 0° to 100° Degrees
Projection shortened by 50%

Construction

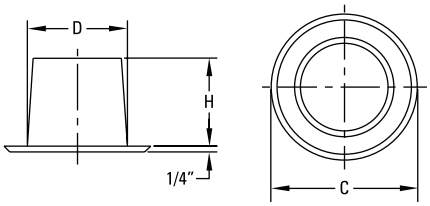
Standard Construction:
Heavy Gauge Metal Construction
Special Construction:
Aluminum Construction
Stainless Steel Construction

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill (Alum)
#10 Clear anodized (Alum)
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

ANF/ANR

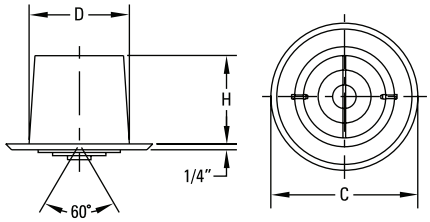
ANF
Wall/Ceiling Mount



ANF Dimensions in Inches

MODEL	D	C	H
ANF-03	3	5 1/4	3 1/2
ANF-04	4	6 1/4	3 1/2
ANF-05	5	7 1/4	4
ANF-06	6	8 1/4	2 1/4
ANF-08	8	10 1/4	2 1/4
ANF-10	10	12 1/4	2 1/4
ANF-12	12	14 1/4	2 1/4
ANF-14	14	16 1/4	2 1/4
ANF-16	16	18 1/4	2 1/4

ANR
Wall/Ceiling Mount



ANR Dimensions in Inches

MODEL	D	C	H
ANR-03	3	5 1/4	3 1/2
ANR-04	4	6 1/4	3 1/2
ANR-05	5	7 1/4	4
ANR-06	6	8 1/4	2 1/4
ANR-08	8	10 1/4	2 1/4
ANR-10	10	12 1/4	2 1/4
ANR-12	12	14 1/4	2 1/4
ANR-14	14	16 1/4	2 1/4
ANR-16	16	18 1/4	2 1/4

MODEL	Duct Velocity (FPM) Velocity Pressure	400 0.01	600 0.022	800 0.04	1000 0.062	1200 0.089	1400 0.122	1600 0.16
ANF/ANR-03	CFM	20	29	39	49	59	69	79
ANF-03	Total Pressure	0.012	0.026	0.047	0.074	0.106	0.144	0.188
ANF-03	NC	<15	<15	<15	<15	17	21	25
ANR-03	Total Pressure	0.016	0.036	0.064	0.100	0.144	0.196	0.256
ANR-03	NC	<15	<15	<15	16	21	25	29
ANF/ANR-03	Projection	1-3-7	2-5-10	3-7-12	5-9-13	6-10-14	6-11-16	7-12-17
ANF/ANR-04	CFM	35	52	70	87	105	122	140
ANF-04	Total Pressure	0.012	0.026	0.047	0.076	0.106	0.144	0.188
ANF-04	NC	<15	<15	<15	19	23	27	31
ANR-04	Total Pressure	0.016	0.036	0.064	0.100	0.144	0.196	0.256
ANR-04	NC	<15	<15	16	22	28	32	36
ANF/ANR-04	Projection	2-4-10	3-7-14	4-10-16	6-12-18	7-14-19	9-15-21	10-13-18

performance data based on ASHRAE 70-06

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±30° Degree Deflection

Construction

Aluminum Cone
Aluminum Core

Finishes

Standard: #52 White powder coat
Optional standard: #00 Mill (Alum)
#10 Clear anodized (Alum)
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#62 Grey prime powder coat
#72 Silver metallic powder coat
Custom colors available

MODEL	Duct Velocity (FPM) Velocity Pressure	400 0.01	600 0.022	800 0.04	1000 0.062	1200 0.089	1400 0.122	1600 0.16
ANF/ANR-05	CFM	55	82	109	136	164	191	218
ANF-05	Total Pressure	0.012	0.026	0.047	0.074	0.106	0.144	0.188
ANF-05	NC	<15	<15	16	22	27	31	35
ANR-05	Total Pressure	0.016	0.036	0.064	0.100	0.144	0.196	0.256
ANR-05	NC	<15	<15	21	28	33	37	41
ANF/ANR-05	Projection	2-5-11	3-6-15	5-10-20	8-13-22	9-15-24	11-18-26	12-16-23
ANF/ANR-06	CFM	79	118	157	196	236	275	314
ANF-06	Total Pressure	0.012	0.026	0.047	0.074	0.106	0.144	0.188
ANF-06	NC	<15	<15	20	26	31	35	39
ANR-06	Total Pressure	0.016	0.036	0.064	0.100	0.144	0.196	0.256
ANR-06	NC	<15	17	25	32	37	42	46
ANF/ANR-06	Projection	4-8-15	5-11-20	6-15-24	9-18-26	11-20-29	13-22-31	15-24-33
ANF/ANR-08	CFM	140	210	280	350	420	490	560
ANF-08	Total Pressure	0.012	0.029	0.052	0.08	0.116	0.158	0.207
ANF-08	NC	<15	<15	<15	15	20	25	29
ANR-08	Total Pressure	0.017	0.039	0.07	0.109	0.157	0.214	0.28
ANR-08	NC	<15	<15	15	20	25	30	34
ANF/ANR-08	Projection	5-11-23	8-17-28	11-23-32	14-25-36	17-28-39	20-30-42	23-32-45
ANF/ANR-10	CFM	218	327	436	545	654	763	872
ANF-10	Total Pressure	0.012	0.029	0.052	0.08	0.116	0.158	0.207
ANF-10	NC	<15	<15	<15	17	22	27	31
ANR-10	Total Pressure	0.017	0.039	0.07	0.109	0.157	0.214	0.28
ANR-10	NC	<15	<15	17	22	27	32	36
ANF/ANR-10	Projection	7-14-28	11-21-34	14-28-40	18-31-44	21-34-49	25-37-53	28-40-56
ANF/ANR-12	CFM	314	471	628	785	942	1100	1256
ANF-12	Total Pressure	0.012	0.029	0.052	0.08	0.116	0.159	0.207
ANF-12	NC	<15	<15	<15	17	23	27	32
ANR-12	Total Pressure	0.017	0.039	0.07	0.109	0.157	0.215	0.28
ANR-12	NC	<15	<15	19	23	29	33	38
ANF/ANR-12	Projection	8-17-34	13-25-41	17-34-48	21-38-53	25-41-58	30-45-63	38-54-76
ANF/ANR-14	CFM	428	641	855	1069	1283	1497	1710
ANF-14	Total Pressure	0.012	0.029	0.052	0.08	0.117	0.158	0.207
ANF-14	NC	<15	<15	<15	19	24	29	33
ANR-14	Total Pressure	0.017	0.039	0.07	0.109	0.158	0.214	0.28
ANR-14	NC	<15	15	20	25	30	35	39
ANF/ANR-14	Projection	9-20-39	15-30-48	20-39-56	25-44-62	30-48-68	35-52-74	39-56-79
ANF/ANR-16	CFM	558	838	1117	1396	1675	1954	2234
ANF-16	Total Pressure	0.012	0.029	0.052	0.08	0.117	0.158	0.207
ANF-16	NC	<15	<15	<15	19	25	30	34
ANR-16	Total Pressure	0.017	0.039	0.07	0.109	0.158	0.214	0.28
ANR-16	NC	<15	15	20	25	31	36	40
ANF/ANR-16	Projection	11-23-45	17-34-55	23-45-64	28-50-71	34-55-78	39-60-84	45-64-90

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

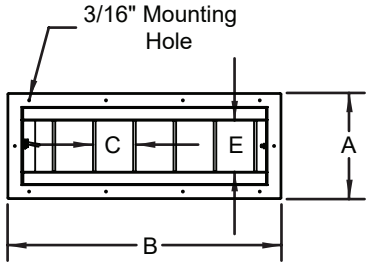
Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

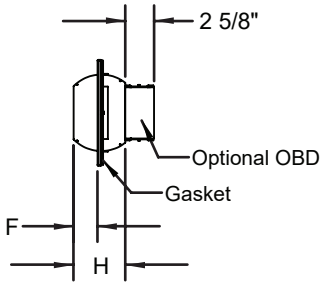
Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

DL-A

Drum Louver

—A Series Flat Panel





DL- Dimensions in Inches

MODEL	A	B	C	E	F	H	Duct Opening	Blade Qty	Mounting Holes
DL-1204-A	6 3/8	14 3/4	2	2	1	2 9/16	12 x 4	6	6
DL-1804-A	6 3/8	20 3/4	2	2	1	2 9/16	18 x 4	9	8
DL-2404-A	6 3/8	26 3/4	2	2	1	2 9/16	24 x 4	12	10
DL-3004-A	6 3/8	32 3/4	2	2	1	2 9/16	30 x 4	15	10
DL-3604-A	6 3/8	38 3/4	2	2	1	2 9/16	36 x 4	18	12
DL-4204-A	6 3/8	44 3/4	2	2	1	2 9/16	42 x 4	21	12
DL-4804-A	6 3/8	50 3/4	2	2	1	2 9/16	48 x 4	24	14
DL-6004-A	6 3/8	62 3/4	2	2	1	2 9/16	60 x 4	30	16
DL-1206-A	8 3/8	14 3/4	2	3 1/2	1 9/16	3 7/16	12 x 6	6	6
DL-1806-A	8 3/8	20 3/4	2	3 1/2	1 9/16	3 7/16	18 x 6	9	8
DL-2406-A	8 3/8	26 3/4	2	3 1/2	1 9/16	3 7/16	24 x 6	12	10
DL-3006-A	8 3/8	32 3/4	2	3 1/2	1 9/16	3 7/16	30 x 6	15	10
DL-3606-A	8 3/8	38 3/4	2	3 1/2	1 9/16	3 7/16	36 x 6	18	12
DL-4206-A	8 3/8	44 3/4	2	3 1/2	1 9/16	3 7/16	42 x 6	21	12
DL-4806-A	8 3/8	50 3/4	2	3 1/2	1 9/16	3 7/16	48 x 6	24	14
DL-6006-A	8 3/8	62 3/4	2	3 1/2	1 9/16	3 7/16	60 x 6	30	16
DL-1208-A	10 5/16	14 3/4	3	5	2 5/16	5	12 x 8	3	6
DL-1808-A	10 5/16	20 3/4	3	5	2 5/16	5	18 x 8	5	8
DL-2408-A	10 5/16	26 3/4	3	5	2 5/16	5	24 x 8	7	10
DL-3008-A	10 5/16	32 3/4	3	5	2 5/16	5	30 x 8	9	10
DL-3608-A	10 5/16	38 3/4	3	5	2 5/16	5	36 x 8	11	12
DL-4208-A	10 5/16	44 3/4	3	5	2 5/16	5	42 x 8	13	12
DL-4808-A	10 5/16	50 3/4	3	5	2 5/16	5	48 x 8	15	14
DL-6008-A	10 5/16	62 3/4	3	5	2 5/16	5	60 x 8	19	16
DL-1210-A	12 7/16	14 3/4	3	6 5/8	3 5/8	6 15/16	12 x 10	3	6
DL-1810-A	12 7/16	20 3/4	3	6 5/8	3 5/8	6 15/16	18 x 10	5	8
DL-2410-A	12 7/16	26 3/4	3	6 5/8	3 5/8	6 15/16	24 x 10	7	10
DL-3010-A	12 7/16	32 3/4	3	6 5/8	3 5/8	6 15/16	30 x 10	9	10
DL-3610-A	12 7/16	38 3/4	3	6 5/8	3 5/8	6 15/16	36 x 10	11	12
DL-4210-A	12 7/16	44 3/4	3	6 5/8	3 5/8	6 15/16	42 x 10	13	12
DL-4810-A	12 7/16	50 3/4	3	6 5/8	3 5/8	6 15/16	48 x 10	15	14
DL-6010-A	12 7/16	62 3/4	3	6 5/8	3 5/8	6 15/16	60 x 10	19	16

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±45° Degree Deflection
±40° Degree Rotation

Construction

Heavy gauge aluminum
Foam gasket

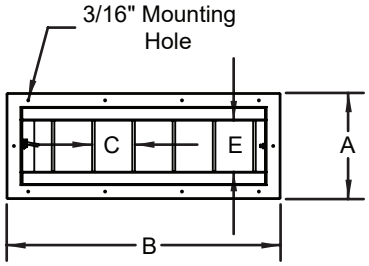
Finishes

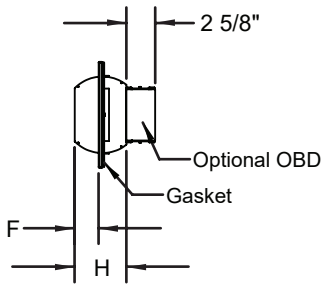
Standard: #72 Silver metallic powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

