

GENERAL PRODUCT OVERVIEW

Ceiling Diffusers

Quality Assured Products, unobtrusive clean lines for appearance, careful engineering and professional workmanship with the backing of an industry leader - these add up to true value; prime reasons for specifying Nailor Ceiling Diffusers.

Architectural excellence and engineering selections demand high quality products and shipping schedules demand service, all part of the package.

SQUARE AND RECTANGULAR PATTERN

Nailor's pattern diffusers are typically used in applications where considerable volumes of air are required while maintaining relatively low noise levels and pressure drops. A full range of models are available and consist of a choice of corrosion-resistant steel or aluminum construction, fixed and adjustable patterns, as well as extra high capacity models. Induction vanes are also available for those jobs that require quick equalization of cool and warm air such as in VAV systems with high cooling loads. The louvered cores are removable and are available in an assortment of patterns.

Steel High Capacity Construction – Fiberglass Plenum

Fixed Pattern Model 6500FP **Page D18**

Steel Construction –

Fixed Pattern Model 6500 **Page D14**

Adjustable Pattern Model 6550 **Page D14**

Induction Vane Model 6500IV **Page D39**

Suffix '-O' adds a steel OBD

Aluminum Construction –

Fixed Pattern Model 6200 **Page D14**

Adjustable Pattern Model 6250 **Page D14**

Induction Vane Model 6200IV **Page D39**

Suffix '-O' adds a steel OBD

Suffix '-OA' adds an aluminum OBD

Aluminum High Capacity Construction –

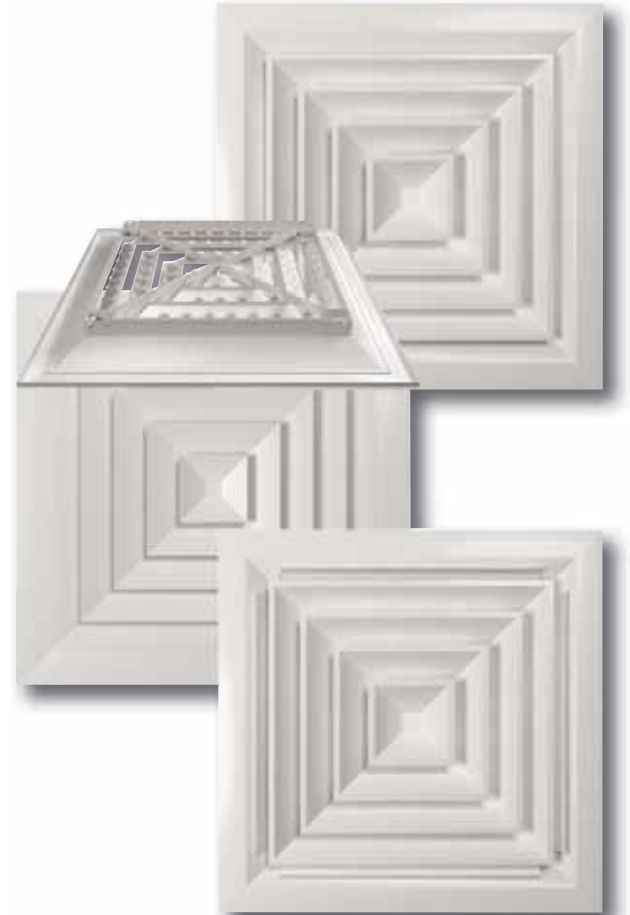
100% Aluminum Model 6200-MRI **Page D20**

Fixed Pattern Model 6400 **Page D46**

Induction Vane Model 6400IV **Page D65**

Suffix '-O' adds a steel OBD

Suffix '-OA' adds an aluminum OBD



Models 6500, 6500IV, 6400, 6550

D

CEILING DIFFUSERS



Models RNS, ARNSA, RNS2

STAMPED SQUARE

These diffusers are a very popular choice for general air distribution applications. The diffusers are designed to provide high performance at a cost effective price. The stamped one-piece cones and die-formed clean curves supply a 360° diffusion pattern and provide the high performance necessary in VAV systems. Integral round necks provide a secure connection for flexible duct applications. Nailor's "classic" four-cone, removable core design is available in most ceiling module sizes, a choice of corrosion-resistant steel or aluminum, and an option of fixed or adjustable patterns. A two and three cone fixed pattern diffuser also accompanies this series.

Steel Construction –

Fixed Pattern Model RNS **Page D87**

Adjustable Pattern Model RNSA **Page D91**

Fixed Pattern 3 Cone Model RNS3 **Page D95**

Fixed Pattern 2 Cone Model RNS2 **Page D98**

Aluminum Construction –

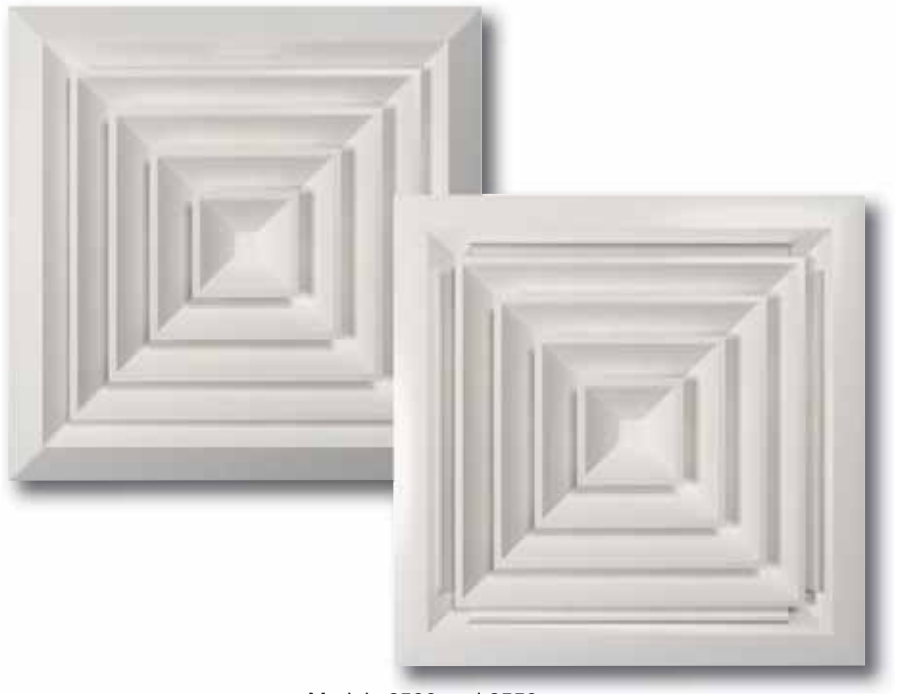
Fixed Pattern Model ARNS **Page D87**

Adjustable Pattern Model ARNSA **Page D91**

Fixed Pattern 3 Cone Model ARNS3 **Page D95**

SQUARE & RECTANGULAR PATTERN CEILING DIFFUSERS

- LOUVERED FACE
- HIGH CAPACITY
- SQUARE, RECTANGULAR OR ROUND NECKS



Models 6500 and 6550

Steel Models:

- 6500 Fixed Pattern
- 6550 Adjustable Pattern

Aluminum Models:

- 6200 Fixed Pattern
- 6250 Adjustable Pattern

- Suffix '-O' adds a steel opposed blade damper
- Suffix '-OA' adds an aluminum opposed blade damper (available on aluminum models only)

Model Series 6500 and 6200 Pattern Ceiling Diffusers have been specially designed to provide a high capacity louvered face directional diffuser that can supply large volumes of air at relatively low sound levels and pressure drops. An engineered blade design with a 1/4" (6) horizontal lip on all angular discharge louvers creates a stable horizontal air pattern that is tight to the ceiling. Ideal for applications in VAV systems, these diffusers create a strong ceiling coanda effect at typical maximum and minimum airflow rates and ensure draft free air distribution.

Available with a wide variety of core styles and neck sizes, a combination can be selected to suit a specified air pattern and deliver the desired volume of air to suit any particular requirement. Many frame types are also available to suit almost any mounting condition including surface mount (flat, beveled or deep drop face) and T-Bar panel types (Standard 1" (25), Fineline®, Spline, Tegular or Metal Snap-in). These models offer a great degree of design flexibility.

Model Series 6550 and 6250 Adjustable Pattern Ceiling Diffusers offer the same features as the 6500 and 6200 Series, however, they feature four hinged, individually adjustable deflecting vanes. These vanes allow air pattern adjustment from horizontal to vertical and further enhance the flexibility of the diffuser. Ideal for applications with higher ceiling heights or for heating applications to minimize stratification.

STANDARD FEATURES:

- Spring loaded core. It is removable without the use of tools.
- High neck collars for solid connection.
- Secure core attachment.
- A wide variety of frame styles to suit most ceiling applications.
- Extended panels to suit modular ceiling systems. PLS (steel) or PLA (aluminum).
- Engineered air diffusion patterns for 1, 2, 3 or 4-way blow in a wide selection of square and rectangular neck sizes (see page D22).
- Clean lines with no unsightly visible screws.
- Opposed blade damper with screwdriver slot operator.

CONSTRUCTION MATERIAL:

6500 Series – Corrosion-resistant steel.
6200 Series – Heavy-gauge aluminum extrusions.

FINISH OPTIONS:

AW Appliance White finish is standard. Other finishes are available.

AVAILABLE SIZES:

Unit size is determined by duct dimensions. Diffuser necks are undersized to suit ductwork.

Duct Sizes are available in 3" (76) increments.

Minimum size:

6" x 6" (152 x 152) square neck. 9" x 6" (229 x 152) rectangular neck (most core styles).

Maximum size:

Types S, B and D: 36" x 36" (914 x 914) or 36" x 24" (914 x 610) with opposed blade damper.

Types L, SP, DL, TL, M and F: see next page.

OPTIONS & ACCESSORIES:

EX External Foil-Back Insulation (installed) – R-4.2.

MIB Molded Insulation Blanket R-6.0.

