

PERFORATED CEILING DIFFUSERS

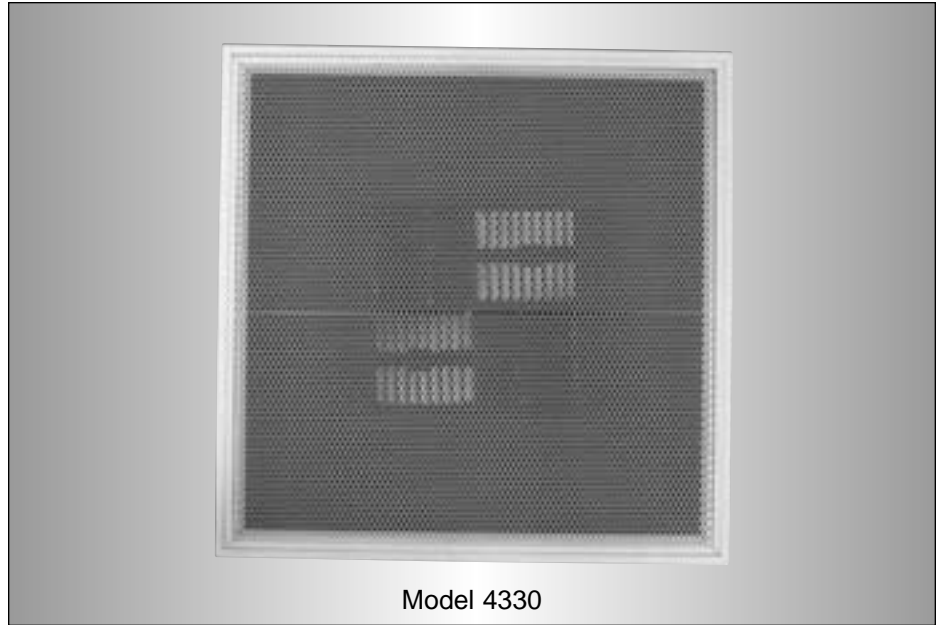
- SUPPLY
- PREMIUM ARCHITECTURAL QUALITY
- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN

Steel Face Model:

4330 Flush Face

Aluminum Face Model:

4330A Flush Face



Model 4330

The **Nailor Perforated Ceiling Diffusers** have been designed to provide both the unobtrusive, smooth appearance preferred by many architects and the high engineering performance required for use in heating and cooling applications. They project a tight, uniform horizontal blanket of air over a wide range of air volumes and provide excellent performance in variable air volume systems.

The **4330 Series** features an extruded aluminum frame with hairline mitered corners that encapsulates the perforated face providing a narrow, visible border within the T-Bar module. Four individual stamped pattern controllers mounted on the rear of the diffuser face are easily field adjustable to suit the desired air pattern.

FEATURES:

- Round or square necks available.
- Hinged, removable face plate with quick-release spring latches.
- Discharge pattern can adjust to vertical or 1, 2, 3 or 4-way horizontal, before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the pattern deflectors.
- Inlet collar has 1 1/4" (32) depth for easy duct connection.
- Dropping the perforated face gives access to the optional damper.
- Perforated face has 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area
- Return models (**4330R Series**) are available with the same face and frame construction as the supply models to match their appearance.

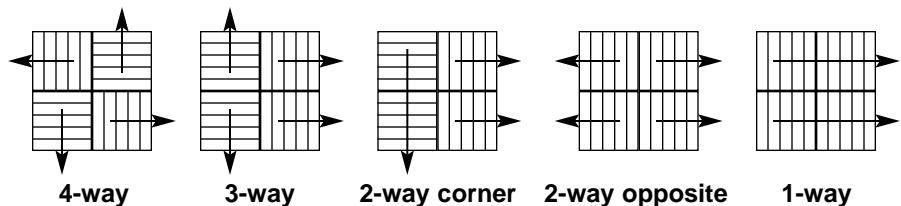
Material: Extruded aluminum border and frame, corrosion-resistant steel backpan. Corrosion-resistant steel or aluminum perforated face depending on model selection.

Finish: AW Appliance White baked enamel finish is standard. Other finishes are available.