DL-A

Drum Louver

—A Series Flat Panel





DL- Dimensions in Inches

MODEL	A max	B	C	E	F	H	Duct Opening	Blade Qty	Mounting Holes
DL-2012-A	14 1/16	22 3/4	5	8 1/8	3	6 7/16	19 3/4 x 11 3/4	3	10
DL-3012-A	14 1/16	32 3/4	5	8 1/8	3	6 7/16	29 3/4 x 11 3/4	5	12
DL-4012-A	14 1/16	42 3/4	5	8 1/8	3	6 7/16	39 3/4 x 11 3/4	7	14
DL-5012-A	14 1/16	52 3/4	5	8 1/8	3	6 7/16	49 3/4 x 11 3/4	9	16
DL-6012-A	14 1/16	62 3/4	5	8 1/8	3	6 7/16	59 3/4 x 11 3/4	11	18
DL-7012-A	14 1/16	72 3/4	5	8 1/8	3	6 7/16	69 3/4 x 11 3/4	13	20
DL-2015-A	16 7/8	22 3/4	5	10 3/8	4	8 3/8	19 3/4 x 14 3/4	3	10
DL-3015-A	16 7/8	32 3/4	5	10 3/8	4	8 3/8	29 3/4 x 14 3/4	5	12
DL-4015-A	16 7/8	42 3/4	5	10 3/8	4	8 3/8	39 3/4 x 14 3/4	7	14
DL-5015-A	16 7/8	52 3/4	5	10 3/8	4	8 3/8	49 3/4 x 14 3/4	9	16
DL-6015-A	16 7/8	62 3/4	5	10 3/8	4	8 3/8	59 3/4 x 14 3/4	11	18
DL-7015-A	16 7/8	72 3/4	5	10 3/8	4	8 3/8	69 3/4 x 14 3/4	13	20

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±45° Degree Deflection
±40° Degree Rotation

Construction

Heavy gauge aluminum
Foam gasket

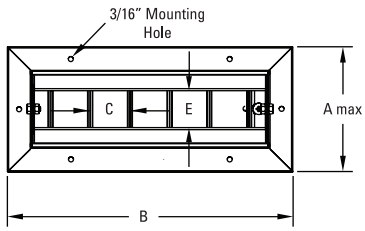
Finishes

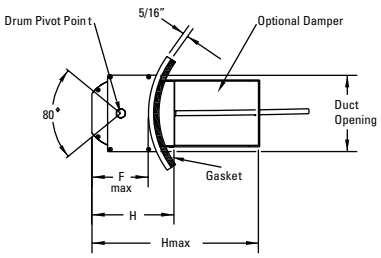
Standard: #72 Silver metallic powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

DL-C

Drum Louver
—Curved Panel

US Patent





DL- Dimensions in Inches

MODEL	A max	B	C	E	F max	H	H max	Duct Opening	Minimum Duct Dia.	Blade Qty	Mounting Holes
DL-1204-C	6 1/2	14 3/8	2	2	3 1/8	4	17 1/4	12 x 4	8	6	6
DL-1804-C	6 1/2	20 3/8	2	2	3 1/8	4	17 1/4	18 x 4	8	9	8
DL-2404-C	6 1/2	26 3/8	2	2	3 1/8	4	17 1/4	24 x 4	8	12	10
DL-3004-C	6 1/2	32 3/8	2	2	3 1/8	4	17 1/4	30 x 4	8	15	10
DL-3604-C	6 1/2	38 3/8	2	2	3 1/8	4	17 1/4	36 x 4	8	18	12
DL-4204-C	6 1/2	44 3/8	2	2	3 1/8	4	17 1/4	42 x 4	8	21	12
DL-4804-C	6 1/2	50 3/8	2	2	3 1/8	4	17 1/4	48 x 4	8	24	14
DL-6004-C	6 1/2	62 3/8	2	2	3 1/8	4	17 1/4	60 x 4	8	30	16
DL-1206-C	8 1/2	14 3/8	2	3 1/2	3 7/8	4 3/4	18	12 x 6	10	6	6
DL-1806-C	8 1/2	20 3/8	2	3 1/2	3 7/8	4 3/4	18	18 x 6	10	9	8
DL-2406-C	8 1/2	26 3/8	2	3 1/2	3 7/8	4 3/4	18	24 x 6	10	12	10
DL-3006-C	8 1/2	32 3/8	2	3 1/2	3 7/8	4 3/4	18	30 x 6	10	15	10
DL-3606-C	8 1/2	38 3/8	2	3 1/2	3 7/8	4 3/4	18	36 x 6	10	18	12
DL-4206-C	8 1/2	44 3/8	2	3 1/2	3 7/8	4 3/4	18	42 x 6	10	21	12
DL-4806-C	8 1/2	50 3/8	2	3 1/2	3 7/8	4 3/4	18	48 x 6	10	24	14
DL-6006-C	8 1/2	62 3/8	2	3 1/2	3 7/8	4 3/4	18	60 x 6	10	30	16
DL-1208-C	10 1/2	14 3/8	3	5	4 1/2	5 1/2	18 3/4	12 x 8	12	6	6
DL-1808-C	10 1/2	20 3/8	3	5	4 1/2	5 1/2	18 3/4	18 x 8	12	9	8
DL-2408-C	10 1/2	26 3/8	3	5	4 1/2	5 1/2	18 3/4	24 x 8	12	12	10
DL-3008-C	10 1/2	32 3/8	3	5	4 1/2	5 1/2	18 3/4	30 x 8	12	15	10
DL-3608-C	10 1/2	38 3/8	3	5	4 1/2	5 1/2	18 3/4	36 x 8	12	18	12
DL-4208-C	10 1/2	44 3/8	3	5	4 1/2	5 1/2	18 3/4	42 x 8	12	21	12
DL-4808-C	10 1/2	50 3/8	3	5	4 1/2	5 1/2	18 3/4	48 x 8	12	24	14
DL-6008-C	10 1/2	62 3/8	3	5	4 1/2	5 1/2	18 3/4	60 x 8	12	30	16
DL-1210-C	12 1/2	14 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	12 x 10	14	6	6
DL-1810-C	12 1/2	20 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	18 x 10	14	9	8
DL-2410-C	12 1/2	26 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	24 x 10	14	12	10
DL-3010-C	12 1/2	32 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	30 x 10	14	15	10
DL-3610-C	12 1/2	38 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	36 x 10	14	18	12
DL-4210-C	12 1/2	44 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	42 x 10	14	21	12
DL-4810-C	12 1/2	50 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	48 x 10	14	24	14
DL-6010-C	12 5/16	62 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	60 x 10	14	30	16

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±45° Degree Deflection
±40° Degree Rotation

Construction

Heavy gauge aluminum
Foam gasket

Finishes

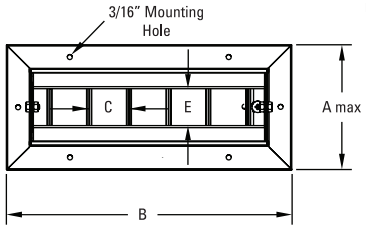
Standard: #72 Silver metallic powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

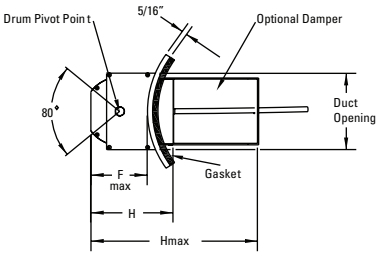
DL-C

Drum Louver

—Curved Panel

US Patent





DL- Dimensions in Inches

MODEL	A max	B	C	E	F max	H	H max	Duct Opening	Minimum Duct Dia.	Blade Qty	Mounting Holes
DL-2012-C	14 1/4	21 7/8	5	8 1/8	7 1/4	8	20 1/4	19 3/4 x 11 3/4	18	3	10
DL-3012-C	14 1/4	31 7/8	5	8 1/8	7 1/4	8	20 1/4	29 3/4 x 11 3/4	18	5	12
DL-4012-C	14 1/4	41 7/8	5	8 1/8	7 1/4	8	20 1/4	39 3/4 x 11 3/4	18	7	14
DL-5012-C	14 1/4	51 7/8	5	8 1/8	7 1/4	8	20 1/4	49 3/4 x 11 3/4	18	9	16
DL-6012-C	14 1/4	61 7/8	5	8 1/8	7 1/4	8	20 1/4	59 3/4 x 11 3/4	18	11	18
DL-7012-C	14 1/4	71 7/8	5	8 1/8	7 1/4	8	20 1/4	69 3/4 x 11 3/4	18	13	20
DL-2015-C	17 1/16	21 7/8	5	10 3/8	8 1/4	9	21 3/4	19 3/4 x 14 3/4	22	3	10
DL-3015-C	17 1/16	31 7/8	5	10 3/8	8 1/4	9	21 3/4	29 3/4 x 14 3/4	22	5	12
DL-4015-C	17 1/16	41 7/8	5	10 3/8	8 1/4	9	21 3/4	39 3/4 x 14 3/4	22	7	14
DL-5015-C	17 1/16	51 7/8	5	10 3/8	8 1/4	9	21 3/4	49 3/4 x 14 3/4	22	9	16
DL-6015-C	17 1/16	61 7/8	5	10 3/8	8 1/4	9	21 3/4	59 3/4 x 14 3/4	22	11	18
DL-7015-C	17 1/16	71 7/8	5	10 3/8	8 1/4	9	21 3/4	69 3/4 x 14 3/4	22	13	20

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±45° Degree Deflection
±40° Degree Rotation

Construction

Heavy gauge aluminum
Foam gasket

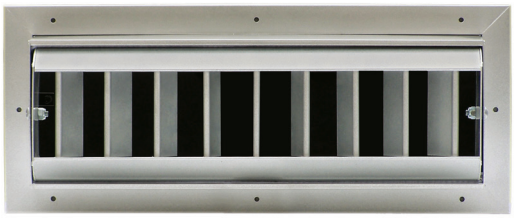
Finishes

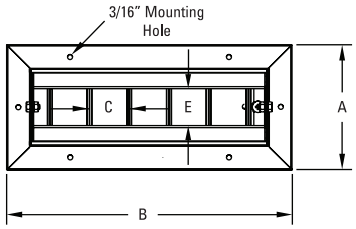
Standard: #72 Silver metallic powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

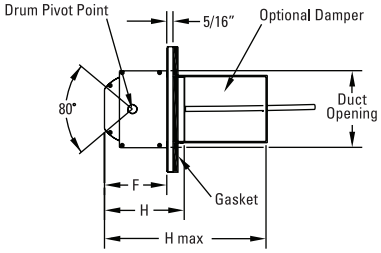
DL-F

Drum Louver

—Flat Panel







DL- Dimensions in Inches

MODEL	A	B	C	E	F	H	H max	Duct Opening	Blade Qty	Mounting Holes
DL-1204-F	6 1/2	14 3/8	2	2	3 1/8	4	17 1/4	12 x 4	6	6
DL-1804-F	6 1/2	20 3/8	2	2	3 1/8	4	17 1/4	18 x 4	9	8
DL-2404-F	6 1/2	26 3/8	2	2	3 1/8	4	17 1/4	24 x 4	12	10
DL-3004-F	6 1/2	32 3/8	2	2	3 1/8	4	17 1/4	30 x 4	15	10
DL-3604-F	6 1/2	38 3/8	2	2	3 1/8	4	17 1/4	36 x 4	18	12
DL-4204-F	6 1/2	44 3/8	2	2	3 1/8	4	17 1/4	42 x 4	21	12
DL-4804-F	6 1/2	50 3/8	2	2	3 1/8	4	17 1/4	48 x 4	24	14
DL-6004-F	6 1/2	62 3/8	2	2	3 1/8	4	17 1/4	60 x 4	30	16
DL-1206-F	8 1/2	14 3/8	2	3 1/2	3 7/8	4 3/4	18	12 x 6	6	6
DL-1806-F	8 1/2	20 3/8	2	3 1/2	3 7/8	4 3/4	18	18 x 6	9	8
DL-2406-F	8 1/2	26 3/8	2	3 1/2	3 7/8	4 3/4	18	24 x 6	12	10
DL-3006-F	8 1/2	32 3/8	2	3 1/2	3 7/8	4 3/4	18	30 x 6	15	10
DL-3606-F	8 1/2	38 3/8	2	3 1/2	3 7/8	4 3/4	18	36 x 6	18	12
DL-4206-F	8 1/2	44 3/8	2	3 1/2	3 7/8	4 3/4	18	42 x 6	21	12
DL-4806-F	8 1/2	50 3/8	2	3 1/2	3 7/8	4 3/4	18	48 x 6	24	14
DL-6006-F	8 1/2	62 3/8	2	3 1/2	3 7/8	4 3/4	18	60 x 6	30	16
DL-1208-F	10 1/2	14 3/8	3	5	4 1/2	5 1/2	18 3/4	12 x 8	6	6
DL-1808-F	10 1/2	20 3/8	3	5	4 1/2	5 1/2	18 3/4	18 x 8	9	8
DL-2408-F	10 1/2	26 3/8	3	5	4 1/2	5 1/2	18 3/4	24 x 8	10	
DL-3008-F	10 1/2	32 3/8	3	5	4 1/2	5 1/2	18 3/4	30 x 8	15	10
DL-3608-F	10 1/2	38 3/8	3	5	4 1/2	5 1/2	18 3/4	36 x 8	18	12
DL-4208-F	10 1/2	44 3/8	3	5	4 1/2	5 1/2	18 3/4	42 x 8	21	12
DL-4808-F	10 1/2	50 3/8	3	5	4 1/2	5 1/2	18 3/4	48 x 8	24	14
DL-6008-F	10 1/2	62 3/8	3	5	4 1/2	5 1/2	18 3/4	60 x 8	30	16
DL-1210-F	12 1/2	14 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	12 x 10	6	6
DL-1810-F	12 1/2	20 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	18 x 10	9	8
DL-2410-F	12 1/2	26 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	24 x 10	12	10
DL-3010-F	12 1/2	32 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	30 x 10	15	10
DL-3610-F	12 1/2	38 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	36 x 10	18	12
DL-4210-F	12 1/2	44 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	42 x 10	21	12
DL-4810-F	12 1/2	50 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	48 x 10	24	14
DL-6010-F	12 1/2	62 3/8	3	6 5/8	5 1/4	6 1/4	19 1/2	60 x 10	30	16