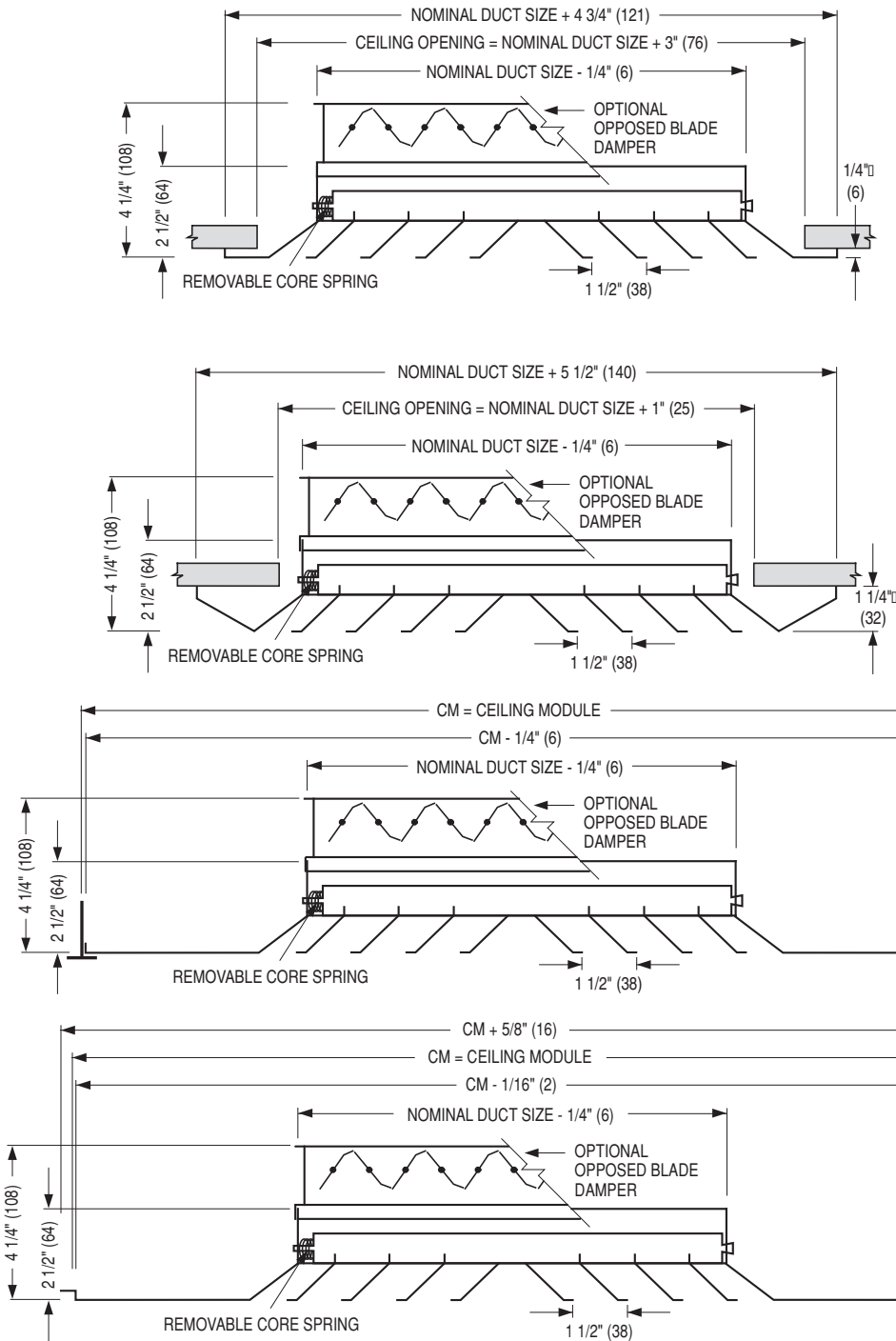
SR Square-to-round transition adaptors are available (SR04 - SR24 option [4" - 24" diameter]). See page D257.

EQT Earthquake Tabs

For additional options and accessories; see page D255.

DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6500 AND 6200



SPLINE TYPE DIFFUSER FOR ONE-DIRECTIONAL EXPOSED T-BAR LAY-IN GRID OR FOR CONCEALED T-BAR GRID.
(SPLINES ON TWO OPPOSITE SIDES. STEEL LIFT BRACKETS ON THE OTHER TWO SIDES).

Type S - Surface Mount Frame



Type B - Beveled Drop Face Frame



Type L - Lay-In T-Bar Frame



Type SP - Spline Frame



D

CEILING DIFFUSERS

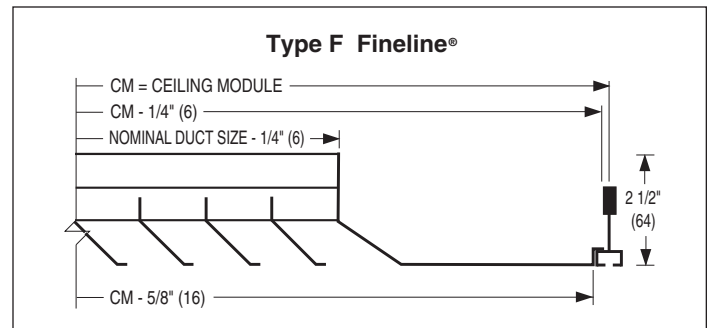
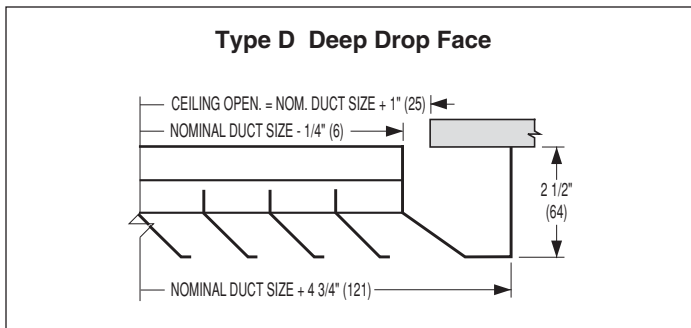
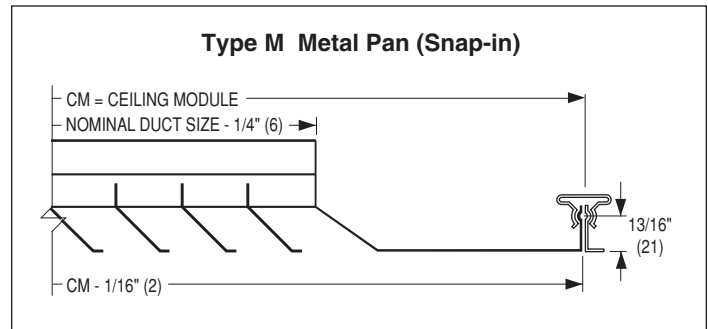
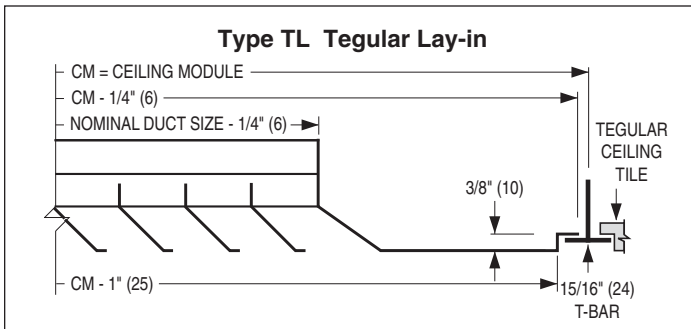
Extended Panel Diffusers Frame Types L, SP, TL, M and F

If the ceiling module is more than 3" (76) larger than the neck size of the diffuser in either or both dimensions, a steel module-sized extended panel will be added. Aluminum is available as an option. See the table at right for the maximum duct size for each module size.

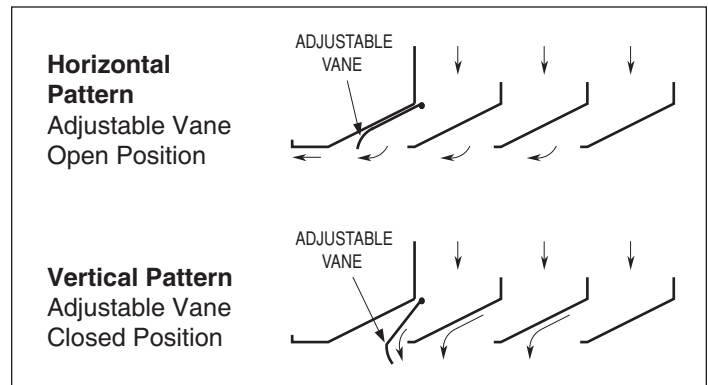
Table 1		
Ceiling Module Size	Maximum Duct Size Frames L, SP and M	Maximum Duct Size Frames TL and F
12 x 12 (305 x 305)	9 x 9 (229 x 229)	6 x 6 (152 x 152)
20 x 20 (508 x 508)	15 x 15 (381 x 381)	—
24 x 12 (610 x 305)	21 x 9 (533 x 229)	18 x 6 (457 x 152)
24 x 24 (610 x 610)	21 x 21 (533 x 533)	18 x 18 (457 x 457)
48 x 24 (1219 x 610)	45 x 21 (1143 x 533)	—

DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6500 AND 6200



ADJUSTABLE DISCHARGE PATTERN: MODELS 6550 AND 6250



Models 6550 and 6250 Adjustable Diffusers provide continuous adjustment – from horizontal to vertical – on each face of the diffuser. They feature four hinged, independently adjustable control vanes attached to the outer cone.

FEATURES:

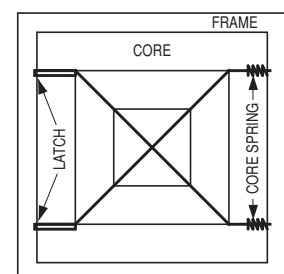
- Unit size is determined by duct dimensions. Diffuser necks are under sized to suit ductwork.
- Square or rectangular 1, 2, 3 or 4-way core style diffusers up to and including 24" x 24" (610 x 610) neck size.
- Square duct sizes are recommended.
- Discharge patterns on all sides are independently adjustable.
- No tools required to adjust pattern.
- Can be adjusted from diffuser face without removing core.