D
CEILING DIFFUSERS

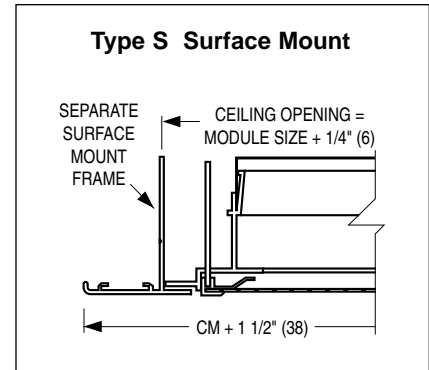
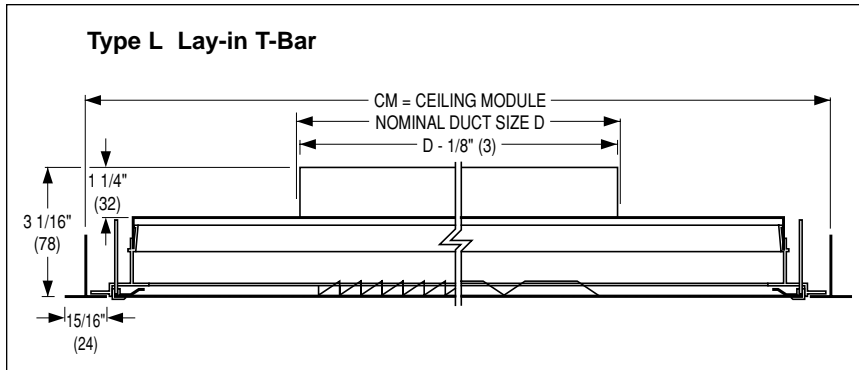
Available Air Patterns

All diffusers are shipped with the standard 4-way pattern, but the air pattern can be simply field adjusted by lowering the hinged face and rotating the spring loaded pattern controllers.



Dimensional Data and Frame Types

Models 4330, 4330A • Supply • Flush Face



Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D			
Imperial Modules	Metric Modules	Round Neck		Square Neck	
		Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	5, 6, 7, 8	127, 152, 178, 203	6 x 6, 8 x 8	152 x 152, 203 x 203
24 x 12	600 x 300	5, 6, 7, 8	127, 152, 178, 203	6 x 6, 8 x 8, 18 x 6	152 x 152, 203 x 203, 457 x 152
16 x 16	400 x 400	5, 6, 7, 8, 10	127, 152, 178, 203, 254	6 x 6, 8 x 8	152 x 152, 203 x 203
20 x 20	500 x 500	5, 6, 7, 8, 10, 12, 14	127, 152, 178, 203, 254, 305, 356	6 x 6, 8 x 8, 10 x 10	152 x 152, 203 x 203, 254 x 254
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16	152, 203, 254, 305, 356, 381, 406	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356

D

CEILING DIFFUSERS

HOW TO SPECIFY OR TO ORDER

(Show complete Model Number and Size, unless "Default" is desired).

Premium Perforated Supply Ceiling Diffusers – Model Series 4330

4330 - 08 - 24 x 24 - L - AW - -

MODEL

- Steel Face 4330
- Aluminum Face 4330A

NECK SIZE (inches)

Round

05, 06, 07, 08, 10, 12, 14, 15, 16

Square/Rectangular

6 x 6, 8 x 8, 10 x 10, 12 x 12,
14 x 14, 15 x 15, 16 x 16, 18 x 6

CEILING MODULE

Imperial (inches) Metric (mm)

- 12 x 12 300 x 300
- 16 x 16 400 x 400
- 20 x 20 500 x 500
- 24 x 12 600 x 300
- 24 x 24 600 x 600
- 48 x 24 1200 x 600

ACCESSORIES

- None (default) —
- External Foil Back Insulation EX
- Earthquake Tabs EQT

AIR BALANCING DEVICES

Round Neck

- Radial Sliding Blade Damper 4250
- Radial Opposed Blade Damper 4275
- Butterfly Damper 4675
- Equalizing Grid EGR
- Damper/Equalizing Grid DEGR

Square/Rectangular Neck

- Opposed Blade Damper OBD
- Equalizing Grid (long) EGL
- Equalizing Grid (short) EGS
- Damper/Equalizing Grid (long) DEGL
- Damper/Equalizing Grid (short) DEGS

FINISH

- Appliance White (default) AW
- Special Custom Color SP
- AW Face/Black Backpan BA

FRAME TYPE

- Lay-in T-Bar L
- Surface Mount S

D
CEILING DIFFUSERS

Note:

1. Consult individual models as to limitations and availability of ceiling module and neck size combinations.
2. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one) **4330** (corrosion-resistant steel face) or **4330A** (aluminum face) **Premium Architectural Perforated Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a corrosion-resistant steel backpan with a round or square neck as specified, and an extruded aluminum border/frame that encapsulates the perforated face. The perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the rear of the perforated face shall be four individually stamped, square pattern deflectors that are easily field rotated to provide throws in 1, 2, 3 or 4-way patterns. The face shall include spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70 – 1991.