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±45° Degree Deflection
±40° Degree Rotation

Construction

Heavy gauge aluminum
Foam gasket

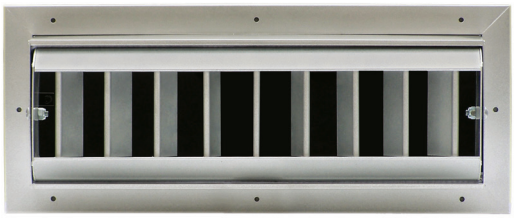
Finishes

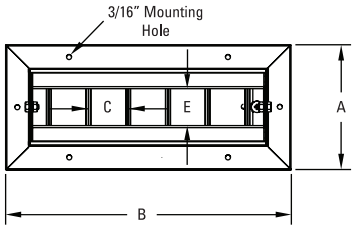
Standard: #72 Silver metallic powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

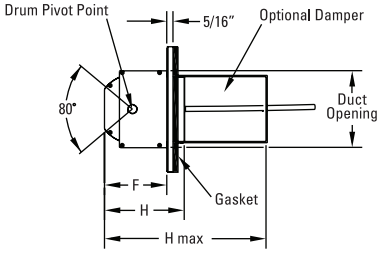
DL-F

Drum Louver

—Flat Panel







DL- Dimensions in Inches

MODEL	A	B	C	E	F	H	H max	Duct Opening	Blade Qty	Mounting Holes
DL-2012-F	14 1/4	21 7/8	5	8 1/8	7 1/4	8	20 1/4	19 3/4 x 11 3/4	3	10
DL-3012-F	14 1/4	31 7/8	5	8 1/8	7 1/4	8	20 1/4	29 3/4 x 11 3/4	5	12
DL-4012-F	14 1/4	41 7/8	5	8 1/8	7 1/4	8	20 1/4	39 3/4 x 11 3/4	7	14
DL-5012-F	14 1/4	51 7/8	5	8 1/8	7 1/4	8	20 1/4	49 3/4 x 11 3/4	9	16
DL-6012-F	14 1/4	61 7/8	5	8 1/8	7 1/4	8	20 1/4	59 3/4 x 11 3/4	11	18
DL-7012-F	14 1/4	71 7/8	5	8 1/8	7 1/4	8	20 1/4	69 3/4 x 11 3/4	13	20
DL-2015-F	17 1/16	21 7/8	5	10 3/8	8 1/4	9	21 3/4	19 3/4 x 14 3/4	3	10
DL-3015-F	17 1/16	31 7/8	5	10 3/8	8 1/4	9	21 3/4	29 3/4 x 14 3/4	5	12
DL-4015-F	17 1/16	41 7/8	5	10 3/8	8 1/4	9	21 3/4	39 3/4 x 14 3/4	7	14
DL-5015-F	17 1/16	51 7/8	5	10 3/8	8 1/4	9	21 3/4	49 3/4 x 14 3/4	9	16
DL-6015-F	17 1/16	61 7/8	5	10 3/8	8 1/4	9	21 3/4	59 3/4 x 14 3/4	11	18
DL-7015-F	17 1/16	71 7/8	5	10 3/8	8 1/4	9	21 3/4	69 3/4 x 14 3/4	13	20

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±45° Degree Deflection
±40° Degree Rotation

Construction

Heavy gauge aluminum
Foam gasket

Finishes

Standard: #72 Silver metallic powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

DL-A/C/F [Performance Data]

MODEL	Discharge Velocity	500	750	1000	1500	2000	2500
DL-1204	CFM	72	107	143	215	286	358
	Total Pressure	0.021	0.047	0.084	0.189	0.334	0.523
	NC	<15	<15	<15	21	29	39
	Projection	3-5-10	4-8-16	5-10-22	8-17-31	11-22-36	13-28-41
DL-1804	CFM	114	171	228	342	456	570
	Total Pressure	0.024	0.055	0.098	0.219	0.391	0.611
	NC	<15	<15	<15	23	33	41
	Projection	4-8-16	5-12-25	8-18-32	13-26-40	18-32-46	22-36-52
DL-2404	CFM	146	218	291	437	583	728
	Total Pressure	0.023	0.051	0.091	0.204	0.365	0.57
	NC	<15	<15	<15	24	34	42
	Projection	5-10-23	8-16-30	11-23-37	17-32-46	22-37-53	25-41-59
DL-3004	CFM	183	274	366	549	731	914
	Total Pressure	0.024	0.052	0.095	0.208	0.379	0.59
	NC	<15	<15	<15	25	35	43
	Projection	7-14-29	10-21-35	14-29-41	22-36-50	25-41-59	28-47-65
DL-3604	CFM	220	330	440	660	880	1100
	Total Pressure	0.024	0.052	0.095	0.208	0.379	0.59
	NC	<15	<15	<15	26	36	45
	Projection	8-17-32	12-24-39	17-32-46	24-40-55	28-46-64	31-50-72
DL-4204	CFM	257	386	514	772	1029	1286
	Total Pressure	0.024	0.054	0.095	0.215	0.381	0.593
	NC	<15	<15	<15	27	37	46
	Projection	10-20-35	15-27-42	20-35-49	26-42-60	30-49-70	33-55-78
DL-4804	CFM	294	442	589	883	1178	1472
	Total Pressure	0.024	0.054	0.096	0.215	0.384	0.593
	NC	<15	<15	<15	28	38	47
	Projection	12-23-37	17-30-45	22-37-53	28-46-65	32-53-74	36-59-83
DL-6004	CFM	369	553	738	1106	1475	1844
	Total Pressure	0.024	0.054	0.097	0.216	0.385	0.603
	NC	<15	<15	<15	29	38	48
	Projection	14-29-42	19-35-50	25-42-59	31-50-72	36-59-83	40-66-92

Performance data based on ASHRAE 70-06

performance values for various deflection angles

Deflection Angle	0°	15°	30°	45°
Total Pressure [times]	1.0	1.2	1.8	2.4
Throw Projection [times]	1.0	0.8	0.7	0.5
Noise Criteria – NC [add]	+0	+3	+7	+12

Airflow CFM: Standard air density and isothermal conditions.

Total Pressure: Inches of water gauge required.

Discharge Velocity: Discharge Velocity in feet per minute [fpm].

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Projection: Projection distance [THROW] in feet from the Louver discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

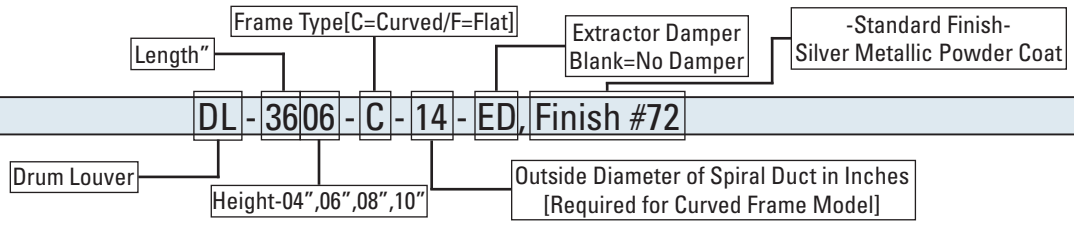
Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

MODEL	Discharge Velocity	500	750	1000	1250	1500	2000
DL-1206	CFM	135	203	270	338	405	540
	Total Pressure	0.028	0.044	0.112	0.176	0.253	0.45
	NC	<15	<15	16	24	30	41
	Projection	5-10-20	8-16-31	10-20-36	12-25-39	15-31-43	21-36-50
DL-1806	CFM	205	308	410	513	615	820
	Total Pressure	0.03	0.067	0.119	0.189	0.267	0.476
	NC	<15	<15	18	26	32	42
	Projection	8-16-31	12-24-38	15-31-43	19-34-48	23-38-54	27-43-62
DL-2406	CFM	276	413	551	689	827	1102
	Total Pressure	0.03	0.069	0.123	0.192	0.276	0.492
	NC	<15	<15	20	28	34	44
	Projection	11-21-36	15-31-44	21-36-50	24-40-56	27-44-62	31-50-72
DL-3006	CFM	346	518	691	864	1037	1382
	Total Pressure	0.031	0.07	0.126	0.195	0.281	0.504
	NC	<15	<15	21	29	35	45
	Projection	13-26-41	20-35-49	24-40-56	27-44-63	30-49-70	35-56-80
DL-3606	CFM	416	624	832	1040	1248	1664
	Total Pressure	0.032	0.071	0.128	0.199	0.285	0.51
	NC	<15	<15	22	30	36	46
	Projection	16-31-44	23-38-54	27-44-62	30-49-69	33-54-77	38-62-88
DL-4206	CFM	487	730	973	1216	1460	1946
	Total Pressure	0.032	0.072	0.129	0.201	0.287	0.512
	NC	<15	<15	23	31	37	47
	Projection	19-34-48	25-41-59	29-48-67	32-53-75	36-59-83	41-67-95
DL-4806	CFM	557	835	1113	1391	1670	2226
	Total Pressure	0.032	0.072	0.129	0.202	0.29	0.514
	NC	<15	<15	23	32	38	48
	Projection	22-36-52	27-44-62	31-52-72	35-57-80	39-62-89	44-72-102
DL-6006	CFM	698	1046	1395	1744	2093	2790
	Total Pressure	0.033	0.073	0.131	0.204	0.293	0.522
	NC	<15	<15	24	32	39	49
	Projection	24-41-58	31-49-70	35-58-80	39-64-89	43-70-98	49-80-114

Performance data based on ASHRAE 70-06

performance values for various deflection angles

Deflection Angle	0°	15°	30°	45°
Total Pressure [times]	1.0	1.2	1.8	2.4
Throw Projection [times]	1.0	0.8	0.7	0.5
Noise Criteria – NC [add]	+0	+3	+7	+12



DL-A/C/F [Performance Data]

MODEL	Discharge Velocity	500	750	1000	1250	1500	2000
DL-1208	CFM	200	300	400	500	600	800
	Total Pressure	0.034	0.075	0.135	0.210	0.303	0.538
	NC	<15	<15	21	29	36	46
	Projection	8-16-30	12-23-37	15-30-43	18-33-48	22-37-53	26-43-61
DL-1808	CFM	304	456	608	760	912	1216
	Total Pressure	0.036	0.081	0.143	0.223	0.322	0.572
	NC	<15	<15	23	31	37	47
	Projection	12-23-37	17-32-46	23-37-53	25-41-59	28-46-65	32-53-76
DL-2408	CFM	408	612	816	1020	1224	1632
	Total Pressure	0.037	0.083	0.147	0.23	0.332	0.585
	NC	<15	15	25	33	39	48
	Projection	15-31-43	23-38-54	27-43-61	29-48-68	32-54-76	38-61-88
DL-3008	CFM	512	768	1024	1280	1536	2048
	Total Pressure	0.037	0.084	0.149	0.234	0.335	0.595
	NC	<15	16	26	34	40	49
	Projection	20-35-49	26-42-60	30-49-70	33-54-77	37-60-85	42-70-98
DL-3608	CFM	617	925	1233	1541	1850	2466
	Total Pressure	0.038	0.085	0.151	0.237	0.34	0.604
	NC	<15	17	27	35	41	50
	Projection	23-38-54	29-47-66	33-54-76	36-60-84	40-66-92	47-76-107
DL-4208	CFM	721	1081	1441	1801	2162	2882
	Total Pressure	0.038	0.086	0.153	0.239	0.345	0.613
	NC	<15	18	28	35	42	52
	Projection	25-41-58	31-50-71	35-58-82	39-64-91	43-71-101	50-82-116
DL-4808	CFM	825	1237	1649	2061	2474	3298
	Total Pressure	0.039	0.087	0.155	0.241	0.347	0.619
	NC	<15	19	29	36	43	53
	Projection	27-44-62	33-54-76	38-62-88	42-69-98	47-76-108	54-88-124
DL-6008	CFM	1033	1550	2066	2583	3099	4132
	Total Pressure	0.039	0.088	0.156	0.244	0.350	0.622
	NC	<15	20	30	37	44	54
	Projection	30-49-70	37-60-85	42-70-98	47-77-109	52-85-120	60-98-139

Performance data based on ASHRAE 70-06

performance values for various deflection angles

Deflection Angle	0°	15°	30°	45°
Total Pressure [times]	1.0	1.2	1.8	2.4
Throw Projection [times]	1.0	0.8	0.7	0.5
Noise Criteria – NC [add]	+0	+3	+7	+12

Airflow CFM: Standard air density and isothermal conditions.

Total Pressure: Inches of water gauge required.

Discharge Velocity: Discharge Velocity in feet per minute [fpm].