REMOVABLE CORE

- Standard feature of **Models 6500, 6550, 6200 and 6250.**
- Engineered design allows easy removal without the need for tools, yet remains securely in place.

HOW TO REMOVE

To remove diffuser core, lift the complete core assembly to disengage the latch, push the core against the core spring, pull down the core slightly and remove. Reverse procedure to re-install.



D
 CEILING DIFFUSERS

PATTERN CEILING DIFFUSERS

- SUITABLE FOR MRI
- 100% ALUMINUM
- HIGH CAPACITY
- SQUARE NECK

Model:

6200-MRI Aluminum



Model 6200-MRI

D

CEILING DIFFUSERS

Model 6200-MRI Pattern Ceiling Diffusers is a high capacity louvered face directional diffuser that has been designed to supply large volumes of air at relatively low sound levels and pressure drops. An engineered blade design with a 1/4" (6) horizontal lip on all angular discharge louvers creates a stable horizontal air pattern that is tight to the ceiling. Ideal for applications in VAV systems, these diffusers create a strong ceiling coanda effect at typical maximum and minimum airflow rates and ensure draft free air distribution.

Available with a wide variety of core styles and neck sizes, a combination can be selected to suit a specified air pattern and deliver the desired volume of air to suit any particular requirement. Model 6200-MRI Ceiling Diffusers are available in 1, 2, 3 or 4-way directional blow patterns with fixed pattern discharge louvers for a horizontal throw pattern. The diffusers are constructed entirely from aluminum and suitable for MRI applications.

STANDARD FEATURES:

- A wide variety of frame styles to suit most ceiling applications.
- Engineered air diffusion patterns for 1, 2, 3 or 4-way blow in a wide selection of square and rectangular neck sizes.
- Clean lines with no unsightly visible screws.
- Fixed core.

CONSTRUCTION MATERIAL:

- 100% Aluminum.

AVAILABLE SIZES:

- Unit size is determined by duct dimensions. Diffuser necks are undersized to suit ductwork.
- Duct sizes are available in 3" (76) increments.
- If the ceiling module is more than 3" (76) larger than the neck size of the diffuser in either or both dimensions, a module sized extended panel will be added.

MINIMUM DUCT SIZE:

- 6" x 6" (152 x 152).

MAXIMUM DUCT SIZE:

See dimensional table on next page.

FINISH OPTIONS:

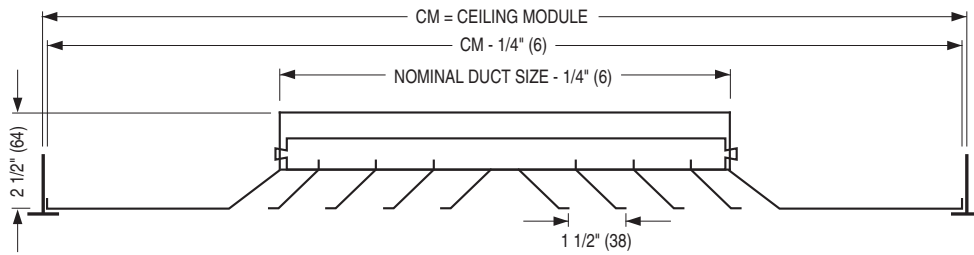
Standard finish is AW Appliance White (optional finishes are available).

OPTIONS & ACCESSORIES:

- EX External Foil-Back Insulation (installed) – R-4.2.

DIMENSIONAL DATA AND FRAME TYPE:

MODEL 6200-MRI TYPE L LAY-IN T-BAR

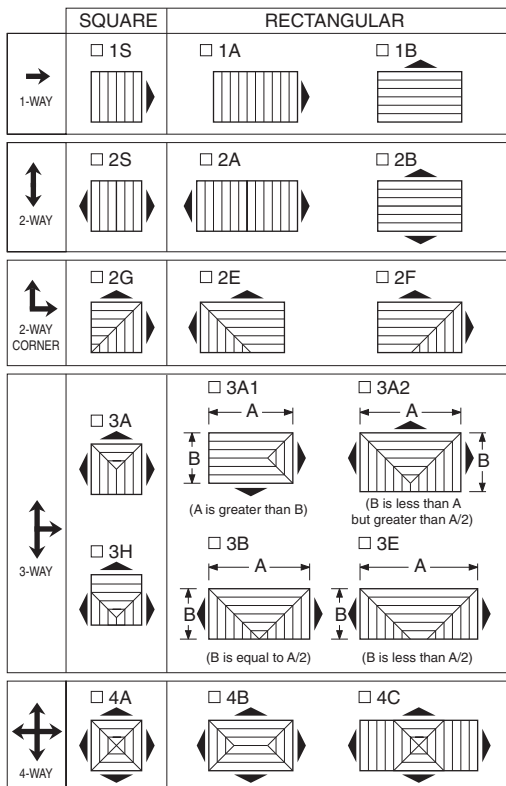


AVAILABLE SIZES:

Imperial Modules				Metric Modules	
Imperial Units (in.)		Metric Units (mm)		Metric Units (mm)	
Ceiling Module Size	Maximum Duct Size	Ceiling Module Size	Maximum Duct Size	Ceiling Module Size	Maximum Duct Size
12 x 12	9 x 9	305 x 305	229 x 229	300 x 300	152 x 152
20 x 20	15 x 15	508 x 508	381 x 381	500 x 500	381 x 381
24 x 12	21 x 9	610 x 305	533 x 229	600 x 300	457 x 152
24 x 24	21 x 21	610 x 610	533 x 533	600 x 600	457 x 457
48 x 24	45 x 12	1219 x 610	1143 x 533	1200 x 600	1067 x 457

If the ceiling module is more than 3" (76) larger than the neck size of the diffuser in either or both dimensions, a module sized extended panel will be added.
 Minimum duct size: 6 x 6 (152 x 152).
 Maximum duct size: see table.
 Available in 3" (76) increments only.

CORE STYLE SELECTION






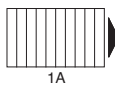
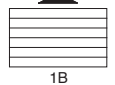







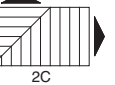
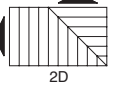



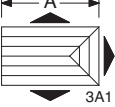
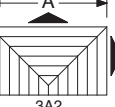


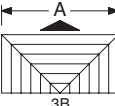

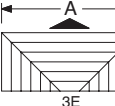


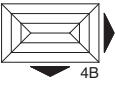


Patterns are shown in plan view (looking down into inlet).

STANDARD CORE STYLES:

MODEL SERIES 6500 AND 6200

Contact factory for special core configurations.

SIZES AVAILABLE

	SQUARE	RECTANGULAR	CORE	MINIMUM	MAXIMUM							
 Type 1S	 1-WAY	 1S	 1A	 1B	1S 6 x 6 (152 x 152) 1A 9 x 6 (229 x 152) 1B 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838)						
		 2-WAY	 2S	 2A	 2B	2S 6 x 6 (152 x 152) 2A 9 x 6 (229 x 152) 2B 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838)					
			 2-WAY CORNER	 Type 2S	 2G	 2C	 2D	2G 6 x 6 (152 x 152) 2C 9 x 6 (229 x 152) 2D 9 x 6 (229 x 152) 2E 9 x 6 (229 x 152) 2F 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838) 36 x 33 (914 x 838) 36 x 33 (914 x 838)			
 3-WAY	 Type 2G	 3A			 3A1	 3A2	3A 6 x 6 (152 x 152) 3A1 9 x 6 (229 x 152) 3A2 9 x 6 (229 x 152) 3B 12 x 6 (305 x 152) 3C 9 x 6 (229 x 152) 3E 15 x 6 (381 x 152) 3H 6 x 6 (152 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838) 36 x 18 (914 x 457) 36 x 33 (914 x 838) 36 x 15 (914 x 381) 36 x 36 (914 x 914)				
		 4-WAY			 Type 3A	 3B (B is equal to A/2)	 3C (B is less than A/2)	 3E (B is less than A/2)	4A 6 x 6 (152 x 152) 4B 9 x 6 (229 x 152) 4C 12 x 6 (305 x 152) 4E 15 x 6 (381 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 30 (914 x 762) 36 x 27 (914 x 686)		
						 Type 4A	 4A	 4B	 4C	 4E	4A 6 x 6 (152 x 152) 4B 9 x 6 (229 x 152) 4C 12 x 6 (305 x 152) 4E 15 x 6 (381 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 30 (914 x 762) 36 x 27 (914 x 686)

Dimensions are in inches (mm).

Notes:

1. Duct sizes are available in 3" (76) increments.
2. Unless otherwise specified, the "x" dimension on 3C and 4E patterns will be such that cataloged flow division is obtained.
3. Patterns are shown in plan view (looking down into inlet).