Performance Data

Models 4330, 4330A • Flush Face • 12 x 12 (300 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400	
5" Dia.	VP	.006	.010	.016	.023	.031	.040	.063	.090	.123	
	TP	.011	.019	.030	.044	.059	.076	.120	.171	.234	
	Flow Rate, CFM	40	55	70	80	95	110	135	165	190	
	T	4-Way	1-2-4	2-2-5	2-3-6	2-4-7	3-5-7	3-6-8	5-6-9	6-7-10	6-7-10
		3-Way	1-2-4	2-3-6	2-3-7	2-4-8	3-5-9	4-6-10	5-7-10	6-8-12	6-9-13
2-Way		1-2-5	2-3-6	2-4-8	3-5-10	4-6-10	4-7-12	6-8-13	7-10-14	7-10-15	
1-Way		2-3-6	2-4-8	3-5-9	4-6-10	5-7-11	6-8-13	6-9-13	8-10-14	9-10-15	
NC	—	—	15	20	24	24	34	39	43		
6" Dia.	VP	.015	.025	.040	.058	.078	.100	.158	.225	.308	
	TP	.015	.025	.040	.058	.078	.100	.158	.225	.308	
	Flow Rate, CFM	60	80	100	120	140	160	195	235	275	
	T	4-Way	1-2-4	2-3-5	3-3-7	3-4-8	3-5-8	3-6-9	5-7-10	6-8-10	7-8-11
		3-Way	1-2-4	2-3-6	3-3-8	3-4-9	3-5-10	4-6-10	5-8-11	6-9-13	7-10-14
2-Way		1-2-5	2-3-7	3-4-9	3-5-10	4-6-11	4-7-12	6-9-14	7-10-15	8-11-17	
1-Way		2-3-6	3-4-9	3-5-11	4-6-11	5-8-12	6-9-13	7-10-15	9-10-16	10-12-17	
NC	—	—	17	22	26	30	36	41	45		
7" Dia.	VP	.016	.028	.040	.066	.092	.118	.187	.262	.360	
	TP	.016	.028	.040	.066	.092	.118	.187	.262	.360	
	Flow Rate, CFM	80	105	135	160	190	215	270	320	375	
	T	4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
		3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
2-Way		1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20	
1-Way		2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20	
NC	—	15	21	26	30	34	40	45	49		
8" Dia.	VP	.019	.034	.053	.077	.104	.136	.213	.306	.417	
	TP	.019	.034	.053	.077	.104	.136	.213	.306	.417	
	Flow Rate, CFM	105	140	175	210	245	280	350	420	490	
	T	4-Way	1-3-6	2-4-8	4-4-10	4-6-11	4-7-12	5-8-12	6-10-13	8-11-14	9-12-16
		3-Way	1-3-6	2-4-8	4-5-11	4-6-13	5-7-13	5-9-14	7-11-16	9-13-18	10-13-19
2-Way		1-3-7	2-5-10	4-6-12	4-7-14	5-8-15	6-10-17	8-12-19	10-14-21	12-16-22	
1-Way		3-4-9	4-6-12	5-7-13	6-9-14	7-10-15	8-12-17	10-13-19	13-14-21	13-16-22	
NC	—	17	23	28	32	36	42	47	51		
6 x 6	VP	.018	.032	.051	.073	.099	.130	.200	.292	.395	
	TP	.018	.032	.051	.073	.099	.130	.200	.292	.395	
	Flow Rate, CFM	75	100	125	150	175	200	250	300	350	
	T	4-Way	1-2-5	2-3-6	3-4-8	3-5-9	4-6-9	4-7-10	6-8-11	7-9-12	8-9-13
		3-Way	1-2-5	2-4-7	3-4-9	3-5-10	4-6-11	5-7-12	6-9-13	7-10-15	8-11-16
2-Way		1-2-6	2-4-8	3-5-10	4-6-12	5-7-13	5-8-14	7-10-16	8-12-17	9-13-19	
1-Way		2-4-7	3-5-10	4-6-11	5-7-12	6-9-13	7-10-14	8-11-16	10-12-17	11-13-19	
NC	—	13	19	24	28	32	38	43	47		