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Projection: Projection distance [THROW] in feet from the Louver discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

MODEL	Discharge Velocity	500	750	1000	1250	1500	2000
DL-1210	CFM	270	405	540	675	810	1080
	Total Pressure	0.025	0.060	0.100	0.170	0.240	0.400
	NC	<15	17	25	33	40	50
	Projection	10-21-35	15-30-43	22-36-50	24-40-56	27-43-61	31-50-70
DL-1810	CFM	410	615	820	1025	1230	1640
	Total Pressure	0.030	0.074	0.119	0.205	0.296	0.475
	NC	<15	19	27	35	41	51
	Projection	15-30-43	23-38-54	27-43-61	30-49-70	33-54-76	38-62-88
DL-2410	CFM	550	825	1100	1375	1650	2200
	Total Pressure	0.030	0.077	0.125	0.215	0.312	0.500
	NC	<15	20	28	36	42	52
	Projection	21-36-50	27-44-62	31-50-72	35-56-80	38-62-88	43-71-101
DL-3010	CFM	690	1035	1380	1725	2070	2760
	Total Pressure	0.031	0.078	0.125	0.218	0.313	0.504
	NC	<15	21	29	37	43	53
	Projection	24-41-58	31-49-70	35-58-80	38-62-87	42-70-97	48-80-110
DL-3610	CFM	830	1245	1660	2075	2490	3320
	Total Pressure	0.032	0.080	0.128	0.224	0.320	0.512
	NC	<15	22	30	38	44	54
	Projection	27-44-62	33-54-77	39-62-89	42-70-98	47-76-108	55-90-125
DL-4210	CFM	970	1455	1940	2425	2910	3880
	Total Pressure	0.032	0.081	0.130	0.227	0.325	0.524
	NC	15	23	31	39	45	55
	Projection	29-48-67	36-59-83	41-67-95	47-76-107	50-82-116	66-93-131
DL-4810	CFM	1110	1665	2220	2775	3330	4440
	Total Pressure	0.033	0.082	0.132	0.230	0.328	0.530
	NC	16	24	32	40	47	57
	Projection	35-50-70	43-61-86	50-70-99	55-78-111	61-86-121	70-99-140
DL-6010	CFM	1395	2092	2790	3487	4185	5580
	Total Pressure	0.033	0.083	0.133	0.232	0.332	0.532
	NC	17	25	33	41	48	58
	Projection	39-56-79	48-68-96	56-79-111	62-88-124	68-96-136	79-111-157

Performance data based on ASHRAE 70-91

performance values for various deflection angles

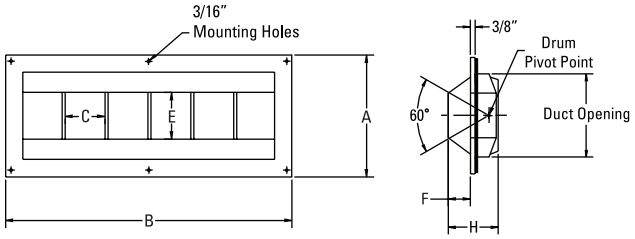
Deflection Angle	0°	15°	30°	45°
Total Pressure [times]	1.0	1.2	1.8	2.4
Throw Projection [times]	1.0	0.8	0.7	0.5
Noise Criteria – NC [add]	+0	+3	+7	+12

Sample Specification:

Air outlets shall be DL Series Drum Louvers by AirConcepts, Inc. Model DL-C (drum louver with curved frame to match the spiral duct diameter) or DL-F (drum louver with flat frame to mount on exposed rectangular duct work). Sizes and model shall be as required or as shown on the plans. Construction shall be of heavy gauge aluminum extrusions with a standard #72 Silver Metallic Powder Coat Finish (or alternate color as selected by architect). Directional control shall be accomplished without the use of special tools. The drum louver shall be capable of a plus or minus 40 degree rotation about the center line. The spread deflection shall be adjustable from 0 to 45 degrees using individually adjustable 2 inch airfoil blades on 2 inch centers. The blades shall be pivoted from the front of the louver to provide a uniform architectural appearance. Where indicated on the plans, the units shall have an extract-damper pre-installed. The drum louver and damper assembly shall have minimum intrusion into the duct work and shall not limit the drum rotation.

DL-SS

Drum Louver
—Stainless Steel



DL- Dimensions in Inches

MODEL	A	B	C	E	F	H	Req. Duct Opening	Blade Qty	Mounting Holes
DL-0906-SS	8 3/16	11 11/16	3	3 3/8	1 21/32	3 5/8	9 11/16 x 6 7/16	2	8
DL-1206-SS	8 3/16	14 11/16	3	3 3/8	1 21/32	3 5/8	12 11/16 x 6 7/16	3	8
DL-1806-SS	8 3/16	20 11/16	3	3 3/8	1 21/32	3 5/8	18 11/16 x 6 7/16	5	8
DL-2406-SS	8 3/16	26 11/16	3	3 3/8	1 21/32	3 5/8	24 11/16 x 6 7/16	5	10
DL-3006-SS	8 3/16	32 11/16	3	3 3/8	1 21/32	3 5/8	30 11/16 x 6 7/16	9	12
DL-3606-SS	8 3/16	38 11/16	3	3 3/8	1 21/32	3 5/8	36 11/16 x 6 7/16	11	14
DL-4806-SS	8 3/16	50 11/16	3	3 3/8	1 21/32	3 5/8	48 11/16 x 6 7/16	15	18
DL-6006-SS	8 3/16	62 11/16	3	3 3/8	1 21/32	3 5/8	60 11/16 x 6 7/16	19	22
DL-2010-SS	11 15/16	22 11/16	5	5 7/8	2 7/16	6	20 11/16 x 10 3/16	3	10
DL-2510-SS	11 15/16	27 11/16	5	5 7/8	2 7/16	6	25 11/16 x 10 3/16	4	12
DL-3010-SS	11 15/16	32 11/16	5	5 7/8	2 7/16	6	30 11/16 x 10 3/16	5	14
DL-3510-SS	11 15/16	37 11/16	5	5 7/8	2 7/16	6	35 11/16 x 10 3/16	6	16
DL-4010-SS	11 15/16	42 11/16	5	5 7/8	2 7/16	6	40 11/16 x 10 3/16	7	18
DL-5010-SS	11 15/16	52 11/16	5	5 7/8	2 7/16	6	50 11/16 x 10 3/16	9	22
DL-6010-SS	11 15/16	62 11/16	5	5 7/8	2 7/16	6	60 11/16 x 10 3/16	11	26
DL-7010-SS	11 15/16	72 11/16	5	5 7/8	2 7/16	6	70 11/16 x 10 3/16	13	30
DL-2012-SS	13 15/16	22 11/16	5	6 7/8	3	6	20 11/16 x 12 3/16	3	10
DL-3012-SS	13 15/16	32 11/16	5	6 7/8	3	6	30 11/16 x 12 3/16	5	14
DL-4012-SS	13 15/16	42 11/16	5	6 7/8	3	6	40 11/16 x 12 3/16	7	18
DL-5012-SS	13 15/16	52 11/16	5	6 7/8	3	6	50 11/16 x 12 3/16	9	22
DL-6012-SS	13 15/16	62 11/16	5	6 7/8	3	6	60 11/16 x 12 3/16	11	26
DL-7012-SS	13 15/16	72 11/16	5	6 7/8	3	6	70 11/16 x 12 3/16	13	30
DL-1515-SS	17	17 11/16	5	9 13/16	3 13/16	8 1/8	15 11/16 x 15 3/16	2	8
DL-2015-SS	17	22 11/16	5	9 13/16	3 13/16	8 1/8	20 11/16 x 15 3/16	3	10
DL-2515-SS	17	27 11/16	5	9 13/16	3 13/16	8 1/8	25 11/16 x 15 3/16	4	12
DL-3015-SS	17	32 11/16	5	9 13/16	3 13/16	8 1/8	30 11/16 x 15 3/16	5	14
DL-4015-SS	17	42 11/16	5	9 13/16	3 13/16	8 1/8	40 11/16 x 15 3/16	7	18
DL-5015-SS	17	52 11/16	5	9 13/16	3 13/16	8 1/8	50 11/16 x 15 3/16	9	22
DL-6015-SS	17	62 11/16	5	9 13/16	3 13/16	8 1/8	60 11/16 x 15 3/16	11	26
DL-7015-SS	17	72 11/16	5	9 13/16	3 13/16	8 1/8	70 11/16 x 15 3/16	13	30

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±45° Degree Deflection
±30° Degree Rotation

Construction

304 Stainless Steel Standard
316 Stainless Steel Option Available

Finishes

Matte Finish Standard

MODEL	Discharge Velocity	750	1000	1250	1500	1750	2000
DL-1206-SS	CFM	161	215	269	323	376	430
	Total Pressure	0.04	0.07	0.12	0.17	0.23	0.30
	NC	<15	<15	15	22	27	32
	Projection	5-10-23	8-16-31	10-19-35	11-23-38	13-27-41	16-31-44
DL-2406-SS	CFM	425	566	708	849	991	1132
	Total Pressure	0.08	0.13	0.21	0.30	0.41	0.54
	NC	<15	21	29	35	41	45
	Projection	15-31-43	20-35-50	26-40-56	31-43-61	33-47-66	35-50-71
DL-3606-SS	CFM	636	848	1060	1272	1484	1696
	Total Pressure	0.08	0.14	0.21	0.30	0.41	0.54
	NC	<15	23	31	37	43	47
	Projection	23-38-53	31-43-61	34-48-69	38-53-75	41-57-81	43-61-87
DL-6006-SS	CFM	1058	1410	1763	2115	2468	2820
	Total Pressure	0.08	0.14	0.21	0.31	0.42	0.55
	NC	15	25	33	39	45	50
	Projection	34-48-68	40-56-79	44-62-88	48-68-97	52-74-105	56-79-112
DL-2010-SS	CFM	617	823	1029	1235	1440	1646
	Total Pressure	0.06	0.11	0.17	0.24	0.33	0.43
	NC	<15	25	33	39	45	49
	Projection	22-37-52	30-43-60	34-48-68	37-52-74	40-56-80	43-60-85
DL-3010-SS	CFM	924	1231	1539	1847	2154	2462
	Total Pressure	0.06	0.11	0.17	0.25	0.34	0.44
	NC	16	27	35	41	46	51
	Projection	32-45-64	37-52-74	41-58-83	45-64-90	49-69-98	52-74-104
DL-4010-SS	CFM	1229	1639	2049	2459	2868	3278
	Total Pressure	0.07	0.12	0.18	0.26	0.35	0.45
	NC	18	28	36	42	48	53
	Projection	37-52-74	43-60-85	48-67-95	52-74-104	56-80-113	60-85-120
DL-6010-SS	CFM	1841	2455	3069	3683	4296	4910
	Total Pressure	0.07	0.12	0.18	0.26	0.35	0.45
	NC	20	30	38	44	50	54
	Projection	45-64-90	52-74-104	58-82-117	64-90-128	69-98-138	74-104-147
DL-7010-SS	CFM	2147	2863	3579	4294	5010	5726
	Total Pressure	0.07	0.12	0.18	0.26	0.35	0.45
	NC	20	31	38	45	50	55
	Projection	49-69-98	56-80-113	63-89-126	69-98-138	74-105-149	80-113-159

Airflow CFM: Standard air density and isothermal conditions.

Total Pressure: Inches of water gauge required.

Discharge Velocity: Discharge Velocity in feet per minute [fpm].