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500 AND 6200 • SQUARE NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033	400 .058	500 .090	600 .130	700 .177	800 .231	900 .293
6 x 6 .25 SQ. FT.	RETURN FACTORS —SP=1.1 TP NC + 1	CFM NC	75 —	100 10	125 17	150 22	175 26	200 31	225 35
	4A	CFM/SIDE THROW, FT.	19 4-5-8	25 4-6-10	31 6-8-10	37 6-8-11	44 8-9-12	50 8-9-12	56 9-10-13
	3A	CFM/SIDE THROW, FT.	19 28 4-5-8	25 38 5-8-11	31 47 6-8-10 8-10-14	37 56 6-8-11 8-11-15	44 66 8-9-12 9-12-16	50 75 8-9-12 9-12-17	56 85 9-10-13 10-13-18
	2S 2G	CFM/SIDE THROW, FT.	37 8-9-12	50 9-10-14	62 10-11-16	75 11-12-17	88 12-13-18	100 12-13-19	113 12-14-20
	1S	CFM/SIDE THROW, FT.	75 9-11-15	100 10-12-17	125 11-14-19	150 12-15-22	175 13-16-22	200 14-17-24	225 15-18-25
9 x 9 .56 SQ. FT.	RETURN FACTORS —SP=1.2 TP NC + 2	CFM NC	170 —	225 14	280 20	340 26	395 31	450 35	505 38
	4A	CFM/SIDE THROW, FT.	42 6-8-12	56 7-10-14	70 10-11-15	84 10-12-16	98 11-12-17	112 11-14-19	126 12-15-20
	3A	CFM/SIDE THROW, FT.	42 63 6-8-12	56 85 9-11-14	70 106 10-12-17	84 127 10-12-16 12-14-20	98 148 11-12-17 13-15-21	112 169 11-14-19 13-16-22	126 190 12-15-20 14-18-24
	2S 2G	CFM/SIDE THROW, FT.	84 9-10-15	112 11-13-18	141 12-15-20	169 13-16-22	197 14-17-23	225 15-18-25	253 16-19-28
	1S	CFM/SIDE THROW, FT.	169 12-15-20	225 14-17-23	282 16-19-26	338 17-22-29	394 18-22-31	450 19-24-33	507 22-25-35
12 x 12 1.0 SQ. FT.	RETURN FACTORS —SP=1.3 TP NC + 4	CFM NC	300 10	400 17	500 23	600 28	700 33	800 36	900 39
	4A	CFM/SIDE THROW, FT.	75 8-13-15	100 11-14-18	125 13-15-21	150 14-17-22	175 14-18-24	200 15-20-25	225 17-21-27
	3A	CFM/SIDE THROW, FT.	75 112 8-13-15	100 150 11-14-19	125 187 12-15-21	150 225 14-17-24	175 262 14-18-24 16-20-27	200 300 15-20-25 17-21-30	225 338 17-21-27 19-22-31
	2S 2G	CFM/SIDE THROW, FT.	150 12-15-20	200 15-17-25	250 17-19-27	300 18-20-29	350 19-21-31	400 20-25-34	450 21-25-36
	1S	CFM/SIDE THROW, FT.	300 16-20-28	400 18-22-32	500 21-25-37	600 22-26-39	700 23-28-41	800 25-29-41	900 28-33-47
15 x 15 1.56 SQ. FT.	RETURN FACTORS —SP=1.8 TP NC + 4	CFM NC	465 10	625 19	780 25	935 30	1090 33	1250 39	1400 41
	4A	CFM/SIDE THROW, FT.	117 13-16-21	156 14-18-24	195 16-19-27	234 18-21-29	273 19-22-30	312 20-24-33	350 21-26-35
	3A	CFM/SIDE THROW, FT.	117 175 13-16-21	156 234 14-17-23	195 292 14-18-24 17-19-29	234 351 16-19-27 19-22-31	273 409 18-21-29 21-23-34	312 468 19-22-30 22-25-36	350 527 19-24-35 22-29-39
	2S 2G	CFM/SIDE THROW, FT.	234 16-20-27	312 19-22-31	390 21-25-36	468 22-27-40	546 24-29-42	625 27-31-45	700 27-35-47
	1S	CFM/SIDE THROW, FT.	467 21-25-36	625 23-29-42	780 26-32-47	935 29-36-51	1090 30-39-55	1250 32-42-57	1400 36-44-61
18 x 18 2.25 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 6	CFM NC	675 12	900 21	1125 27	1350 31	1575 36	1800 39	2025 42
	4A	CFM/SIDE THROW, FT.	168 15-19-25	225 17-20-29	281 19-24-32	337 20-25-36	394 22-27-37	450 24-29-41	506 25-31-43
	3A	CFM/SIDE THROW, FT.	168 253 15-19-25	225 338 17-22-29	281 422 17-20-29 20-25-33	337 506 19-24-32 23-27-38	394 590 20-25-36 25-32-42	450 675 22-27-37 26-32-45	506 760 24-29-41 27-35-48
	2S 2G	CFM/SIDE THROW, FT.	337 19-23-32	450 22-26-38	562 24-30-43	675 26-31-46	787 30-34-49	900 30-35-53	1012 32-39-55
	1S	CFM/SIDE THROW, FT.	675 25-33-45	900 30-36-51	1125 34-42-58	1350 36-45-61	1575 39-48-66	1800 43-52-70	2025 46-55-75

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • SQUARE NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033	400 .058	500 .090	600 .130	700 .177	800 .231	900 .293
21 x 21 3.06 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 8	CFM NC	915 14	1225 22	1530 28	1835 32	2140 37	2450 40	2750 43
	4A	CFM/SIDE THROW, FT.	230 18-21-30	306 19-25-34	382 21-28-39	460 23-30-41	535 25-32-44	612 26-34-46	688 28-39-51
	3A	CFM/SIDE THROW, FT.	230 345 15-19-26 20-25-34	306 460 17-22-29 23-28-39	382 573 19-25-34 26-31-45	460 688 20-26-36 28-34-50	535 802 22-28-39 29-36-53	612 918 23-29-40 34-39-56	688 1030 25-34-45 34-43-59
	2S 2G	CFM/SIDE THROW, FT.	458 22-27-39	612 25-31-45	765 28-35-50	917 31-39-55	1070 32-42-59	1225 35-45-62	1375 39-48-66
	1S	CFM/SIDE THROW, FT.	917 29-37-51	1225 34-43-59	1530 39-50-67	1835 43-53-71	2140 46-56-77	2450 50-60-82	2750 53-64-88
24 x 24 4.0 SQ. FT.	RETURN FACTORS —SP=2.7 TP NC + 8	CFM NC	1200 15	1600 23	2000 29	2400 33	2800 37	3200 41	3600 44
	4A	CFM/SIDE THROW, FT.	300 20-24-33	400 24-27-40	500 27-31-44	600 29-33-47	700 31-35-51	800 33-40-55	900 35-40-58
	3A	CFM/SIDE THROW, FT.	300 450 20-24-33 23-28-39	400 600 24-27-40 26-31-46	500 750 27-31-44 29-36-52	600 900 29-33-47 31-38-56	700 1050 31-33-51 36-41-59	800 1200 33-40-55 36-43-64	900 1350 35-40-58 39-47-67
	2S 2G	CFM/SIDE THROW, FT.	600 25-33-45	800 30-36-51	1000 34-42-58	1200 36-45-61	1400 39-48-66	1600 43-52-70	1800 46-55-75
	1S	CFM/SIDE THROW, FT.	1200 35-40-59	1600 38-48-67	2000 45-54-77	2400 48-58-82	2800 51-62-90	3200 54-67-93	3600 59-70-101
30 x 30 6.25 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1875 16	2500 24	3125 30	3750 35	4375 39	5000 42	5625 46
	4A	CFM/SIDE THROW, FT.	469 25-31-42	625 29-36-48	782 34-40-55	937 36-44-61	1093 38-46-65	1250 40-50-69	1406 46-52-73
	3A	CFM/SIDE THROW, FT.	469 703 25-31-42 28-34-49	625 938 29-36-48 32-39-57	782 1172 34-40-55 35-44-64	937 1405 36-44-61 39-49-69	1093 1640 38-46-65 41-49-74	1250 1875 40-50-69 44-57-78	1406 2110 46-52-73 49-60-83
	2S 2G	CFM/SIDE THROW, FT.	937 32-40-55	1250 37-47-63	1562 42-53-72	1875 47-57-77	2187 50-60-83	2500 53-65-88	2812 57-68-95
	1S	CFM/SIDE THROW, FT.	1875 42-53-72	2500 49-60-83	3125 56-69-93	3750 60-72-102	4375 63-77-109	5000 69-83-116	5625 72-88-123
36 x 36 9.0 SQ. FT.	RETURN FACTORS —SP=3.6 TP NC + 9	CFM NC	2700 18	3600 25	4500 31	5400 36	6300 40	7200 44	8100 48
	4A	CFM/SIDE THROW, FT.	675 30-37-51	900 34-41-57	1125 39-46-67	1350 41-51-74	1575 44-53-78	1800 51-57-83	2025 51-64-87
	3A	CFM/SIDE THROW, FT.	675 1010 30-37-51 34-44-60	900 1350 34-41-57 40-48-68	1125 1687 39-46-67 46-56-78	1350 2025 41-51-74 48-60-82	1575 2362 44-53-78 52-64-88	1800 2700 51-57-83 58-70-94	2025 3038 51-64-87 62-74-100
	2S 2G	CFM/SIDE THROW, FT.	1350 40-45-67	1800 43-54-76	2250 50-61-86	2700 54-65-92	3150 58-70-101	3600 61-76-104	4050 67-79-113
	1S	CFM/SIDE THROW, FT.	2700 49-61-85	3600 59-70-99	4500 66-80-114	5400 72-85-122	6300 76-91-131	7200 82-97-142	8100 87-106-150

For performance notes, see page D37.