Models 4330, 4330A • Flush Face • 24 x 12 (600 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400	
5" Dia.	VP	.006	.010	.016	.023	.031	.040	.063	.090	.123	
	TP	.010	.018	.028	.040	.054	.070	.110	.157	.215	
	Flow Rate, CFM	40	55	70	80	95	110	135	165	190	
	T	4-Way	1-2-4	2-2-5	2-3-6	2-4-7	3-5-7	3-6-8	5-6-9	6-7-10	6-7-10
		3-Way	1-2-4	2-3-6	2-3-7	2-4-8	3-5-9	4-6-10	5-7-10	6-8-12	6-9-13
2-Way		1-2-5	2-3-6	2-4-8	3-5-10	4-6-10	4-7-12	6-8-13	7-10-14	7-10-15	
1-Way		2-3-6	2-4-8	3-5-9	4-6-10	5-7-11	6-8-13	6-9-13	8-10-14	9-10-15	
NC	—	—	14	19	23	27	33	38	42		
6" Dia.	VP	.013	.021	.034	.048	.065	.084	.132	.189	.258	
	TP	.013	.021	.034	.048	.065	.084	.132	.189	.258	
	Flow Rate, CFM	60	80	100	120	140	160	195	235	275	
	T	4-Way	1-2-4	2-3-5	3-3-7	3-4-8	3-5-8	3-6-9	5-7-10	6-8-10	7-8-11
		3-Way	1-2-4	2-3-6	3-3-8	3-4-9	3-5-10	4-6-10	5-8-11	6-9-13	7-10-14
2-Way		1-2-5	2-3-7	3-4-9	3-5-10	4-6-11	4-7-12	6-9-14	7-10-15	8-11-17	
1-Way		2-3-6	3-4-9	3-5-11	4-6-11	5-8-12	6-9-13	7-10-15	9-10-16	10-12-17	
NC	—	—	17	22	26	30	36	41	45		
7" Dia.	VP	.015	.025	.039	.057	.076	.098	.155	.221	.302	
	TP	.015	.025	.039	.057	.076	.098	.155	.221	.302	
	Flow Rate, CFM	80	105	135	160	190	215	270	320	375	
	T	4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
		3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
2-Way		1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20	
1-Way		2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20	
NC	—	14	20	25	29	33	39	44	48		
8" Dia.	VP	.014	.026	.040	.058	.079	.103	.160	.231	.314	
	TP	.014	.026	.040	.058	.079	.103	.160	.231	.314	
	Flow Rate, CFM	105	140	175	210	245	280	350	420	490	
	T	4-Way	1-3-6	2-4-8	4-4-10	4-6-11	4-7-12	5-8-12	6-10-13	8-11-14	9-12-16
		3-Way	1-3-6	2-4-8	4-5-11	4-6-13	5-7-13	5-9-14	7-11-16	9-13-18	10-13-19
2-Way		1-3-7	2-5-10	4-6-12	4-7-14	5-8-15	6-10-17	8-12-19	10-14-21	12-16-22	
1-Way		3-4-9	4-6-12	5-7-13	6-9-14	7-10-15	8-12-17	10-13-19	13-14-21	13-16-22	
NC	—	16	22	27	31	35	41	46	50		
6 x 6	VP	.017	.030	.048	.069	.094	.122	.189	.274	.374	
	TP	.017	.030	.048	.069	.094	.122	.189	.274	.374	
	Flow Rate, CFM	75	100	125	150	175	200	250	300	350	
	T	4-Way	1-2-5	2-3-6	3-4-8	3-5-9	4-6-9	4-7-10	6-8-11	7-9-12	8-9-13
		3-Way	1-2-5	2-4-7	3-4-9	3-5-10	4-6-11	5-7-12	6-9-13	7-10-15	8-11-16
2-Way		1-2-6	2-4-8	3-5-10	4-6-12	5-7-13	5-8-14	7-10-16	8-12-17	9-13-19	
1-Way		2-4-7	3-5-10	4-6-11	5-7-12	6-9-13	7-10-14	8-11-16	10-12-17	11-13-19	
NC	—	13	19	24	28	32	38	43	47		
18 x 6	VP	.041	.068	.109	.157	.211	.273	.430	.613	.840	
	TP	.041	.068	.109	.157	.211	.273	.430	.613	.840	
	Flow Rate, CFM	225	300	375	450	525	600	750	900	1050	
	T	4-Way	5-7-15	6-10-17	8-12-19	10-15-21	11-16-22	13-17-24	16-19-27	17-21-30	19-23-32
		3-Way	5-7-15	7-10-17	8-13-19	10-15-21	12-16-22	13-17-24	16-19-27	17-21-30	19-23-32
2-Way		5-8-15	7-11-17	9-13-19	11-15-21	13-16-22	14-17-24	16-19-27	17-21-30	19-23-32	
1-Way		8-12-21	10-15-24	13-19-27	15-21-30	18-23-32	20-24-34	22-28-39	24-30-42	27-32-46	
NC	—	17	25	31	36	40	44	50	55		

For performance notes, see page D183.