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Projection: Projection distance [THROW] in feet from the Louver discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

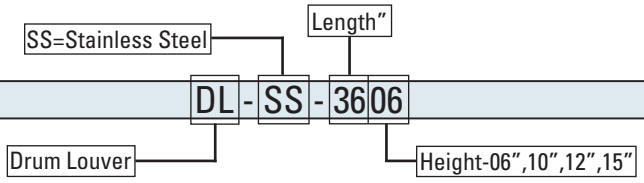
DL-SS [Performance Data]

MODEL	Discharge Velocity	750	1000	1250	1500	1750	2000
DL-2012-SS	CFM	723	963	1204	1445	1685	1926
	Total Pressure	0.05	0.10	0.15	0.22	0.30	0.39
	NC	<15	25	33	39	45	49
	Projection	26-40-57	33-46-65	37-52-73	40-57-80	43-61-86	46-65-92
DL-4012-SS	CFM	1439	1918	2398	2877	3357	3836
	Total Pressure	0.06	0.10	0.15	0.22	0.30	0.40
	NC	18	28	36	42	48	53
	Projection	40-56-80	46-65-92	52-73-103	56-80-113	61-86-122	65-92-130
DL-6012-SS	CFM	2155	2873	3591	4309	5028	5746
	Total Pressure	0.06	0.10	0.16	0.22	0.31	0.40
	NC	20	30	38	44	50	55
	Projection	49-69-98	56-80-113	63-89-126	69-98-138	75-106-149	80-113-160
DL-7012-SS	CFM	2513	3351	4189	5027	5864	6702
	Total Pressure	0.06	0.10	0.16	0.23	0.31	0.40
	NC	20	31	39	45	51	55
	Projection	53-75-105	61-86-122	68-96-136	75-106-149	81-114-161	86-122-172
DL-2015-SS	CFM	1032	1375	1719	2063	2406	2750
	Total Pressure	0.06	0.11	0.17	0.24	0.33	0.43
	NC	20	30	38	44	50	55
	Projection	34-48-68	39-55-78	44-62-87	48-68-96	52-73-103	55-78-110
DL-4015-SS	CFM	2053	2738	3423	4107	4791	5476
	Total Pressure	0.06	0.11	0.17	0.25	0.34	0.44
	NC	23	33	41	48	53	58
	Projection	48-67-95	55-78-110	62-87-123	67-95-135	73-103-146	78-110-156
DL-5015-SS	CFM	2565	3419	4274	5129	5983	6838
	Total Pressure	0.06	0.11	0.17	0.25	0.34	0.44
	NC	24	34	42	49	54	59
	Projection	53-75-107	62-87-123	69-97-138	75-107-151	81-115-163	87-123-174
DL-6015-SS	CFM	3076	4101	5126	6151	7177	8202
	Total Pressure	0.06	0.11	0.17	0.25	0.34	0.44
	NC	25	35	43	50	55	60
	Projection	58-83-117	67-95-135	75-107-151	83-117-165	89-126-178	95-135-191
DL-7015-SS	CFM	3587	4783	5979	7175	8370	9566
	Total Pressure	0.06	0.11	0.17	`0.25	0.34	0.44
	NC	26	36	44	50	56	60
	Projection	63-89-126	73-103-146	81-115-163	89-126-178	96-136-193	105-146-206

Performance data based on ASHRAE 70-06

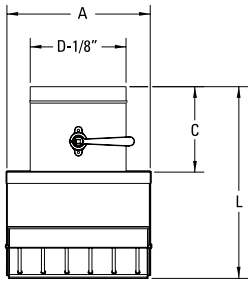
performance values for various deflection angles

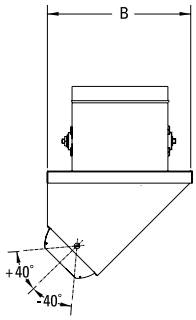
Deflection Angle	0°	15°	30°
Total Pressure [times]	1.0	1.2	1.8
Throw Projection [times]	1.0	0.8	0.7
Noise Criteria – NC [add]	+0	+3	+7

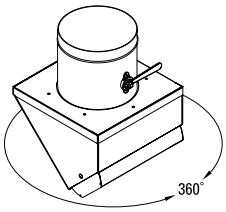


TDL Dimensions in Inches

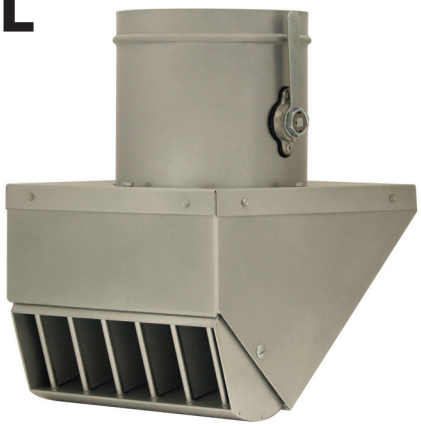
MODEL	A	B	C	D	L
TDL-06	12	10	7	6	15 3/16
TDL-08	12	12	8	8	16 13/16
TDL-10	14	14	10	10	18 11/16
TDL-12	20	16	11	12	21 5/8







TDL



MODEL	DRUM LOUVER SIZE
TDL-06	12" x 4"
TDL-08	12" x 6"
TDL-10	14" x 8"
TDL-12	20" x 8"

Adjustability

Easy Finger Tip Adjustment
Directional Air Pattern Control:
±40° Degree Deflection
360° Degree Rotation

Construction

Heavy Gauge Steel Turret
Aluminum Drum Louver

Finishes

Standard: #72 Silver Metallic Powder Coat
Custom Colors Available

MODEL	Air Flow	Duct Velocity	Discharge Velocity	Projection	+40° Static Pressure	+40° NC	0° Static Pressure	0° NC	-40° Static Pressure	-40° NC
TDL-06	100	509	676	4-8-16	0.02	<15	0.02	<15	0.03	<15
	150	764	1014	5-10-22	0.05	20	0.04	18	0.07	22
	200	1018	1351	8-17-31	0.08	28	0.07	26	0.11	30
	300	1527	2027	12-23-38	0.19	39	0.17	37	0.26	41
	400	2037	2703	14-31-46	0.34	47	0.30	45	0.43	49
TDL-08	150	430	557	5-11-21	0.03	<15	0.03	<15	0.04	<15
	300	860	1113	10-20-31	0.12	29	0.10	27	0.16	31
	450	1289	1670	16-27-37	0.26	40	0.23	38	0.36	41
	600	1719	2226	23-40-56	0.47	48	0.41	46	0.64	50
	750	2149	2783	29-50-69	0.74	54	0.66	52	1.00	56
TDL-10	300	550	640	12-23-37	0.06	18	0.05	16	0.08	20
	500	917	1066	18-33-48	0.17	32	0.14	30	0.22	34
	700	1283	1493	24-40-57	0.33	41	0.26	39	0.43	43
	900	1650	1919	28-46-65	0.53	47	0.42	45	0.69	49
	1100	2017	2345	31-51-74	0.81	53	0.65	51	1.07	55
TDL-12	400	510	600	14-30-42	0.05	15	0.04	<15	0.07	17
	700	892	1049	25-41-59	0.16	30	0.13	28	0.20	32
	1000	1274	1499	28-46-66	0.32	40	0.26	37	0.42	42
	1300	1656	1949	31-52-74	0.55	46	0.44	44	0.72	48
	1600	2038	2399	37-59-86	0.84	52	0.66	50	1.10	54

Performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Static Pressure: Inches of water gauge required.

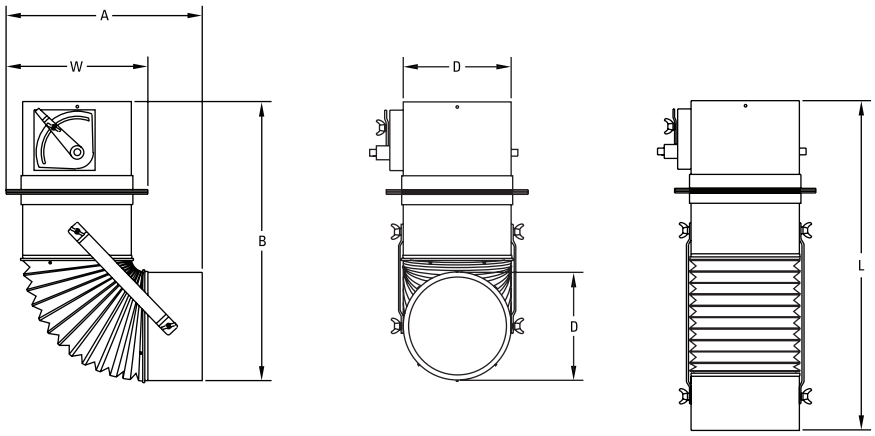
Projection: Projection distance [THROW] in feet from the Louver discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Discharge Velocity: Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100 fpm, and 50 fpm respectively.

ADN/ADNA

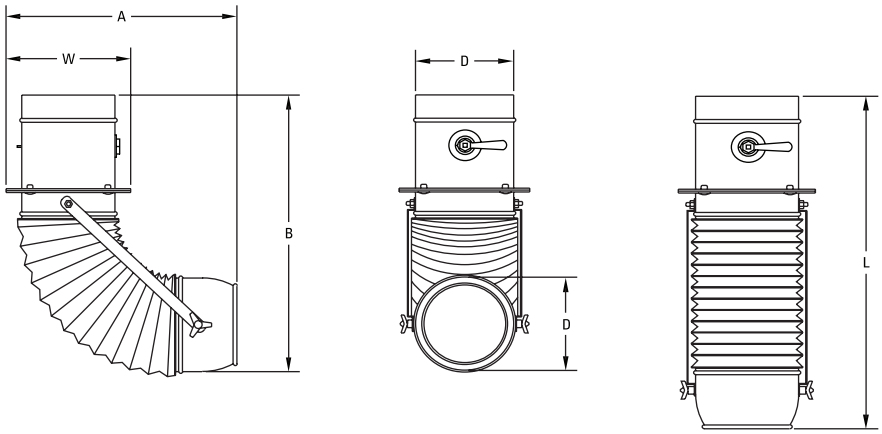
ADN



ADN Dimensions in Inches

MODEL	D	W	L	A	B
ADN-08	8	10 3/4	26 3/4	16 1/2	24-1/4
ADN-10	10	12 3/4	27 3/4	18 1/2	25
ADN-12	12	14 3/4	28 3/4	20	25 3/4

ADNA



ADNA Dimensions in Inches

MODEL	D	W	L	A	B
ADNA-06	6	8	18	15	17
ADNA-08	8	10	20 1/4	17	18
ADNA-10	10	12	24	20 1/2	20
ADNA-12	12	14 3/4	26 1/2	25	22

Adjustability

Directional control adjustable through a 180° degree deflection of air stream.

Directional control adjustable through a 360° degree range of motion using a "ring to ring" turret-style rotation.

Air volume control adjustable with locking quadrant damper.

Construction

Heavy Gauge Steel (ADN)

Heavy Gauge Aluminum (ADNA)

Coated Fiberglass Cloth Fabric

Finishes

Standard: Safety Orange (ADN)

Standard: #72 Silver Metallic (ADNA)

Custom colors available

MODEL	Air Flow (CFM)	Duct Velocity	0° Deflection Ps	0° Deflection NC	45° Deflection Ps	45° Deflection NC	90° Deflection Ps	90° Deflection NC	Vt Projection
ADN-08	200	573	0.03	<20	0.05	<20	0.06	<20	3-8-16
	300	859	0.06	20	0.11	26	0.14	29	5-12-22
	400	1146	0.11	28	0.20	33	0.24	35	8-16-27
	500	1432	0.17	33	0.32	38	0.38	40	10-20-30
	600	1719	0.25	37	0.45	42	0.54	44	11-23-33
	700	2005	0.34	41	0.62	46	0.74	48	12-25-36
	800	2292	0.44	45	0.80	49	0.95	51	13-27-38
ADN-10	300	550	0.02	<20	0.04	<20	0.06	22	4-10-19
	400	733	0.04	<20	0.08	23	0.12	27	6-13-26
	600	1100	0.09	29	0.18	33	0.26	37	9-18-33
	800	1466	0.14	37	0.32	41	0.46	44	12-24-38
	1000	1833	0.25	42	0.49	46	0.72	49	15-30-43
	1200	2200	0.35	48	0.71	52	1.04	55	18-36-52
	1400	2566	0.48	51	0.96	55	1.42	58	21-42-61
ADN-12	400	509	0.02	<20	0.03	<20	0.04	<20	5-11-22
	700	891	0.05	<20	0.10	22	0.13	25	9-19-36
	1000	1273	0.11	28	0.20	33	0.27	35	13-27-43
	1300	1655	0.19	35	0.34	40	0.46	42	16-34-49
	1600	2037	0.28	41	0.51	45	0.70	47	18-38-54
	1900	2419	0.39	46	0.72	50	1.00	52	20-42-59
	2200	2800	0.53	50	0.97	54	1.33	56	22-45-63
ADNA-06	100	573	0.03	<20	0.05	<20	0.06	<20	3-8-16
	150	859	0.06	20	0.11	26	0.14	29	5-12-22
	200	1146	0.11	28	0.20	33	0.24	35	8-16-27
	250	1432	0.17	33	0.32	38	0.38	40	10-20-30
	300	1719	0.25	37	0.45	42	0.54	44	11-23-33
	350	2005	0.34	41	0.62	46	0.74	48	12-25-36
	400	2292	0.44	45	0.80	49	0.95	51	13-27-38
ADNA-08	200	550	0.02	<20	0.04	<20	0.06	22	4-10-19
	300	733	0.04	<20	0.08	23	0.12	27	6-13-26
	400	1100	0.09	29	0.18	33	0.26	37	9-18-33
	500	1466	0.14	37	0.32	41	0.46	44	12-24-38
	600	1833	0.25	42	0.49	46	0.72	49	15-30-43
	700	2200	0.35	48	0.71	52	1.04	55	18-36-52
	800	2566	0.48	51	0.96	55	1.42	58	21-42-61
ADNA-10	300	509	0.02	<20	0.03	<20	0.04	<20	5-11-22
	400	891	0.05	<20	0.10	22	0.13	25	9-19-36
	500	1273	0.11	28	0.20	33	0.27	35	13-27-43
	600	1655	0.19	35	0.34	40	0.46	42	16-34-49
	800	2037	0.28	41	0.51	45	0.70	47	18-38-54
	1000	2419	0.39	46	0.72	50	1.00	52	20-42-59
	1200	2800	0.53	50	0.97	54	1.33	56	22-45-63
ADNA-12	400	509	0.02	<20	0.03	<20	0.04	<20	5-11-22
	700	891	0.05	<20	0.10	22	0.13	25	9-19-36
	1000	1273	0.11	28	0.20	33	0.27	35	13-27-43
	1300	1655	0.19	35	0.34	40	0.46	42	16-34-49
	1600	2037	0.28	41	0.51	45	0.70	47	18-38-54
	1900	2419	0.39	46	0.72	50	1.00	52	20-42-59
	2200	2800	0.53	50	0.97	54	1.33	56	22-45-63

performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

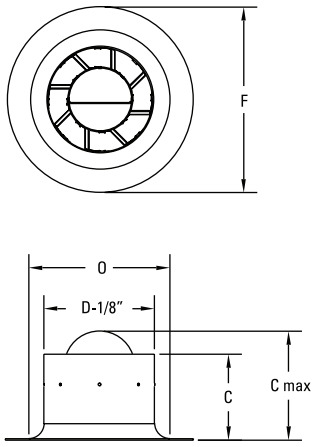
Pressure Static: Inches of water gauge required [Ps].