D

CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500 AND 6200 • ROUND NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	400 .026	600 .058	800 .103	900 .130	1000 .161	1200 .231	1400 .315		
6" ROUND	RETURN FACTORS —SP=0.7 TP NC + 0	CFM NC	78 —	118 11	157 19	176 21	196 25	235 30	274 35		
	4A	CFM/SIDE THROW, FT.	20 2-4-6	29 4-7-10	39 6-8-11	44 7-8-12	49 7-8-13	59 8-9-14	69 8-10-15		
	3A	CFM/SIDE THROW, FT.	20 2-4-6	29 2-4-7	39 4-7-10	44 4-8-11	49 6-8-11	59 7-9-12	69 8-9-13	103 8-9-14	
	2S	CFM/SIDE THROW, FT.	39 3-4-9	59 5-6-13	78 6-9-15	88 6-10-16	98 7-11-17	118 8-13-18	137 9-14-20		
	1S	CFM/SIDE THROW, FT.	78 4-7-14	118 6-10-18	157 9-14-21	176 10-15-23	196 11-16-24	235 12-18-26	274 13-19-28		
8" ROUND	RETURN FACTORS —SP=0.8 TP NC + 0	CFM NC	140 —	209 13	279 21	314 23	349 27	419 32	489 37		
	4A	CFM/SIDE THROW, FT.	35 4-8-10	52 6-9-13	70 8-10-15	79 9-11-15	87 9-12-17	105 10-13-19	122 11-14-20		
	3A	CFM/SIDE THROW, FT.	35 4-8-10	52 4-9-11	70 6-9-13	79 7-10-14	87 8-10-15	105 9-11-17	122 10-12-17	183 10-13-19	
	2S	CFM/SIDE THROW, FT.	70 5-17-14	105 6-9-17	140 8-13-20	157 9-14-22	175 10-15-23	209 12-17-25	244 10-13-1		
	1S	CFM/SIDE THROW, FT.	140 7-12-19	209 9-14-24	279 13-19-28	314 14-21-30	349 15-22-32	419 16-24-34	489 17-26-37		
10" ROUND	RETURN FACTORS —SP=0.9 TP NC + 2	CFM NC	218 —	327 16	436 24	491 26	545 30	654 35	763 40		
	4A	CFM/SIDE THROW, FT.	55 4-8-12	82 8-11-17	109 10-13-19	123 11-14-20	136 12-15-21	164 12-16-23	191 13-17-24		
	3A	CFM/SIDE THROW, FT.	55 4-8-12	82 4-9-13	109 8-11-17	164 9-12-19	123 10-13-19	184 11-14-21	136 12-15-22	204 12-16-23	245 13-17-23
	2S	CFM/SIDE THROW, FT.	109 5-7-15	164 7-11-22	218 10-15-25	245 12-17-27	273 13-19-28	327 14-21-30	382 15-23-34		
	1S	CFM/SIDE THROW, FT.	218 7-12-22	327 12-17-31	436 15-23-25	491 17-26-37	545 19-27-39	654 20-29-42	763 22-32-45		
12" ROUND	RETURN FACTORS —SP=1.0 TP NC + 3	CFM NC	314 —	471 18	628 26	707 28	785 32	942 37	1099 42		
	4A	CFM/SIDE THROW, FT.	79 6-9-15	118 8-11-18	157 10-15-23	177 13-17-24	196 14-18-25	236 15-20-28	275 17-21-30		
	3A	CFM/SIDE THROW, FT.	79 6-9-15	118 7-10-17	157 8-11-18	236 9-12-20	177 10-15-23	265 11-17-25	196 13-17-24	294 14-19-26	
	2S	CFM/SIDE THROW, FT.	157 6-9-19	236 9-14-26	314 11-16-29	353 14-21-32	393 15-23-34	471 16-24-38	550 18-27-40		
	1S	CFM/SIDE THROW, FT.	314 9-14-28	471 14-21-37	628 19-28-42	707 21-32-45	785 23-34-47	942 24-36-51	1099 27-39-55		
14" ROUND	RETURN FACTORS —SP=1.1 TP NC + 4	CFM NC	427 —	641 20	854 28	961 30	1068 34	1282 39	1495 44		
	4A	CFM/SIDE THROW, FT.	107 7-10-19	160 10-15-23	214 14-19-26	240 15-20-29	267 17-21-30	320 19-23-32	374 21-26-38		
	3A	CFM/SIDE THROW, FT.	107 7-10-19	160 8-11-21	214 10-15-23	320 11-17-25	240 14-19-26	360 15-21-29	267 17-22-32	401 19-23-33	
	2S	CFM/SIDE THROW, FT.	214 7-11-22	320 11-16-31	427 14-22-36	481 16-24-38	534 18-27-40	641 19-28-43	748 21-31-47		
	1S	CFM/SIDE THROW, FT.	427 11-16-32	641 16-24-42	854 24-33-50	961 24-33-52	1068 27-39-55	1282 29-42-60	1495 33-45-65		
16" ROUND	RETURN FACTORS —SP=1.3 TP NC + 6	CFM NC	558 —	837 22	1116 30	1256 32	1395 36	1674 41	1953 46		
	4A	CFM/SIDE THROW, FT.	140 8-12-21	209 12-19-26	279 17-21-31	314 19-23-32	349 20-25-35	419 22-28-42	488 24-30-48		
	3A	CFM/SIDE THROW, FT.	140 8-12-21	209 9-13-23	279 12-19-26	419 13-21-29	314 17-21-31	471 19-23-34	349 20-25-35	523 22-28-39	
	2S	CFM/SIDE THROW, FT.	279 8-13-25	419 13-19-35	558 16-25-41	628 19-28-43	698 20-30-45	837 23-34-49	977 26-37-54		
	1S	CFM/SIDE THROW, FT.	558 13-19-38	837 19-28-49	1116 25-38-57	1256 28-42-60	1395 31-44-63	1674 36-48-69	1953 42-52-75		

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293	
			CFM NC	— —	A	B	A	B	A	B	A	B	A	B	A	B
9 x 6 .375 SQ. FT.	RETURN FACTORS —SP=1.2 TP NC + 0	CFM NC	110	—	150	14	185	20	225	25	260	29	300	33	335	37
	4B	CFM/SIDE THROW, FT.	37	18	50	25	62	31	75	37	87	44	100	50	112	56
	3A1	CFM/SIDE THROW, FT.	47	18	62	25	78	31	94	37	109	44	125	50	140	56
	3A2	CFM/SIDE THROW, FT.	42	35	55	47	70	58	84	70	98	82	112	94	126	105
	2A 2B	CFM/SIDE THROW, FT.	56	—	75	—	93	—	112	—	131	—	150	—	168	—
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	75	37	100	50	125	62	150	75	175	87	200	100	225	112
1A 1B	CFM/SIDE THROW, FT.	112	—	150	—	187	—	225	—	262	—	300	—	337	—	
12 x 6 .50 SQ. FT.	RETURN FACTORS —SP=1.6 TP NC + 1	CFM NC	150	—	200	14	250	20	300	26	350	31	400	35	450	39
	4B 4C	CFM/SIDE THROW, FT.	56	18	75	25	94	31	113	37	131	44	150	50	169	56
	3A1	CFM/SIDE THROW, FT.	66	18	87	25	109	31	131	37	153	44	175	50	197	56
	3B	CFM/SIDE THROW, FT.	75	37	100	50	126	62	150	75	176	87	200	100	226	112
	2A 2B	CFM/SIDE THROW, FT.	75	—	100	—	125	—	150	—	175	—	200	—	225	—
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	112	37	150	50	188	62	225	75	263	87	300	100	338	112
1A 1B	CFM/SIDE THROW, FT.	150	—	200	—	250	—	300	—	350	—	400	—	450	—	
15 x 6 .625 SQ. FT.	RETURN FACTORS —SP=1.9 TP NC + 1	CFM NC	190	—	250	15	310	21	375	27	440	32	500	36	565	40
	4B 4C	CFM/SIDE THROW, FT.	75	18	100	25	125	31	150	37	175	44	200	50	225	56
	4E	CFM/SIDE THROW, FT.	56	37	75	50	94	62	113	75	131	87	150	100	169	112
	3A1	CFM/SIDE THROW, FT.	84	18	112	25	140	31	169	37	197	44	225	50	253	56
	2A 2B	CFM/SIDE THROW, FT.	94	—	125	—	156	—	187	—	219	—	250	—	281	—
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	150	37	200	50	250	62	300	75	350	87	400	100	450	112
1A 1B	CFM/SIDE THROW, FT.	188	—	250	—	312	—	375	—	438	—	500	—	563	—	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D37.

D

CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293	
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A
18 x 6 .75 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 2	CFM NC	225 —		300 16		375 22		450 28		525 33		600 37		675 41	
	4B 4C	CFM/SIDE THROW, FT.	94	18	125	25	156	31	188	37	218	44	250	50	281	56
	4E	CFM/SIDE THROW, FT.	56	56	75	75	94	94	113	113	131	131	150	150	169	169
	3A1	CFM/SIDE THROW, FT.	103	18	137	25	172	31	206	37	240	44	275	50	309	56
	2A 2B	CFM/SIDE THROW, FT.	112		150		187		225		262		300		337	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	187	37	250	50	313	62	375	75	438	87	500	100	563	112
	1A 1B	CFM/SIDE THROW, FT.	225		300		375		450		525		600		675	
21 x 6 .875 SQ. FT.	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	260 —		350 16		435 22		525 29		610 33		700 38		785 41	
	4B 4C	CFM/SIDE THROW, FT.	112	18	150	25	187	31	225	37	262	44	300	50	337	56
	4E	CFM/SIDE THROW, FT.	75	56	100	75	125	94	150	113	175	131	200	150	225	169
	3A1	CFM/SIDE THROW, FT.	122	18	162	25	203	31	244	37	284	44	325	50	365	56
	2A 2B	CFM/SIDE THROW, FT.	131		175		218		262		306		350		393	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	225	37	300	50	375	62	450	75	525	87	600	100	675	112
	1A 1B	CFM/SIDE THROW, FT.	262		350		437		525		612		700		787	
24 x 6 1.0 SQ. FT.	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	300 —		400 16		500 23		600 30		700 34		800 39		900 42	
	4B 4C	CFM/SIDE THROW, FT.	131	18	175	25	219	31	263	37	306	44	350	50	394	56
	4E	CFM/SIDE THROW, FT.	75	75	100	100	125	125	150	150	175	175	200	200	225	225
	3A1	CFM/SIDE THROW, FT.	141	18	187	25	234	31	281	37	328	44	375	50	422	56
	2A 2B	CFM/SIDE THROW, FT.	150		200		250		300		350		400		450	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	260	37	350	50	438	62	525	75	613	87	700	100	788	112
	1A 1B	CFM/SIDE THROW, FT.	300		400		500		600		700		800		900	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293	
			CFM NC	375 —	500 17	625 24	750 30	875 35	1000 40	1125 43	A	B	A	B	A	B
30 x 6 1.25 SQ. FT.	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	375 —		500 17		625 24		750 30		875 35		1000 40		1125 43	
	4B 4C	CFM/SIDE THROW, FT.	169	18	225	25	281	31	338	37	393	44	450	50	506	56
	4E	CFM/SIDE THROW, FT.	94	94	125	125	156	156	188	188	219	219	250	250	282	282
	3A1	CFM/SIDE THROW, FT.	178	18	237	25	297	31	356	37	415	44	475	50	534	56
	2A 2B	CFM/SIDE THROW, FT.	187		250		312		375		437		500		562	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	337	37	450	50	563	62	675	75	788	87	900	100	1013	112
1A 1B	CFM/SIDE THROW, FT.	375		500		625		750		875		1000		1125		
12 x 9 .75 SQ. FT.	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	225 —		300 17		375 23		450 28		525 33		600 36		675 40	
	4B 4C	CFM/SIDE THROW, FT.	70	42	94	56	117	70	141	84	164	98	188	112	211	126
	3A1	CFM/SIDE THROW, FT.	91	42	121	56	152	70	183	84	213	98	244	112	274	126
	3A2	CFM/SIDE THROW, FT.	75	75	100	100	125	125	150	150	175	175	200	200	225	225
	2A 2B	CFM/SIDE THROW, FT.	112		150		187		225		262		300		337	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	141	84	188	112	234	141	281	169	328	197	375	225	422	253
1A 1B	CFM/SIDE THROW, FT.	225		300		375		450		525		600		675		
15 x 9 .93 SQ. FT.	RETURN FACTORS —SP=1.7 TP NC + 3	CFM NC	280 —		375 18		470 24		565 29		655 34		750 37		845 41	
	4B 4C	CFM/SIDE THROW, FT.	98	42	131	56	165	70	198	84	230	98	263	112	296	126
	4E	CFM/SIDE THROW, FT.	70	70	94	94	117	117	141	141	164	164	188	188	211	211
	3A1	CFM/SIDE THROW, FT.	120	42	159	56	200	70	240	84	279	98	319	112	359	126
	3A2	CFM/SIDE THROW, FT.	117	82	155	110	196	137	233	165	272	192	312	219	351	247
	2A 2B	CFM/SIDE THROW, FT.	140		187		235		281		328		375		422	
2C 2E 2D 2F	CFM/SIDE THROW, FT.	197	84	263	112	329	141	394	169	459	197	525	225	592	253	
1A 1B	CFM/SIDE THROW, FT.	281		375		470		563		656		750		845		