D
CEILING DIFFUSERS

Performance Data

Models 4330, 4330A • Flush Face • 16 x 16 (400 x 400) Module Size

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400	
5" Dia.	VP	.006	.010	.016	.023	.031	.040	.063	.090	.123	
	TP	.010	.018	.028	.040	.054	.070	.110	.157	.215	
	Flow Rate, CFM	40	55	70	80	95	110	135	165	190	
	T	4-Way	1-2-4	2-2-5	2-3-6	2-4-7	3-5-7	3-6-8	5-6-9	6-7-10	6-7-10
		3-Way	1-2-4	2-3-6	2-3-7	2-4-8	3-5-9	4-6-10	5-7-10	6-8-12	6-9-13
		2-Way	1-2-5	2-3-6	2-4-8	3-5-10	4-6-10	4-7-12	6-8-13	7-10-14	7-10-15
1-Way		2-3-6	2-4-8	3-5-9	4-6-10	5-7-11	6-8-13	6-9-13	8-10-14	9-10-15	
NC	—	—	14	19	23	27	33	38	42		
6" Dia.	TP	.013	.021	.034	.048	.065	.084	.132	.189	.258	
	Flow Rate, CFM	60	80	100	120	140	160	200	235	275	
	T	4-Way	1-2-4	2-3-5	3-3-7	3-4-8	3-5-8	3-6-9	5-7-10	6-8-10	7-8-11
		3-Way	1-2-4	2-3-6	3-3-8	3-4-9	3-5-10	4-6-10	5-8-11	6-9-13	7-10-14
		2-Way	1-2-5	2-3-7	3-4-9	3-5-10	4-6-11	4-7-12	6-9-14	7-10-15	8-11-17
		1-Way	2-3-6	3-4-9	3-5-11	4-6-11	5-8-12	6-9-13	7-10-15	9-10-16	10-12-17
NC	—	—	17	22	26	30	36	41	45		
7" Dia.	TP	.015	.025	.039	.057	.076	.098	.155	.221	.302	
	Flow Rate, CFM	80	105	135	160	190	215	270	320	375	
	T	4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
		3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
		2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
		1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
NC	—	14	20	25	29	33	39	44	48		
8" Dia.	TP	.017	.028	.045	.065	.088	.113	.179	.255	.350	
	Flow Rate, CFM	105	140	175	210	245	280	350	420	490	
	T	4-Way	1-3-6	2-4-8	4-4-10	4-6-11	4-7-12	5-8-12	6-10-13	8-11-14	9-12-16
		3-Way	1-3-6	2-4-8	4-5-11	4-6-13	5-7-13	5-9-14	7-11-16	9-13-18	10-13-19
		2-Way	1-3-7	2-5-10	4-6-12	4-7-14	5-8-15	6-10-17	8-12-19	10-14-21	12-16-22
		1-Way	3-4-9	4-6-12	5-7-13	6-9-14	7-10-15	8-12-17	10-13-19	13-14-21	13-16-22
NC	—	16	22	27	31	35	41	46	50		
10" Dia.	TP	.023	.039	.062	.089	.120	.154	.243	.348	.475	
	Flow Rate, CFM	165	220	270	325	380	435	545	655	760	
	T	4-Way	1-3-8	2-6-10	4-6-12	4-8-13	6-9-14	7-10-14	8-12-17	10-13-18	11-14-20
		3-Way	1-3-8	2-6-10	4-7-13	6-8-15	7-9-17	7-11-18	9-13-20	11-15-22	12-17-23
		2-Way	1-3-9	2-7-12	4-8-14	6-9-18	7-10-19	8-12-21	10-14-23	12-18-25	14-20-28
		1-Way	3-6-11	4-8-14	7-9-17	8-11-18	9-12-19	10-14-21	12-17-23	15-18-25	15-20-28
NC	11	19	25	30	34	38	44	49	53		
6 x 6	TP	.015	.025	.039	.057	.076	.098	.155	.221	.302	
	Flow Rate, CFM	75	100	125	150	175	200	250	300	350	
	T	4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
		3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
		2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
		1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
NC	—	14	20	25	29	33	39	44	48		
8 x 8	TP	.020	.034	.054	.078	.105	.135	.213	.304	.415	
	Flow Rate, CFM	135	180	220	265	310	355	445	535	625	
	T	4-Way	1-3-7	2-5-9	4-5-11	4-7-12	5-8-13	6-9-13	7-11-15	9-12-16	10-13-18
		3-Way	1-3-7	2-5-9	4-6-12	5-7-14	6-8-15	6-10-16	8-12-18	10-14-20	11-15-21
		2-Way	1-3-8	2-6-11	4-7-13	5-8-16	6-9-17	7-11-19	9-13-21	11-16-23	13-18-25
		1-Way	3-5-10	4-7-13	6-8-15	7-10-16	8-11-17	9-13-19	11-15-21	14-16-23	14-18-25
NC	9	17	23	28	32	36	42	47	51		

For performance notes, see page D183.