Projection: Projection distance [THROW] in feet from the nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Nozzle Velocity: Nozzle Discharge Velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

VTX

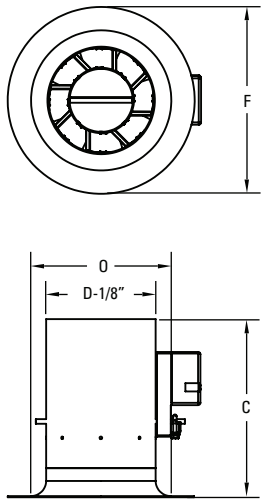


The **Vortex** provides the versatility of a radial jet dispersion and generators that spin the air in a uniform horizontal 360° degree discharge pattern.

VTX Dimensions in Inches

MODEL	SIZE	C	C-MAX	D	F	O
VTX-06	6	4 1/4	5 1/2	6	10	7 1/2
VTX-08	8	5	6 7/8	8	12	9 1/2
VTX-10	10	5 1/2	7 7/8	10	15	11 7/8
VTX-12	12	6 1/4	9 1/4	12	17	13 7/8
VTX-14	14	8	11 1/2	14	20	17 7/8
VTX-16	16	9	13 1/4	16	23	20 7/8

VTXM



The **Vortex** comes with a standard damper actuator, 24 VAC/DC, spring return. Contact factory for more information.

VTXM Dimensions in Inches

MODEL	SIZE	C	D	F	O
VTXM-06	6	10 3/4	6	10	7 1/2
VTXM-08	8	10 3/4	8	12	9 1/2
VTXM-10	10	10 3/4	10	15	11 7/8
VTXM-12	12	10 3/4	12	17	13 7/8
VTXM-14	14	11 1/4	14	20	17 7/8
VTXM-16	16	11 3/4	16	23	20 7/8

Adjustability

Adjusted from horizontal to vertical discharge by opening the center-mounted diverter plate.

Construction

Heavy Gauge Aluminum Construction

Finishes

Standard: #72 Silver metallic powder coat
Optional standard: #00 Mill
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

MODEL	Duct Velocity (FPM) / Velocity Pressure ("WG)	400 0.010	500 0.016	600 0.023	700 0.031	800 0.040	900 0.051	1000 0.063
VTX/VTXM-06	Air Flow (CFM)	78	98	118	137	157	176	196
	Total Pressure ("WG) Radial	0.133	0.207	0.298	0.406	0.530	0.671	0.828
	Noise Criteria (NC) Radial	22	28	32	36	40	43	46
	Radius of Diffusion (FT) Radial	2-3-4	2-3-5	2-3-6	3-4-7	3-4-8	3-5-9	4-6-11
	Total Pressure ("WG) Vertical	0.021	0.032	0.047	0.064	0.083	0.105	0.130
	Noise Criteria (NC) Vertical	<15	<15	<15	16	20	23	26
	Vertical Projection (FT) Vertical	4-8	5-10	6-12	7-15	9-18	10-20	11-22
VTX/VTXM-08	Air Flow (CFM)	140	175	209	244	279	314	349
	Total Pressure ("WG) Radial	0.128	0.199	0.287	0.390	0.510	0.645	0.797
	Noise Criteria (NC) Radial	24	30	34	38	42	45	48
	Radius of Diffusion (FT) Radial	3-4-7	3-4-9	4-5-10	4-6-11	4-7-12	5-7-13	5-8-14
	Total Pressure ("WG) Vertical	0.020	0.030	0.044	0.060	0.078	0.099	0.122
	Noise Criteria (NC) Vertical	<15	<15	<15	17	21	24	27
	Vertical Projection (FT) Vertical	6-13	7-15	8-16	10-20	12-24	13-25	14-28
VTX/VTXM-10	Air Flow (CFM)	218	273	327	382	436	491	545
	Total Pressure ("WG) Radial	0.110	0.172	0.248	0.337	0.440	0.557	0.688
	Noise Criteria (NC) Radial	26	31	36	40	44	47	50
	Radius of Diffusion (FT) Radial	3-4-8	3-5-10	4-6-11	4-7-13	5-8-14	6-9-16	6-10-17
	Total Pressure ("WG) Vertical	0.023	0.035	0.051	0.069	0.090	0.114	0.141
	Noise Criteria (NC) Vertical	<15	<15	17	21	24	27	30
	Vertical Projection (FT) Vertical	7-14	8-16	9-18	11-22	14-28	15-30	16-32
VTX/VTXM-12	Air Flow (CFM)	314	393	471	550	628	707	785
	Total Pressure ("WG) Radial	0.120	0.187	0.270	0.368	0.480	0.608	0.750
	Noise Criteria (NC) Radial	27	32	37	41	45	48	51
	Radius of Diffusion (FT) Radial	3-5-9	3-6-12	4-7-14	5-8-16	6-10-17	6-11-18	7-11-19
	Total Pressure ("WG) Vertical	0.021	0.033	0.048	0.065	0.085	0.108	0.133
	Noise Criteria (NC) Vertical	<15	<15	18	23	26	29	32
	Vertical Projection (FT) Vertical	8-16	9-18	10-20	13-26	16-32	17-34	18-36
VTX/VTXM-14	Air Flow (CFM)	428	535	641	748	855	962	1069
	Total Pressure ("WG) Radial	0.110	0.172	0.248	0.337	0.440	0.557	0.688
	Noise Criteria (NC) Radial	28	33	38	42	46	49	52
	Radius of Diffusion (FT) Radial	4-6-10	4-7-13	5-8-16	6-9-18	7-11-19	7-12-21	8-13-22
	Total Pressure ("WG) Vertical	0.023	0.035	0.051	0.069	0.090	0.114	0.141
	Noise Criteria (NC) Vertical	<15	15	19	24	27	30	33
	Vertical Projection (FT) Vertical	10-20	11-23	13-26	15-30	18-36	20-40	21-42
VTX/VTXM-16	Air Flow (CFM)	558	698	838	977	1117	1256	1396
	Total Pressure ("WG) Radial	0.100	0.156	0.225	0.306	0.400	0.506	0.625
	Noise Criteria (NC) Radial	30	35	40	44	48	51	54
	Radius of Diffusion (FT) Radial	5-7-12	6-8-15	6-10-18	7-11-20	8-13-22	9-14-23	10-16-24
	Total Pressure ("WG) Vertical	0.020	0.031	0.045	0.061	0.080	0.101	0.125
	Noise Criteria (NC) Vertical	<15	17	21	26	29	32	35
	Vertical Projection (FT) Vertical	12-24	14-28	16-32	18-36	20-40	22-44	23-46

performance data based on ASHRAE 70-06

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level Re: 10-12 watts.

Airflow CFM: Standard air density and isothermal conditions.

Terminal Velocity: Maximum velocity (Vt) in feet per minute at the specified distance from the outlet face (THROW) 150 fpm, 100 fpm and 50 fpm respectively.

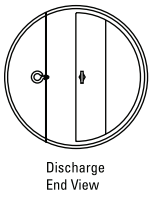
Radius of Diffusion: Horizontal distance (THROW) in feet from the Diffuser at which the maximum velocity has been reduced to specified terminal velocity (Vt).

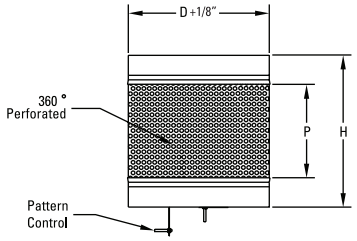
Vertical Projection: Projection distance [THROW] in feet -minimum value is 20-degree heating to 0 fpm terminal velocity and maximum value is 20-degree cooling to 100 fpm terminal velocity.

Total Pressure: Inches of water gauge required.

FVO-A/B

FVO-A

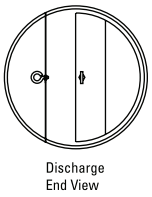


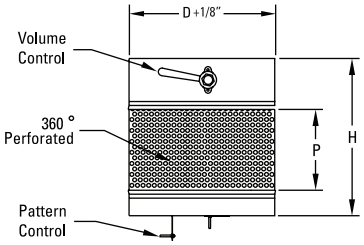


FVO-A Dimensions in Inches

MODEL	INLET D	DISCHARGE D	H	P	PERF. AREA(IN²)	PERF. FREE AREA(IN²)
FVO-06-A	6	6	9	4	70	28
FVO-08-A	8	8	11	5	125	50
FVO-10-A	10	10	12	6	200	79
FVO-12-A	12	12	14	8	290	115
FVO-14-A	14	14	15	9	390	155
FVO-16-A	16	16	16	10	500	202
FVO-18-A	18	18	17	11	640	255
FVO-20-A	20	20	19	13	820	325
FVO-22-A	22	22	20	14	970	385
FVO-24-A	24	24	21	15	1130	460

FVO-B





FVO-B Dimensions in Inches

MODEL	INLET D	DISCHARGE D	H	P	PERF. AREA(IN²)	PERF. FREE AREA(IN²)
FVO-06-B	6	6	11 ½	4	70	28
FVO-08-B	8	8	13 ½	5	125	50
FVO-10-B	10	10	14 ½	6	200	79
FVO-12-B	12	12	15 ½	8	290	115
FVO-14-B	14	14	17 ½	9	390	155
FVO-16-B	16	16	18 ½	10	500	202
FVO-18-B	18	18	19 ½	11	640	255
FVO-20-B	20	20	21	13	820	325
FVO-22-B	22	22	23	14	970	385
FVO-24-B	24	24	25	15	1130	460

Adjustability

Doors open - open jet,full velocity
Doors partially closed - wider pattern, reduced velocity.
Doors closed - wide angle hollow cone pattern, lowest velocity.

Construction

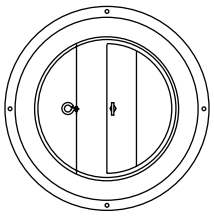
Heavy gauge steel

Finishes

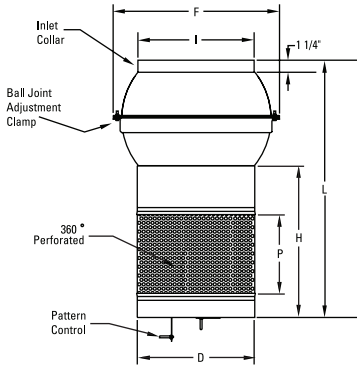
Standard: #72 Silver metallic powder coat
Optional standard:
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

FVO-C/D

FVO-C



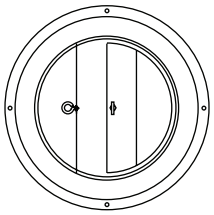
Discharge
End View



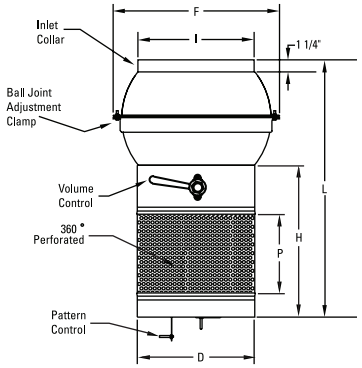
FVO-C Dimensions in Inches

MODEL	INLET I	DISCHARGE D	F	L	H	P	PERF. AREA(IN²)	PERF. FREE AREA(IN²)
FVO-06-C	5 7/8	6	11 1/4	17 1/2	9	4	70	28
FVO-08-C	7 7/8	8	14	21 1/2	11	5	125	50
FVO-10-C	9 7/8	10	15 3/4	22	12	6	200	79
FVO-12-C	11 7/8	12	17	23 1/2	13	8	290	115
FVO-14-C	13 7/8	14	20 1/8	26 3/4	15	9	390	155
FVO-16-C	15 7/8	16	22	30 1/4	16 1/2	10	507	201

FVO-D



Discharge
End View



FVO-D Dimensions in Inches

MODEL	INLET I	DISCHARGE D	F	L	H	P	PERF. AREA(IN²)	PERF. FREE AREA(IN²)
FVO-06-D	5 7/8	6	11 1/4	20	11 1/2	4	70	28
FVO-08-D	7 7/8	8	14	24	13 1/2	5	125	50
FVO-10-D	9 7/8	10	15 3/4	24 1/2	14 1/2	6	200	79
FVO-12-D	11 7/8	12	17	26	15 1/2	8	290	115
FVO-14-D	13 7/8	14	20 1/8	29 1/4	17 1/2	9	390	155
FVO-16-D	15 7/8	16	22	32 3/4	19	10	507	201

Adjustability

Doors open - open jet,full velocity
Doors partially closed - wider pattern, reduced velocity.
Doors closed - wide angle hollow cone pattern, lowest velocity.