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D37.

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293								
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A	B						
18 x 9 1.125 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 3	CFM NC	335 —		450 19		560 25		675 30		790 35		900 38		1010 42								
	4B 4C	CFM/SIDE THROW, FT.	126 42	169 56	211 70	254 84	296 98	338 112	380 126	14-17-23	6-8-13	17-19-29	8-10-14	19-22-31	10-12-16	21-23-34	10-13-17	22-25-36	12-13-18	23-27-39	12-14-19	25-29-42	13-16-21
	4E	CFM/SIDE THROW, FT.	99 70	132 94	164 117	197 141	230 164	263 188	296 211	13-16-22	12-14-19	14-18-25	13-16-22	16-21-29	14-18-25	17-22-30	16-19-29	18-23-32	17-21-29	19-25-34	18-22-31	21-29-38	19-23-32
	3A1	CFM/SIDE THROW, FT.	147 42	197 56	246 70	295 84	345 98	394 112	443 126	14-17-23	6-8-13	17-19-29	8-10-14	19-22-31	10-12-16	21-23-34	10-13-17	22-25-36	12-13-18	23-27-39	12-14-19	25-29-42	13-16-21
	3B	CFM/SIDE THROW, FT.	168 84	225 112	281 141	337 169	394 197	450 225	506 253	17-21-28	13-15-20	19-23-32	14-17-22	21-27-36	15-20-25	23-28-40	17-21-27	25-30-42	18-22-31	27-32-46	20-24-31	28-34-47	21-25-34
	2A 2B	CFM/SIDE THROW, FT.	163	225	281	337	394	450	506	16-19-26		18-22-30		21-25-34		22-29-38		23-29-40		25-31-43		29-32-45	
	2C 2E	CFM/SIDE THROW, FT.	253 84	338 112	421 141	506 169	591 197	675 225	759 253	18-22-31	13-15-20	21-25-35	14-17-22	24-28-41	15-20-25	25-31-45	17-21-27	27-32-48	18-22-31	29-35-50	20-24-31	31-39-53	21-25-34
1A 1B	CFM/SIDE THROW, FT.	337	450	562	675	788	900	1012	20-24-34		22-27-39		25-31-45		27-32-48		29-35-50		31-36-55		34-41-57		
21 x 9 1.125 SQ. FT.	RETURN FACTORS —SP=2.5 TP NC + 4	CFM NC	395 —		525 19		655 25		785 31		915 36		1050 38		1180 42								
	4B 4C	CFM/SIDE THROW, FT.	154 42	206 56	258 70	309 84	360 98	413 112	464 126	16-19-26	6-8-13	18-22-30	8-10-14	21-25-34	10-12-16	22-29-38	10-13-17	23-29-40	12-13-18	25-31-43	12-14-19	29-32-45	13-16-21
	4E	CFM/SIDE THROW, FT.	98 98	131 131	163 163	196 196	229 229	261 261	294 294	13-16-22	13-16-22	14-18-25	14-18-25	16-21-29	16-21-29	17-22-30	17-22-30	18-23-32	18-23-32	19-25-34	19-25-34	21-29-38	21-29-38
	3A1	CFM/SIDE THROW, FT.	175 42	234 56	292 70	351 84	410 98	468 112	527 126	16-19-26	6-8-13	18-22-30	8-10-14	21-25-34	10-12-16	22-29-38	10-13-17	23-29-40	12-13-18	25-31-43	12-14-19	29-32-45	13-16-21
	2A 2B	CFM/SIDE THROW, FT.	196	262	327	393	458	525	590	16-19-26		18-22-30		21-25-34		22-27-38		23-29-40		25-31-43		29-32-45	
	2C 2E	CFM/SIDE THROW, FT.	308 84	412 112	514 141	617 169	720 197	825 225	927 253	20-24-34	13-15-20	22-27-39	14-17-22	25-31-45	15-20-25	27-32-48	17-21-27	31-35-50	18-22-29	31-36-55	20-24-31	34-41-57	21-25-34
	1A 1B	CFM/SIDE THROW, FT.	393	524	655	786	917	1050	1180	21-25-35		24-31-42		27-34-48		29-36-50		31-39-55		34-42-59		35-45-62	
24 x 9 1.5 SQ. FT.	RETURN FACTORS —SP=2.9 TP NC + 4	CFM NC	450 —		600 19		750 25		900 31		1050 36		1200 38		1350 43								
	4B 4C	CFM/SIDE THROW, FT.	183 42	244 56	305 70	366 84	427 98	488 112	549 126	17-21-28	7-8-14	20-24-32	8-11-15	22-27-36	11-13-17	24-29-41	11-14-18	25-31-43	13-14-20	27-34-46	13-15-21	31-35-49	14-17-22
	4E	CFM/SIDE THROW, FT.	126 99	169 132	211 164	253 197	295 230	337 263	379 296	15-18-25	14-17-24	18-21-31	15-20-27	21-24-34	17-22-31	22-25-36	18-24-32	24-27-39	20-25-35	25-31-42	21-27-36	27-31-45	22-31-41
	3A1	CFM/SIDE THROW, FT.	204 42	272 56	340 70	408 84	476 98	544 112	612 126	17-21-28	7-8-14	20-24-32	8-11-15	22-27-36	11-13-17	24-29-41	11-14-18	25-31-43	13-14-20	27-34-46	13-15-21	31-35-49	14-17-22
	2A 2B	CFM/SIDE THROW, FT.	225	300	375	450	525	600	675	18-22-31		21-25-35		24-28-41		25-31-45		27-32-48		29-35-50		31-39-53	
	2C 2E	CFM/SIDE THROW, FT.	365 84	488 112	609 141	731 169	853 197	975 225	1097 253	21-25-35	13-15-20	24-31-42	14-17-22	27-34-48	15-20-25	29-36-50	17-21-27	31-39-55	18-22-29	34-42-59	20-24-31	35-45-62	21-25-34
	1A 1B	CFM/SIDE THROW, FT.	450	600	750	900	1050	1200	1350	21-25-35		24-31-42		27-34-48		29-36-50		31-39-55		34-42-59		35-45-62	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293	
			CFM NC	—	A	B	A	B	A	B	A	B	A	B	A	B
30 x 9 1.875 SQ. FT.	RETURN FACTORS —SP=3.9 TP NC + 5	CFM NC	560 —		750 20		935 26		1125 32		1310 37		1500 39		1685 44	
	4B 4C	CFM/SIDE THROW, FT.	238	42	319	56	398	70	478	84	557	98	638	112	716	126
	4E	CFM/SIDE THROW, FT.	155	126	206	169	258	211	310	253	361	295	413	337	465	379
	3A1	CFM/SIDE THROW, FT.	259	42	347	56	433	70	520	84	606	98	694	112	779	126
	2A 2B	CFM/SIDE THROW, FT.	281		375		468		562		655		750		842	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	476	84	638	112	796	141	956	169	1113	197	1275	225	1432	253
	1A 1B	CFM/SIDE THROW, FT.	562		750		937		1125		1310		1500		1685	
36 x 9 2.25 SQ. FT.	RETURN FACTORS —SP=5.0 TP NC + 6	CFM NC	675 —		900 21		1125 27		1350 33		1575 38		1800 40		2025 44	
	4B 4C	CFM/SIDE THROW, FT.	295	42	394	56	492	70	591	84	689	98	788	112	886	126
	4E	CFM/SIDE THROW, FT.	183	155	244	206	305	258	366	310	427	361	488	413	549	465
	3A1	CFM/SIDE THROW, FT.	316	42	422	56	527	70	633	84	738	98	844	112	949	126
	2A 2B	CFM/SIDE THROW, FT.	337		450		562		675		787		900		1012	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	590	84	788	112	984	141	1181	169	1378	197	1575	225	1772	253
	1A 1B	CFM/SIDE THROW, FT.	675		900		1125		1350		1575		1800		2025	
15 x 12 1.25 SQ. FT.	RETURN FACTORS —SP=1.6 TP NC + 2	CFM NC	375 —		500 19		625 25		750 30		875 34		1000 38		1125 41	
	4B 4C	CFM/SIDE THROW, FT.	112	75	150	100	187	125	225	150	262	175	300	200	337	225
	3A1	CFM/SIDE THROW, FT.	150	75	200	100	250	125	300	150	350	175	400	200	450	225
	3A2	CFM/SIDE THROW, FT.	117	129	156	172	195	215	234	258	273	301	312	344	351	387
	2A 2B	CFM/SIDE THROW, FT.	187		250		312		375		437		500		567	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	225	150	300	200	375	250	450	300	525	350	600	400	675	450
	1A 1B	CFM/SIDE THROW, FT.	375		500		625		750		875		1000		1125	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033	400 .058	500 .090	600 .130	700 .177	800 .231	900 .293
18 x 12 1.5 SQ. FT.	RETURN FACTORS —SP=1.9 TP NC + 3	CFM NC	450 —	600 20	750 26	900 31	1050 35	1200 39	1350 42
		CFM/SIDE THROW, FT.	150 75 15-18-25 8-13-15	200 100 18-21-31 11-14-18	250 125 21-24-34 13-15-21	300 150 22-25-36 14-17-22	350 175 24-27-39 14-18-24	400 200 25-31-42 15-20-25	450 225 27-31-45 17-21-27
		CFM/SIDE THROW, FT.	187 75 17-21-28 8-13-15	250 100 20-24-32 11-14-18	312 125 22-27-36 13-15-21	375 150 24-31-41 14-17-22	437 175 25-31-43 14-18-24	500 200 27-34-46 15-20-25	562 225 31-35-49 17-21-27
		CFM/SIDE THROW, FT.	168 141 14-17-24 13-15-21	225 187 15-20-27 14-17-24	281 234 17-22-31 15-20-27	337 281 18-24-32 17-21-31	394 328 20-25-35 18-22-31	450 375 21-27-36 20-24-34	506 422 22-31-41 21-25-35
		CFM/SIDE THROW, FT.	225 18-22-31	300 21-25-35	375 24-28-41	450 25-31-45	525 27-32-48	600 29-35-50	675 31-39-53