Performance Data

Models 4330, 4330A • Flush Face • 20 x 20 (500 x 500) Module Size

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400	
5" Dia.	TP	.006	.010	.016	.023	.031	.040	.063	.090	.123	
	Flow Rate, CFM	40	55	70	80	95	110	135	165	190	
	T	4-Way	1-2-4	2-2-5	2-3-6	2-4-7	3-5-7	3-6-8	5-6-9	6-7-10	6-7-10
		3-Way	1-2-4	2-3-6	2-3-7	2-4-8	3-5-9	4-6-10	5-7-10	6-8-12	6-9-13
		2-Way	1-2-5	2-3-6	2-4-8	3-5-10	4-6-10	4-7-12	6-8-13	7-10-14	7-10-15
		1-Way	2-3-6	2-4-8	3-5-9	4-6-10	5-7-11	6-8-13	6-9-13	8-10-14	9-10-15
NC	—	—	14	19	23	27	33	38	42		
6" Dia.	TP	.013	.021	.034	.048	.065	.084	.132	.189	.258	
	Flow Rate, CFM	60	80	100	120	140	160	200	235	275	
	T	4-Way	1-2-4	2-3-5	3-3-7	3-4-8	3-5-8	3-6-9	5-7-10	6-8-10	7-8-11
		3-Way	1-2-4	2-3-6	3-3-8	3-4-9	3-5-10	4-6-10	5-8-11	6-9-13	7-10-14
		2-Way	1-2-5	2-3-7	3-4-9	3-5-10	4-6-11	4-7-12	6-9-14	7-10-15	8-11-17
		1-Way	2-3-6	3-4-9	3-5-11	4-6-11	5-8-12	6-9-13	7-10-15	9-10-16	10-12-17
NC	—	—	17	22	26	30	36	41	45		
7" Dia.	TP	.014	.023	.037	.053	.071	.092	.145	.207	.283	
	Flow Rate, CFM	80	105	135	160	190	215	270	320	375	
	T	4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
		3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
		2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
		1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
NC	—	13	19	24	28	32	38	43	47		
8" Dia.	TP	.014	.024	.038	.055	.075	.096	.151	.216	.295	
	Flow Rate, CFM	105	140	175	210	245	280	350	420	490	
	T	4-Way	1-3-6	2-4-8	4-4-10	4-6-11	4-7-12	5-8-12	6-10-13	8-11-14	9-12-16
		3-Way	1-3-6	2-4-8	4-5-11	4-6-13	5-7-13	5-9-14	7-11-16	9-13-18	10-13-19
		2-Way	1-3-7	2-5-10	4-6-12	4-7-14	5-8-15	6-10-17	8-12-19	10-14-21	12-16-22
		1-Way	3-4-9	4-6-12	5-7-13	6-9-14	7-10-15	8-12-17	10-13-19	13-14-21	13-16-22
NC	—	16	22	27	31	35	41	46	50		
10" Dia.	TP	.019	.031	.050	.071	.096	.124	.195	.279	.381	
	Flow Rate, CFM	165	220	270	325	380	435	545	655	760	
	T	4-Way	1-3-8	2-6-10	4-6-12	4-8-13	6-9-14	7-10-14	8-12-17	10-13-18	11-14-20
		3-Way	1-3-8	2-6-10	4-7-13	6-8-15	7-9-17	7-11-18	9-13-20	11-15-22	12-17-23
		2-Way	1-3-9	2-7-12	4-8-14	6-9-18	7-10-19	8-12-21	10-14-23	12-18-25	14-20-28
		1-Way	3-6-11	4-8-14	7-9-17	8-11-18	9-12-19	10-14-21	12-17-23	15-18-25	15-20-28
NC	11	19	25	30	34	38	44	49	53		
12" Dia.	TP	.023	.038	.060	.087	.117	.150	.237	.338	.462	
	Flow Rate, CFM	235	315	390	470	550	630	785	945	1100	
	T	4-Way	2-4-8	3-5-12	5-7-14	5-8-16	6-9-17	7-12-18	9-14-20	12-16-21	14-17-23
		3-Way	2-4-10	3-6-13	5-7-16	6-9-18	7-11-20	8-13-21	11-16-23	13-18-27	15-20-28
		2-Way	2-4-11	3-7-15	5-8-18	7-11-20	8-13-23	9-15-25	12-18-28	15-21-31	17-23-33
		1-Way	3-6-14	5-8-18	7-11-20	8-13-21	11-16-23	12-18-25	15-20-28	18-21-31	19-23-33
NC	14	22	28	33	37	41	47	52	56		
14" Dia.	TP	.029	.049	.079	.113	.152	.196	.309	.440	.603	
	Flow Rate, CFM	320	425	530	635	740	850	1060	1270	1480	
	T	4-Way	2-5-10	4-6-13	6-8-16	6-10-18	7-11-19	8-13-20	11-16-23	13-18-24	16-19-26
		3-Way	2-3-11	4-7-14	6-8-18	7-11-20	8-12-23	10-14-24	12-18-26	14-20-30	17-23-31
		2-Way	3-5-12	4-8-17	6-10-20	8-12-23	10-14-26	11-17-29	13-20-31	17-24-35	19-26-37
		1-Way	4-7-16	6-10-20	8-12-23	10-14-24	12-18-26	13-20-29	17-23-31	20-24-35	22-26-37
NC	19	27	33	38	42	46	52	57	61		
6 x 6	TP	.014	.023	.037	.053	.071	.092	.145	.207	.283	
	Flow Rate, CFM	75	100	125	150	175	200	250	300	350	
	T	4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
		3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
		2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
		1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
NC	—	13	19	24	28	32	38	43	47		
8 x 8	TP	.019	.031	.050	.071	.096	.124	.195	.279	.381	
	Flow Rate, CFM	135	180	220	265	310	355	445	535	625	
	T	4-Way	1-3-8	2-6-10	4-6-12	4-8-13	6-9-14	7-10-14	8-12-17	10-13-18	11-14-20
		3-Way	1-3-8	2-6-10	4-7-13	6-8-15	7-9-17	7-11-18	9-13-20	11-15-22	12-17-23
		2-Way	1-3-9	2-7-12	4-8-14	6-9-18	7-10-19	8-12-21	10-14-23	12-18-25	14-20-28
		1-Way	3-6-11	4-8-14	7-9-17	8-11-18	9-12-19	10-14-21	12-17-23	15-18-25	15-20-28
NC	11	19	25	30	34	38	44	49	53		
10 x 10	TP	.021	.035	.057	.082	.110	.142	.223	.318	.435	
	Flow Rate, CFM	210	280	350	415	485	555	695	835	975	
	T	4-Way	2-4-8	3-5-11	5-7-13	5-8-15	6-9-16	7-11-17	9-13-19	11-15-20	13-16-22
		3-Way	2-4-9	3-6-12	5-7-15	6-9-17	7-10-19	8-12-20	10-15-22	12-17-22	14-19-26
		2-Way	2-4-10	3-7-14	5-8-17	7-10-19	8-12-22	9-14-24	11-17-26	14-20-29	16-22-31
		1-Way	3-6-13	5-8-17	7-10-19	8-12-20	10-15-22	11-17-24	14-19-26	17-20-29	18-22-31
NC	13	21	27	32	36	40	46	51	55		