Construction

Heavy gauge steel

Finishes

Standard: #72 Silver metallic powder coat
Optional standard:
#12 Anodized powder coat
#42 Gloss black powder coat
#43 Flat black powder coat
#52 White powder coat
#62 Grey prime powder coat
Custom colors available

FVO [Performance Data]

MODEL	Discharge Velocity	1000	1200	1400	1600	1800	2000
FVO-06	CFM	195	235	275	315	355	390
	Total Pressure	0.11	0.16	0.21	0.28	0.35	0.43
	NC	27	32	36	39	42	45
	Projection	5-12-21	7-14-23	8-17-24	10-18-26	11-20-28	12-21-29
FVO-08	CFM	350	420	490	560	630	700
	Total Pressure	0.11	0.15	0.21	0.27	0.34	0.42
	NC	30	34	38	41	44	47
	Projection	7-16-28	9-19-30	11-22-33	13-25-35	14-26-37	16-28-39
FVO-10	CFM	545	655	765	870	980	1090
	Total Pressure	0.10	0.15	0.20	0.26	0.33	0.41
	NC	32	36	40	43	46	49
	Projection	8-20-34	12-24-38	14-28-41	16-31-43	18-33-46	20-34-49
FVO-12	CFM	785	940	1100	1255	1415	1570
	Total Pressure	0.10	0.14	0.19	0.25	0.32	0.39
	NC	33	38	42	45	48	51
	Projection	10-24-41	14-29-45	17-34-49	19-37-52	22-39-55	24-41-58
FVO-14	CFM	1010	1210	1410	1615	1815	2015
	Total Pressure	0.10	0.14	0.19	0.24	0.31	0.38
	NC	34	39	43	46	49	52
	Projection	11-27-47	16-33-51	19-38-55	22-42-59	24-44-63	27-47-66
FVO-16	CFM	1395	1675	1955	2230	2510	2790
	Total Pressure	0.09	0.13	0.18	0.23	0.29	0.36
	NC	36	40	44	48	51	53
	Projection	13-32-55	19-38-60	22-45-65	26-49-70	29-52-74	32-55-78
FVO-18	CFM	1760	2110	2465	2815	3170	3520
	Total Pressure	0.09	0.13	0.17	0.23	0.28	0.35
	NC	37	41	45	49	52	54
	Projection	15-36-62	21-43-68	25-50-73	29-55-78	32-59-83	36-62-87
FVO-20	CFM	2182	2618	3055	3491	3928	4364
	Total Pressure	0.09	0.13	0.17	0.23	0.28	0.35
	NC	37	42	45	49	52	55
	Projection	19-38-64	22-44-70	25-51-75	27-55-80	32-62-88	36-65-94
FVO-22	CFM	2640	3168	3696	4224	4752	5280
	Total Pressure	0.09	0.12	0.17	0.22	0.28	0.34
	NC	38	43	47	51	54	56
	Projection	20-42-70	23-46-78	26-53-82	29-58-88	29-58-90	39-72-106
FVO-24	CFM	3132	3758	4385	5011	5638	6264
	Total Pressure	0.08	0.12	0.16	0.21	0.27	0.33
	NC	39	44	48	52	55	57
	Projection	22-44-75	25-50-88	28-56-95	33-62-100	38-76-108	40-80-112

Performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level. Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Louver discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Duct Velocity: Duct discharge velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the Duct Discharge [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

MODEL	Discharge Velocity	1000	1200	1400	1600	1800	2000
FVO-26	CFM	3687	4424	5162	5899	6637	7374
	Total Pressure	0.08	0.12	0.16	0.21	0.27	0.33
	NC	40	45	49	53	56	58
	Projection	24-48-82	27-54-92	30-60-102	34-64-109	39-73-116	42-79-126
FVO-28	CFM	4276	5131	5986	6842	7697	8552
	Total Pressure	0.08	0.11	0.15	0.20	0.26	0.32
	NC	41	46	50	54	57	59
	Projection	25-50-85	28-56-95	32-64-109	36-67-114	41-77-123	44-82-132

Performance data based on ASHRAE 70-06

Airflow CFM: Standard air density and isothermal conditions.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attenuation of 10db and based on Sound Power Level. Re: 10-12 watts.

Total Pressure: Inches of water gauge required.

Projection: Projection distance [THROW] in feet from the Louver discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Duct Velocity: Duct discharge velocity in feet per minute [fpm].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the Duct Discharge [THROW] 400 fpm, 200 fpm, and 100 fpm respectively.

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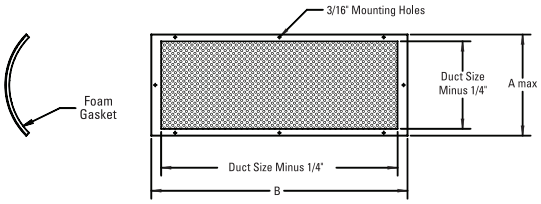
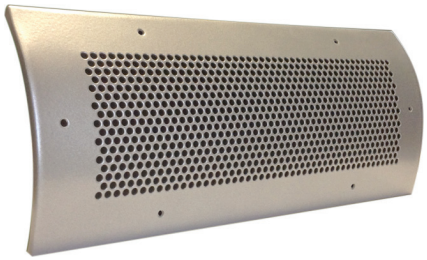
DMPG





DMPG Dimensions in Inches

MODEL	A	B	Duct Opening	Minimum Duct Dia.	Mount Holes
DMPG-1204	6 1/4	14 1/4	12 x 4	8	6
DMPG-2404	6 1/4	26 1/4	24 x 4	8	10
DMPG-3604	6 1/4	38 1/4	36 x 4	8	12
DMPG-1206	8 1/4	14 1/4	12 x 6	8	6
DMPG-2406	8 1/4	26 1/4	24 x 6	8	10
DMPG-3606	8 1/4	38 1/4	36 x 6	8	12
DMPG-1208	10 1/4	14 1/4	12 x 8	10	6
DMPG-2408	10 1/4	26 1/4	24 x 8	10	10
DMPG-3608	10 1/4	38 1/4	36 x 8	10	12
DMPG-1210	12 1/4	14 1/4	12 x 10	12	8
DMPG-2410	12 1/4	26 1/4	24 x 10	12	12
DMPG-3610	12 1/4	38 1/4	36 x 10	12	14
DMPG-1212	14 1/4	14 1/4	12 x 12	14	8
DMPG-2412	14 1/4	26 1/4	24 x 12	14	12
DMPG-3612	14 1/4	38 1/4	36 x 12	14	14

Versatility

Can be utilized for supply, return or exhaust air.
Custom Round Duct Mount

Construction

Heavy Gauge Aluminum Construction
Foam gasket

Finishes

Standard: #72 Silver Metallic Powder Coat
Custom colors available

Supply Air Flow Data

*** See website for Extract Air Flow Data**

Model Size	Opening Area	Opening Velocity Static Pressure	400 0.05	500 0.07	600 0.1	700 0.13	800 0.17	1000 0.25	1200 0.33
DMPG-1204	0.306	CFM	122	153	184	214	245	306	367
		NC	•	•	•	20	22	26	29
		Projection	4-8-17	5-10-19	6-12-21	7-15-23	8-17-24	10-19-27	12-21-30
DMPG-2404	0.618	CFM	247	309	371	433	494	618	742
		NC	•	•	22	24	26	30	32
		Projection	6-12-24	8-15-27	9-18-30	11-21-32	12-24-35	15-27-39	18-30-42
DMPG-3604	0.931	CFM	372	465	559	652	745	931	1117
		NC	•	20	23	25	27	30	33
		Projection	7-14-29	9-18-34	11-21-37	12-25-40	14-29-42	18-34-47	21-37-52
DMPG-1206	0.469	CFM	188	235	281	328	375	469	563
		NC	•	•	21	24	26	29	32
		Projection	6-11-21	7-14-24	8-17-26	10-19-28	11-21-30	14-24-34	17-26-37
DMPG-2406	0.948	CFM	379	474	569	664	758	948	1138
		NC	•	20	23	25	27	30	33
		Projection	7-14-29	9-18-34	11-21-37	12-25-40	14-29-42	18-34-47	21-37-52
DMPG-3606	1.427	CFM	571	714	856	999	1141	1427	1712
		NC	•	•	20	22	24	27	30
		Projection	6-13-25	8-16-31	9-19-37	11-22-40	13-25-43	16-31-48	19-37-52
DMPG-1208	0.632	CFM	253	316	379	442	506	632	758
		NC	•	•	22	24	26	30	32
		Projection	6-12-24	8-15-27	9-18-30	11-21-32	12-24-35	15-27-39	18-30-42
DMPG-2408	1.278	CFM	511	639	767	895	1022	1278	1534
		NC	•	21	24	27	29	32	35
		Projection	8-17-34	11-21-39	13-25-43	15-30-47	17-34-50	21-39-56	25-43-61
DMPG-3608	1.924	CFM	770	962	1154	1347	1539	1924	2309
		NC	•	22	25	27	29	33	36
		Projection	9-20-40	12-25-48	15-30-53	17-35-57	20-39-61	25-48-68	30-53-75
DMPG-1210	0.795	CFM	318	398	477	557	636	795	954
		NC	•	•	22	24	26	30	33
		Projection	7-13-27	8-17-31	10-20-34	12-33-37	13-27-39	17-31-44	20-34-48
DMPG-2410	1.608	CFM	643	804	965	1126	1286	1608	1930
		NC	•	21	24	26	28	32	35
		Projection	8-18-36	11-22-44	13-27-48	16-31-52	18-36-56	22-44-62	27-48-68
DMPG-3610	2.421	CFM	968	1210	1453	1695	1937	2421	2905
		NC	•	23	26	28	30	33	36
		Projection	10-22-44	14-27-54	16-33-59	19-38-64	22-44-68	27-54-77	33-59-84
DMPG-1212	0.959	CFM	384	480	575	671	767	959	1151
		NC	•	20	23	25	27	31	34
		Projection	7-15-29	9-18-34	11-22-37	13-26-40	15-29-43	18-34-48	22-37-53
DMPG-2412	1.938	CFM	775	969	1163	1357	1550	1938	2326
		NC	•	22	25	27	29	33	36
		Projection	9-20-40	12-25-48	15-30-53	17-35-57	20-40-61	25-48-68	30-53-75
DMPG-3612	2.917	CFM	1167	1459	1750	2042	2337	2917	3500
		NC	20	24	26	29	31	34	37
		Projection	11-24-48	15-30-59	18-36-65	21-42-70	24-48-75	30-59-84	36-65-92

Performance data based on ASHRAE 70-06

Projection: Projection distance [THROW] in feet from the Nozzle discharge at which the maximum velocity has been reduced to specified terminal velocity [Vt].

Terminal Velocity: Maximum velocity [Vt] in feet per minute at the specified distance from the outlet face [THROW] 200 fpm, 100fpm and 50 fpm respectively.

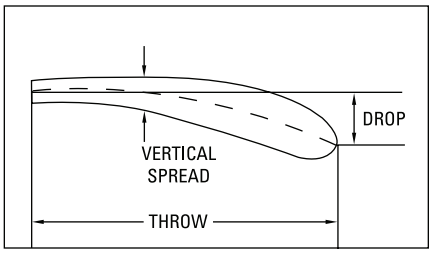
Airflow CFM: Standard air density and isothermal conditions.

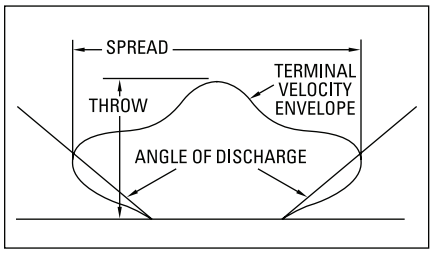
Static Pressure: Inches of water gauge required.

Noise Criteria: Noise criteria [NC] curve which is not exceeded with a Room Attnuation of 10db and based on Sound Power Level Re: 10-12 watts.

Engineering Guidelines

The purpose of a heating, ventilating, or air conditioning system is to create the proper combination of temperature, humidity and air motion which will provide comfort for the occupants of the conditioned room.





THROW, as defined in the ASHRAE Handbook of Fundamentals (1993), is "the horizontal or vertical axial distance an air stream travels after leaving an air outlet before the maximum stream velocity is reduced to a specified terminal velocity, e.g. 100, 150, 200 fpm..."AirConcepts uses the term PROJECTION interchangeably with Throw, because we think PROJECTION is a better description of the physical characteristics of what is being accomplished by forcing a concentrated column of air through a nozzle-type air distribution device.

DROP is the vertical distance that the lower edge of a horizontally projected air stream drops between the outlet and the end of its throw.

SPREAD is the divergence of the air stream in a horizontal or vertical plane after it leaves the outlet. The natural spread from a jet type outlet is approximately 22° included angle and can be approximated by one foot of spread for every three feet of throw.

The air stream characteristics for projected air flow from a nozzle are illustrated in Figure 1. There are three variables that determine how far the air can be projected and the velocity decay characteristics of the air stream: (1) air volume or mass of air flow, (2) discharge velocity or nozzle velocity, and (3) outlet configuration.

AIR VOLUME

In general, the larger the air volume or air mass, the further it can be projected. A projectile in excess of 100 pounds from a 16" naval gun with a muzzle velocity of 800 fps can travel up to 40 miles, while a rifle bullet which weighs less than one ounce and leaves the barrel at 3200 fps can only travel a mile.

DISCHARGE VELOCITY

When air exits from an opening at a higher velocity that the surrounding air, the surrounding air will be induced, aspirated, or entrained into the moving air stream. This induction of slower moving air results in an interchange of momentum such that the stream grows in mass as it moves forward, and the resultant velocity of the larger mass is decreasing as the air stream moves away from the opening. The greater the differential between the discharge velocity and the surrounding velocity, the greater is the induction; the greater the induction, the greater is the interchange of momentum.