		CFM/SIDE THROW, FT.	300 150 20-24-34 14-17-24	400 200 22-27-39 15-20-27	500 250 25-31-45 17-22-31	600 300 27-32-48 18-24-32	700 350 29-35-50 20-25-35	800 400 31-36-55 21-27-36	900 450 34-41-57 22-31-41
		CFM/SIDE THROW, FT.	450 21-25-35	600 24-31-42	750 27-34-48	900 29-36-50	1050 31-39-55	1200 34-42-59	1350 35-45-62
21 x 12 1.75 SQ. FT.	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	525 —	700 20	875 26	1050 31	1225 35	1400 39	1575 42
		CFM/SIDE THROW, FT.	187 75 17-21-28 8-13-15	250 100 20-24-32 11-14-18	312 125 22-27-36 13-15-21	375 150 24-31-41 14-17-22	437 175 25-32-43 14-18-24	500 200 27-34-46 15-20-25	562 225 31-35-49 17-21-27
		CFM/SIDE THROW, FT.	150 112 15-18-25	200 150 18-21-31 15-18-25	250 187 21-24-34	300 225 22-25-36	350 262 24-27-39	400 300 25-31-42 22-25-36	450 337 27-31-45
		CFM/SIDE THROW, FT.	225 75 18-22-31 8-13-15	300 100 21-25-35 11-14-18	375 125 24-28-41 13-15-21	450 150 25-31-45 14-17-22	525 175 27-32-48 14-18-24	600 200 29-35-50 15-20-25	675 225 31-39-53 17-21-27
		CFM/SIDE THROW, FT.	230 148 14-17-24 13-15-21	306 197 15-20-27 14-17-24	382 246 17-22-31 15-20-27	460 295 18-24-32 17-21-31	535 345 20-25-35 18-22-31	612 394 21-27-36 20-24-34	688 443 22-31-41 21-25-35
		CFM/SIDE THROW, FT.	262 18-22-31	350 21-25-35	437 24-28-41	525 25-31-45	612 27-32-48	700 29-35-50	787 31-39-53
		CFM/SIDE THROW, FT.	375 150 21-25-35 14-17-24	500 200 24-31-42 15-20-27	625 250 27-34-48 17-22-31	750 300 29-36-50 18-24-32	875 350 31-39-55 20-25-35	1000 400 34-42-59 21-27-36	1125 450 35-45-62 22-31-41
	CFM/SIDE THROW, FT.	525 22-27-39	700 25-31-45	875 28-35-50	1050 31-39-55	1225 32-42-59	1400 35-45-62	1575 39-48-66	
24 x 12 2.0 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 5	CFM NC	600 12	800 21	1000 27	1200 32	1400 36	1600 40	1800 43
		CFM/SIDE THROW, FT.	225 75 18-22-31 8-13-15	300 100 21-25-35 11-14-18	375 125 24-28-41 13-15-21	450 150 25-31-45 14-17-22	525 175 27-32-48 14-18-24	600 200 31-35-50 15-20-25	675 225 31-39-53 17-21-27
		CFM/SIDE THROW, FT.	150 150 15-18-25 15-18-25	200 200 18-21-31 18-21-31	250 250 21-24-34 21-24-34	300 300 22-25-36 22-25-36	350 350 24-27-39 24-27-39	400 400 25-31-42 25-31-42	450 450 27-31-45 27-31-45
		CFM/SIDE THROW, FT.	262 75 18-22-31 8-13-15	350 100 21-25-35 11-14-18	437 175 24-28-41 13-15-21	525 150 25-31-45 14-17-22	612 175 27-32-48 14-18-24	700 200 29-35-50 15-20-25	787 225 31-39-53 17-21-27
		CFM/SIDE THROW, FT.	300 150 15-18-25 14-17-24	400 200 18-21-31 15-20-27	500 250 21-24-34 17-22-31	600 300 22-25-36 18-24-32	700 350 24-27-39 20-25-35	800 400 25-31-42 21-27-36	900 450 27-31-45 22-31-41
		CFM/SIDE THROW, FT.	300 20-24-34	400 22-27-39	500 25-31-45	600 27-32-48	700 29-35-50	800 31-36-55	900 34-41-57
		CFM/SIDE THROW, FT.	450 150 21-25-35 14-17-24	600 200 24-31-42 15-20-27	750 250 27-34-48 17-22-31	900 300 29-36-50 18-24-32	1050 350 31-39-55 20-25-35	1200 400 34-42-59 21-27-36	1350 450 35-45-62 22-31-41
	CFM/SIDE THROW, FT.	600 24-31-42	800 28-34-48	1000 32-39-55	1200 34-42-57	1400 36-45-62	1600 41-49-66	1800 43-52-70	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293								
			CFM NC	750 15	1000 23	1250 29	1500 33	1750 37	2000 41	2250 43	A	B	A	B	A	B	A	B					
30 x 12 2.5 SQ. FT.	RETURN FACTORS —SP=3.3 TP NC + 6	CFM NC	750 15		1000 23		1250 29		1500 33		1750 37		2000 41		2250 43								
	4B 4C	CFM/SIDE THROW, FT.	300 75	400 100	500 125	600 150	700 175	800 200	900 225	20-24-34	8-13-15	22-27-39	11-14-18	25-31-45	13-15-21	27-32-48	14-17-22	29-35-50	14-18-24	31-36-55	15-20-25	34-41-57	17-21-27
	4E	CFM/SIDE THROW, FT.	183 183	250 250	313 313	375 375	437 437	500 500	562 562	17-21-28	17-21-28	20-24-32	20-24-32	22-27-36	22-27-36	24-31-41	24-31-41	25-31-43	25-31-43	27-34-46	27-34-46	31-35-49	31-35-49
	3A1	CFM/SIDE THROW, FT.	337 75	450 100	562 125	675 150	787 175	900 200	1012 225	20-24-34	8-13-15	22-27-39	11-14-18	25-31-45	13-15-21	27-32-48	14-17-22	29-35-50	14-18-24	31-36-55	15-20-25	34-41-57	17-21-27
	2A 2B	CFM/SIDE THROW, FT.	375 21-25-35	500 24-31-42	625 27-34-48	750 29-36-50	875 31-39-55	1000 34-42-59	1125 35-45-62														
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	600 150	800 200	1000 250	1200 300	1400 350	1600 400	1800 450	24-31-41	14-17-24	28-34-48	15-20-27	32-39-55	17-22-31	34-42-57	18-24-32	36-45-62	20-25-35	41-49-66	21-27-36	43-52-70	22-31-41
1A 1B	CFM/SIDE THROW, FT.	750 25-31-45	1000 31-35-50	1250 34-41-57	1500 36-45-62	1750 39-48-66	2000 42-50-70	2250 45-53-74															
36 x 12 3.0 SQ. FT.	RETURN FACTORS —SP=4.0 TP NC + 7	CFM NC	900 16		1200 25		1500 30		1800 34		2100 38		2400 42		2700 44								
	4B 4C	CFM/SIDE THROW, FT.	375 75	500 100	625 125	750 150	875 175	1000 200	1125 225	21-25-35	8-13-15	24-31-42	11-14-18	27-34-48	13-15-21	29-36-50	14-17-22	31-39-55	14-18-24	34-42-59	15-20-25	35-45-62	17-21-27
	4E	CFM/SIDE THROW, FT.	225 225	300 300	375 375	450 450	525 525	600 600	675 675	18-22-31	18-22-31	21-25-35	21-25-35	24-28-41	24-28-41	25-31-45	25-31-45	27-32-48	27-32-48	29-35-50	29-35-50	31-39-53	31-39-53
	3A1	CFM/SIDE THROW, FT.	412 75	550 100	687 125	825 150	962 175	1100 200	1237 225	21-25-35	8-13-15	24-31-42	11-14-18	27-34-48	13-15-21	29-36-50	14-17-22	31-39-55	14-18-24	34-42-59	15-20-25	35-45-62	17-21-27
	2A 2B	CFM/SIDE THROW, FT.	450 21-25-35	600 24-31-42	750 27-34-48	900 29-36-50	1050 31-39-55	1200 34-42-59	1350 35-45-62														
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	750 150	1000 200	1250 250	1500 300	1750 350	2000 400	2250 450	25-31-45	14-17-24	31-35-50	15-20-27	34-41-57	17-22-31	36-45-62	18-24-32	39-48-66	20-25-35	42-50-70	21-27-36	45-53-74	22-31-41
1A 1B	CFM/SIDE THROW, FT.	900 27-34-46	1200 31-39-53	1500 35-45-60	1800 39-48-64	2100 42-50-70	2400 45-55-74	2700 48-57-80															
18 x 15 1.875 SQ. FT.	RETURN FACTORS —SP=2.0 TP NC + 4	CFM NC	560 14		750 21		935 28		1125 32		1310 36		1500 39		1685 43								
	4B 4C	CFM/SIDE THROW, FT.	164 117	219 156	273 195	328 234	383 273	438 312	492 351	14-17-24	11-14-18	15-20-27	13-15-21	17-22-31	14-17-24	18-24-32	15-18-25	20-25-35	17-20-27	21-27-36	17-21-31	22-31-41	18-22-31
	3A1	CFM/SIDE THROW, FT.	222 117	297 156	371 195	445 234	519 273	594 312	668 351	18-22-31	11-14-18	21-25-35	13-15-21	24-28-41	14-17-24	25-31-45	15-18-25	31-39-55	17-20-27	31-35-50	17-21-31	31-39-53	18-22-31
	3A2	CFM/SIDE THROW, FT.	168 197	225 262	281 328	337 394	394 459	450 525	506 590	13-16-22	18-22-30	15-18-25	21-25-34	16-21-28	24-28-39	18-22-33	25-33-43	19-24-33	27-33-46	21-25-36	28-36-49	22-27-37	33-37-52
	2A 2B	CFM/SIDE THROW, FT.	281 20-24-34	375 22-27-39	468 25-31-45	562 27-32-48	656 29-35-50	750 31-36-55	843 34-41-57														
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	329 234	438 312	547 390	657 468	766 546	876 624	985 702	25-33-45	18-22-30	30-36-51	21-25-34	34-42-58	24-28-39	36-45-61	25-31-43	39-48-66	27-33-46	43-52-70	28-36-49	46-55-75	33-37-52
1A 1B	CFM/SIDE THROW, FT.	562 24-28-42	750 27-33-48	937 30-37-54	1125 33-42-58	1312 34-45-63	1500 37-48-66	1687 42-51-70															