D
CEILING DIFFUSERS

For performance notes, see page D183.

Performance Data

Models 4330, 4330A • Flush Face • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400	
	VP	.006	.010	.016	.023	.031	.040	.063	.090	.123	
6" Dia.	TP	.013	.021	.034	.048	.065	.084	.132	.189	.258	
	Flow Rate, CFM	60	80	100	120	140	160	195	235	275	
	T	4-Way	1-2-4	2-3-5	3-3-7	3-4-8	3-5-8	3-6-9	5-7-10	6-8-10	7-8-11
		3-Way	1-2-4	2-3-6	3-3-8	3-4-9	3-5-10	4-6-10	5-8-11	6-9-13	7-10-14
		2-Way	1-2-5	2-3-7	3-4-9	3-5-10	4-6-11	4-7-12	6-9-14	7-10-15	8-11-17
1-Way		2-3-6	3-4-9	3-5-11	4-6-11	5-8-12	6-9-13	7-10-15	9-10-16	10-12-17	
NC	—	—	17	22	26	30	36	41	45		
8" Dia.	TP	.014	.024	.038	.055	.075	.096	.151	.216	.295	
	Flow Rate, CFM	105	140	175	210	245	280	350	420	490	
	T	4-Way	1-3-6	2-4-8	4-4-10	4-6-11	4-7-12	5-8-12	6-10-13	8-11-14	9-12-16
		3-Way	1-3-6	2-4-8	4-5-11	4-6-13	5-7-13	5-9-14	7-11-16	9-13-18	10-13-19
		2-Way	1-3-7	2-5-10	4-6-12	4-7-14	5-8-15	6-10-17	8-12-19	10-14-21	12-16-22
1-Way		3-4-9	4-6-12	5-7-13	6-9-14	7-10-15	8-12-17	10-13-19	13-14-21	13-16-22	
NC	—	16	22	27	31	35	41	46	50		
10" Dia.	TP	.016	.027	.043	.062	.084	.109	.171	.244	.333	
	Flow Rate, CFM	165	220	270	325	380	435	545	655	760	
	T	4-Way	1-3-8	2-6-10	4-6-12	4-8-13	6-9-14	7-10-14	8-12-17	10-13-18	11-14-20
		3-Way	1-3-8	2-6-10	4-7-13	6-8-15	7-9-17	7-11-18	9-13-20	11-15-22	12-17-23
		2-Way	1-3-9	2-7-12	4-8-14	6-9-18	7-10-19	8-12-21	10-14-23	12-18-25	14-20-28
1-Way		3-6-11	4-8-14	7-9-17	8-11-18	9-12-19	10-14-21	12-17-23	15-18-25	15-20-28	
NC	11	19	25	30	34	38	44	49	53		
12" Dia.	TP	.020	.033	.053	.076	.103	.132	.208	.298	.407	
	Flow Rate, CFM	235	315	390	470	550	630	785	945	1100	
	T	4-Way	2-4-8	3-5-12	5-7-14	5-8-16	6-9-17	7-12-18	9-14-20	12-16-21	14-17-23
		3-Way	2-4-10	3-6-13	5-7-16	6-9-18	7-11-20	8-13-21	11-16-23	13-18-27	15-20-28
		2-Way	2-4-11	3-7-15	5-8-18	7-11-20	8-13-23	9-15-25	12-18-28	15-21-31	17-23-33
1-Way		3-6-14	5-8-18	7-11-20	8-13-21	11-16-23	12-18-25	15-20-28	18-21-31	19-23-33	
NC	14	22	28	33	37	41	47	52	56		
14" Dia.	TP	.023	.038	.061	.088	.119	.153	.241	.345	.470	
	Flow Rate, CFM	320	425	530	635	740	850	1060	1270	1480	
	T	4-Way	2-5-10	4-6-13	6-8-16	6-10-18	7-11-19	8-13-20	11-16-23	13-18-24	16-19-26
		3-Way	2-5-11	4-7-14	6-8-18	7-11-20	8-12-23	10-14-24	12-18-26	14-20-30	17-23-31
		2-Way	3-5-12	4-8-17	6-10-20	8-12-23	10-14-26	11-17-29	13-20-31	17-24-35	19-26-37
1-Way		4-8-16	6-10-20	8-12-23	10-14-24	12-18-26	13-20-29	17-23-31	20-24-35	22-26-37	
NC	16	24	30	35	39	43	49	54	58		
16" Dia.	TP	.029	.048	.076	.110	.148	.191	.300	.430	.587	
	Flow Rate, CFM	420	560	700	840	980	1120	1400	1680	1960	
	T	4-Way	2-5-12	5-8-15	6-9-19	8-12-20	9-13-21	11-15-24	13-19-26	15-20-28	18-22-31
		3-Way	3-5-12	5-8-17	6-11-20	8-12-25	9-14-26	11-17-28	14-20-32	17-25-34	19-26-38
		2-Way	4-5-14	5-9-19	6-12-24	9-14-28	11-17-31	13-19-33	15-24-37	19-28-40	21-31-44
1-Way		5-8-18	8-12-24	9-14-26	12-18-28	13-20-31	15-24-33	19-26-37	24-28-40	25-31-44	
NC	19	27	33	38	42	46	52	57	61		