OUTLET CONFIGURATION

The induction of room air into the moving air stream is a function of the discharge velocity, as previously discussed, and the exposed perimeter of the air stream. To project the air the greatest distance, a round nozzle has the least perimeter for any given discharge area.

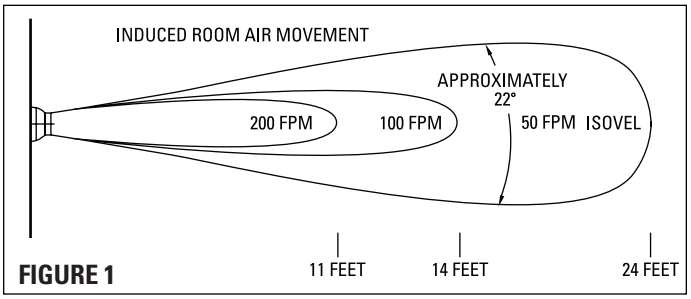
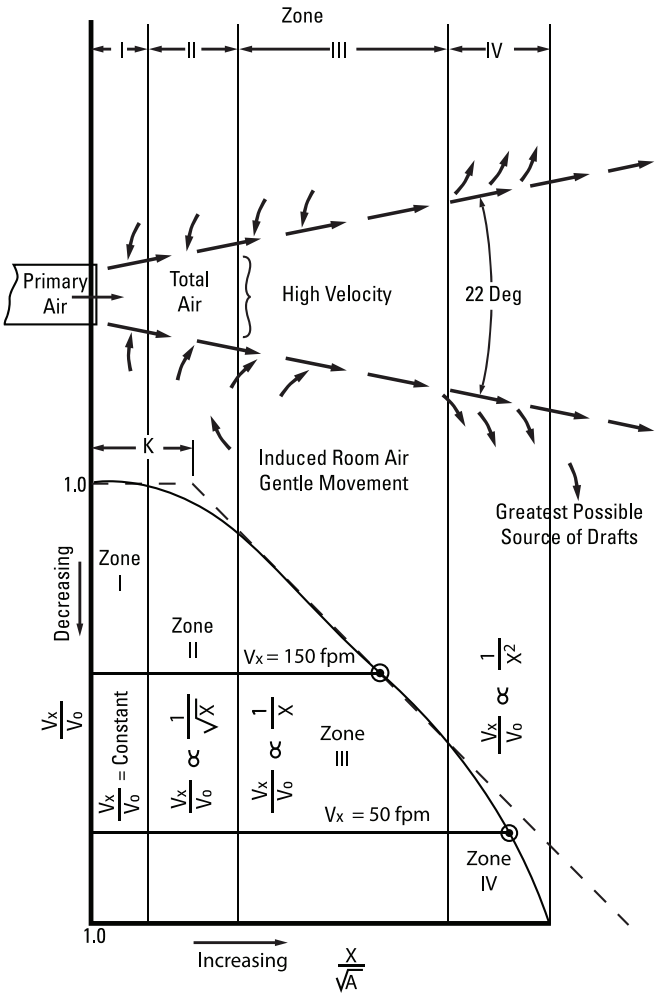


FIGURE 1

The zones of expansion for an isothermal jet can be described as follows, based on numerous observations and measurements by many investigators:



ZONE 1 A short zone, extending about four diameters from the outlet face (or vena contracta for orifice discharge), in which the maximum velocity of the air stream or the center line velocity remains practically unchanged.

ZONE 2 A transition zone, extending to about eight diameters for round outlets, or for rectangular outlets of small aspect ratio, over which maximum velocities vary inversely with the square root of the distance from the outlet. For rectangular outlets of large aspect ratio, this zone is elongated and extends from about four widths to a distance approximately equal to the width multiplied by four times the aspect ratio.

ZONE 3 A long zone, of major engineering importance, in which the maximum velocities vary inversely with the distance from the outlet. This zone is often called the zone of fully established turbulent flow and may be 25 to 100 diameter long, depending on the shape and area of the outlet, the initial velocity, and the dimensions of the space into which the outlet discharges.

ZONE 4 A terminal zone in which, in the case of confined spaces, the maximum velocity decreases at an increasing rate or, in the case of large spaces free from wall effects, the maximum velocity decreases rapidly, in a few diameters, to a velocity below 50 fpm.

ADPI

Using this draft temperature as our criteria, the comfort level of a space can be determined based on the Air Diffusion Performance Index (ADPI). ADPI is defined as the percentage of locations in the occupied space which meet the comfort criteria based on velocity and temperature measurements taken at a given number of uniformly distributed points. This ADPI value has proven to be a valid single number rating of an air diffusion system.

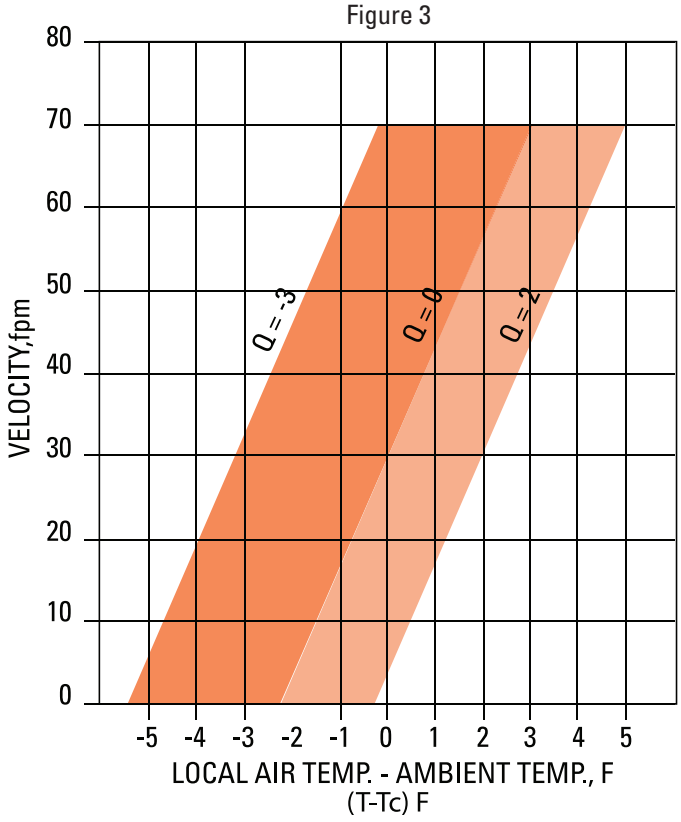
The ADPI rating of an air diffusion system depends on a number of factors:

- Outlet type
- Room dimensions and diffuser layout
- Room load
- Outlet throw

COMFORT CRITERIA

The true measure of the performance of any environmental system is that it maintains comfort of the occupants of the space it serves. Provided the total amount of heated or cooled air required to thermally satisfy the requirements of the space is available, the comfort level within the space becomes totally dependent upon the space air distribution. In general, comfort when related to anatomy can be described as the condition that exists when the heat generated by the body is balanced by some of the metabolic heat transfers through convection, the air, wall surfaces and other heat transfer mechanisms in the space.

Figure 3



Research indicates that a high percentage of people are comfortable where the effective draft temperature difference is between -3°F and +2°F. This comfort zone is illustrated as the shaded area in the figure 3 shown to the left.

ELEVATED AIR SPEED This standard ASHRAE 55 allows elevated air speed to be used to increase the maximum temperature for acceptability if the affected occupants are able to control the air speed. The amount that the temperature may be increased is shown in figure 2. The combinations of air speed and temperature defined by the lines in this figure result in the same heat loss from the skin. The reference point for these curves is the upper temperature limit of the comfort zone (PMV = +0.5) and 0.20 m/s (40 fpm) of air speed. This figure applies to a lightly clothed person (with clothing insulation between 0.5 clo and 0.7 clo) who is engaged in near sedentary physical activity (with metabolic rates between 1.0 met and 1.3 met).

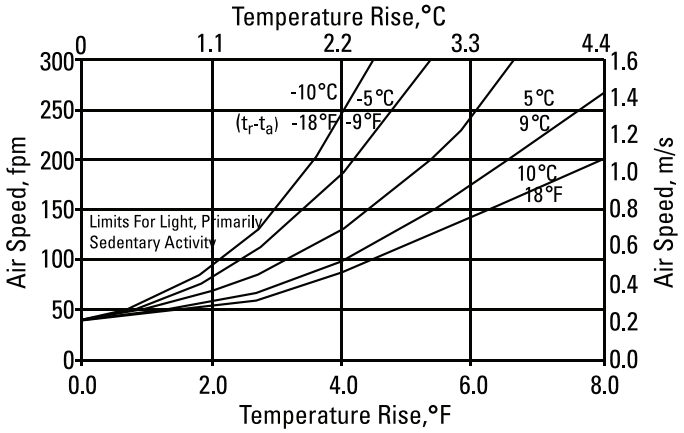


Figure 2 Air speed requied to offset increased temperature.

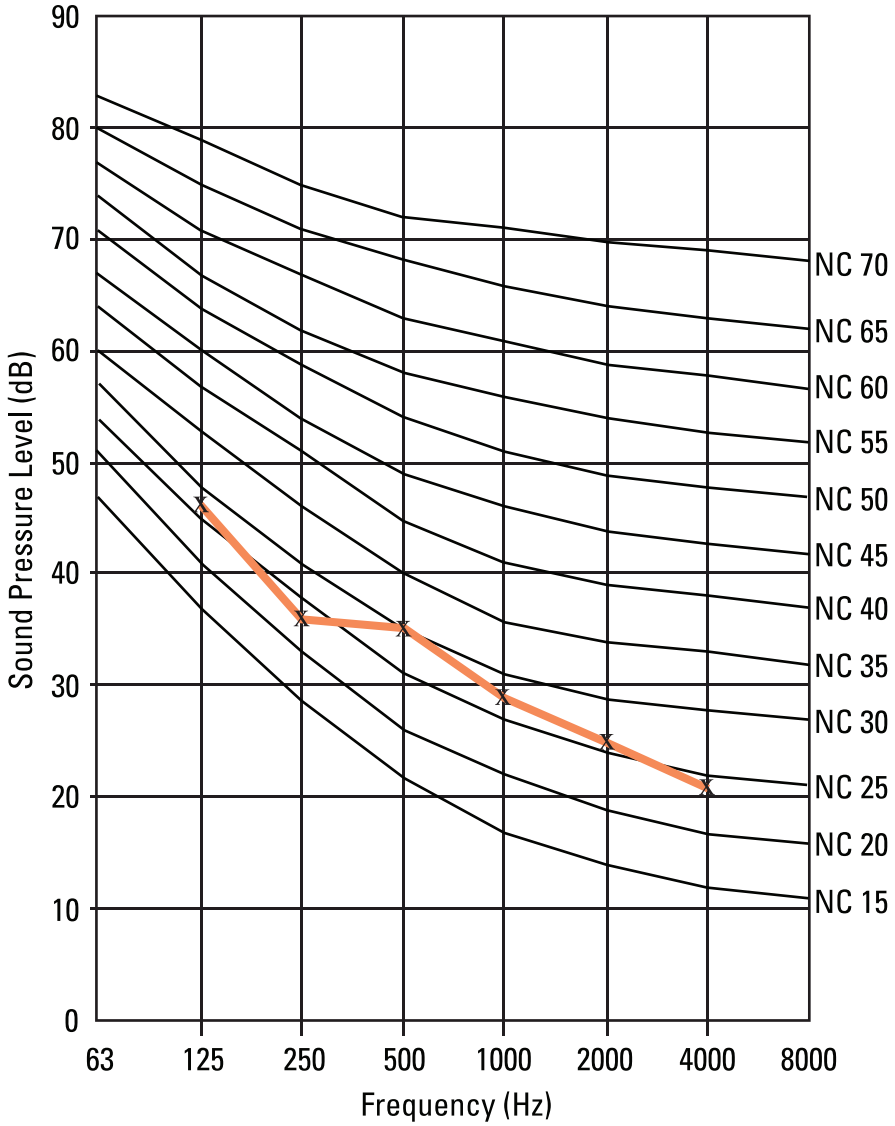
Per ANSI / ASHRAE STANDARD 55-2004

NOISE CRITERIA

Noise Criteria - NC - were established in U.S. for rating indoor noise, noise from air-conditioning equipment etc. In Europe it is common to use Noise Rating Curves - NR.

The method consists of a set of criteria curves extending from 63 to 8000 Hz, and a tangency rating procedure. The criteria curves define the limits of octave band spectra that must not be exceeded to meet occupant acceptance in certain spaces.

The NC rating can be obtained by plotting the octave band levels for a given noise spectrum - the NC curves. The noise spectrum is specified as having a NC rating same as the lowest NC curve which is not exceeded by the spectrum.



AirConcepts NC's are determined by ploting octave band 2-7 Sound poWer Levels minus a Room Absorption of 10dB.

Model	Nozzle Velocity	CFM		125	250	500	1K	2K	4K	Noise Criteria
APL-08	3000	313	SWL	57	47	45	39	35	31	30
			RA	-10	-10	-10	-10	-10	-10	
			SPL	47	37	35	29	25	21	

Notes

Notes

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