For performance notes, see page D183.

Performance Data

Models 4330, 4330A • Flush Face • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400	
6 x 6	VP	.006	.010	.016	.023	.031	.040	.063	.090	.123	
	TP	.014	.023	.037	.053	.071	.092	.145	.207	.283	
	Flow Rate, CFM	75	100	125	150	175	200	250	300	350	
	T	4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
		3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
		2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
		1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
	NC	—	13	19	24	28	32	38	43	47	
	8 x 8	TP	.016	.027	.043	.062	.084	.109	.171	.244	.333
		Flow Rate, CFM	135	180	220	265	310	355	445	535	625
T		4-Way	1-3-8	2-6-10	4-6-12	4-8-13	6-9-14	7-10-14	8-12-17	10-13-18	11-14-20
		3-Way	1-3-8	2-6-10	4-7-13	6-8-15	7-9-17	7-11-18	9-13-20	11-15-22	12-17-23
		2-Way	1-3-9	2-7-12	4-8-14	6-9-18	7-10-19	8-12-21	10-14-23	12-18-25	14-20-28
		1-Way	3-6-11	4-8-14	7-9-17	8-11-18	9-12-19	10-14-21	12-17-23	15-18-25	15-20-28
NC		11	19	25	30	34	38	44	49	53	
10 x 10		TP	.020	.033	.053	.076	.103	.132	.208	.298	.407
		Flow Rate, CFM	235	315	390	470	550	630	785	945	1100
		T	4-Way	2-4-8	3-5-11	5-7-13	5-8-15	6-9-16	7-11-17	9-13-19	11-15-20
	3-Way		2-4-9	3-6-12	5-7-15	6-9-17	7-10-19	8-12-20	10-15-22	12-17-22	14-19-26
	2-Way		2-4-10	3-7-14	5-8-17	7-10-19	8-12-22	9-14-24	11-17-26	14-20-29	16-22-31
	1-Way		3-6-13	5-8-17	7-10-19	8-12-20	10-15-22	11-17-24	14-19-26	17-20-29	18-22-31
	NC	14	22	28	33	37	41	47	52	56	
	12 x 12	TP	.021	.037	.058	.083	.115	.148	.230	.333	.450
		Flow Rate, CFM	300	400	500	600	700	800	1000	1200	1400
		T	4-Way	2-4-10	4-7-13	5-8-16	7-10-17	8-11-18	9-13-20	11-16-22	13-17-24
3-Way			2-4-10	4-7-14	5-9-17	7-10-21	8-12-22	9-14-24	12-17-27	14-21-29	16-22-32
2-Way			2-4-12	4-8-16	5-10-20	8-12-24	9-14-26	11-16-28	13-20-31	16-24-34	18-26-37
1-Way			4-7-15	7-10-20	8-12-22	10-15-24	11-17-26	13-20-28	16-22-31	20-24-34	21-26-37
NC		16	24	30	35	39	43	49	54	58	

CFM - cubic feet per minute

FPM - feet per minute velocity

TP - total pressure - inches w.g.

VP - velocity pressure - inches w.g.

T - throw in feet

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.

Listed throws for the 18" x 6" neck/ 24" x 12" module are for the long side of the diffuser. Throws for the narrow side are approximately x 0.6 listed values.

2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.

Balancing:

It is recommended that a commercially available 'Flow Hood' is used for field balancing. The airflow meter directly reads average flow rate with great accuracy at all volumes. It is a much faster and more accurate alternative to time consuming multiple velocity readings, eliminating the use of Ak factors and the calculations required to convert the average velocity into airflow.