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293	
			CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC
21 x 15 2.185 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 5	CFM NC	655 14		875 21		1090 28		1310 33		1530 36		1750 39		1970 43	
	4B 4C	CFM/SIDE THROW, FT.	210 117	281 156	361 195	422 234	493 273	563 312	634 351	19-24-33 12-15-19	22-27-37 13-16-22	25-30-43 15-18-25	27-33-48 16-19-27	28-34-51 18-21-28	33-37-54 18-22-33	33-42-57 19-24-33
	4E	CFM/SIDE THROW, FT.	164 164	218 218	273 273	327 327	382 382	437 437	491 491	18-22-30 18-22-30	21-25-36 21-25-36	24-28-39 24-28-39	25-31-43 25-31-43	27-33-46 27-33-46	28-36-49 28-36-49	33-37-52 33-37-52
	3A1	CFM/SIDE THROW, FT.	269 117	359 156	448 195	539 234	629 273	719 312	809 351	19-24-33 12-15-19	22-27-37 13-16-22	25-30-43 15-18-25	27-33-48 16-19-27	28-34-51 18-21-28	33-37-54 18-22-33	33-42-57 19-24-33
	3A2	CFM/SIDE THROW, FT.	230 213	306 284	382 355	460 426	535 498	612 569	688 641	16-19-27 15-18-25	19-22-33 16-21-28	22-25-36 18-24-33	24-27-39 19-25-34	25-28-42 21-27-37	27-31-45 22-28-39	28-33-48 24-33-43
	2A 2B	CFM/SIDE THROW, FT.	327	437	596	656	766	875	985	21-25-36	24-28-42	27-33-48	28-34-51	31-37-54	33-39-58	36-43-61
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	422 234	563 312	702 390	844 468	966 546	1126 624	1268 702	22-27-37 18-22-30	25-33-45 21-25-34	28-36-51 24-28-39	29-39-54 25-33-43	33-42-58 27-33-46	36-45-63 28-36-49	37-48-66 33-37-52
	1A 1B	CFM/SIDE THROW, FT.	655	875	1092	1312	1532	1750	1970	25-33-45	30-36-51	33-42-58	36-45-61	39-48-66	43-52-70	46-55-75
24 x 15 2.5 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 6	CFM NC	750 14		1000 22		1250 29		1500 34		1750 37		2000 39		2250 44	
	4B 4C	CFM/SIDE THROW, FT.	258 117	344 156	430 195	516 234	602 273	688 312	774 351	19-24-33 12-15-19	22-27-37 13-16-22	25-30-43 15-18-25	27-33-48 16-19-27	28-34-51 18-21-28	31-37-54 18-22-31	33-42-57 19-24-33
	4E	CFM/SIDE THROW, FT.	164 211	218 281	273 352	327 422	382 492	437 563	491 633	18-22-30 19-24-33	21-25-36 22-27-37	24-28-39 25-30-43	25-31-43 27-33-48	27-33-46 28-34-51	28-36-49 33-37-54	33-37-52 33-42-57
	3A1	CFM/SIDE THROW, FT.	316 117	422 156	527 195	633 234	738 273	844 312	949 351	21-25-36 12-15-19	24-28-42 13-16-22	27-33-48 15-18-25	28-34-51 16-19-27	31-37-54 18-21-28	33-39-58 18-22-31	36-43-61 19-24-33
	3A2	CFM/SIDE THROW, FT.	300 225	400 300	500 375	600 450	700 525	800 600	900 675	19-24-33 16-19-27	22-27-37 19-22-33	25-30-43 22-25-36	27-33-48 24-27-39	28-34-51 25-28-42	31-37-54 27-33-45	33-42-57 28-33-48
	2A 2B	CFM/SIDE THROW, FT.	375	500	625	750	875	1000	1125	22-27-37	25-33-45	28-36-51	31-39-54	33-42-58	36-45-63	37-48-66
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	516 234	688 312	860 390	1032 468	1204 546	1376 624	1548 702	24-28-42 18-22-30	27-33-48 21-25-34	30-37-54 24-28-39	33-42-58 25-31-43	34-45-63 27-33-46	37-48-66 28-36-49	42-51-70 33-37-52
	1A 1B	CFM/SIDE THROW, FT.	750	1000	1250	1500	1750	2000	2250	27-33-48	33-37-54	36-43-61	39-48-66	41-51-70	45-54-75	48-57-79
30 x 15 3.125 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 7	CFM NC	935 14		1250 23		1565 30		1875 36		2190 39		2500 40		2810 45	
	4B 4C	CFM/SIDE THROW, FT.	351 117	469 156	587 195	703 234	822 273	938 312	1054 351	20-24-34 11-14-18	22-27-39 13-15-21	25-31-45 14-17-24	27-32-48 15-18-25	29-35-50 17-20-27	31-36-55 17-21-29	34-41-57 18-22-31
	4E	CFM/SIDE THROW, FT.	258 211	344 281	430 352	516 422	602 492	688 583	775 633	18-22-31 18-22-31	21-25-31 21-25-35	24-28-41 24-28-41	25-31-45 25-31-45	27-32-48 27-32-48	31-35-50 31-35-50	31-39-53 31-39-53
	3A1	CFM/SIDE THROW, FT.	410 117	547 156	685 195	820 234	958 273	1094 312	1224 351	21-25-35 11-14-18	24-31-42 13-15-21	27-34-48 14-17-24	29-36-50 15-18-25	31-39-55 17-20-27	34-42-59 17-21-29	35-45-62 18-22-31
	3B	CFM/SIDE THROW, FT.	468 234	625 312	782 391	937 469	1095 547	1250 625	1406 702	24-30-40 18-22-30	28-34-46 21-25-34	32-38-52 24-28-39	34-44-58 25-33-43	36-44-62 27-33-46	38-48-66 28-36-49	44-50-70 33-37-52
	2A 2B	CFM/SIDE THROW, FT.	468	625	782	937	1095	1250	1405	22-27-39	25-31-45	28-35-50	31-39-55	32-42-59	35-45-62	39-48-66
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	702 234	938 312	1175 390	1407 468	1644 546	1876 624	2108 702	25-33-45 18-22-30	30-36-51 21-25-34	34-42-58 24-28-39	36-45-61 25-33-43	39-48-66 27-33-46	43-52-70 28-36-49	51-55-75 33-37-52
	1A 1B	CFM/SIDE THROW, FT.	937	1250	1565	1875	2190	2500	2810	28-36-49	33-42-57	37-48-64	42-51-69	45-54-75	48-58-79	51-61-85

Notes:

- Core style 4E is sized to give equal flow as near as possible in directions A and B.
- For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293	
			CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC	CFM NC
36 x 15 3.75 SQ. FT.	RETURN FACTORS —SP=3.8 TP NC + 7	CFM NC	1125 13	1500 23	1875 31	2250 37	2625 40	3000 41	3375 46							
	4B 4C	CFM/SIDE THROW, FT.	446 117 22-27-37 12-15-19	594 156 25-33-45 13-16-22	742 195 28-36-51 15-18-25	891 234 33-39-54 16-19-27	1039 273 33-45-58 18-21-28	1188 312 36-45-63 18-22-30	1336 351 37-48-66 19-24-33							
	4E	CFM/SIDE THROW, FT.	306 258 21-25-36 19-24-33	408 344 24-28-42 22-27-37	510 430 27-33-48 25-30-43	612 516 28-34-51 27-33-48	714 602 33-37-54 28-34-51	816 688 33-39-58 33-37-54	918 775 36-43-61 33-42-57							
	3A1	CFM/SIDE THROW, FT.	504 117 24-28-42 12-15-19	672 156 27-33-48 13-16-22	840 195 30-37-54 15-18-25	1008 234 33-45-58 16-19-27	1176 273 34-45-63 18-21-28	1344 312 37-48-66 18-22-30	1512 351 42-51-70 19-24-33							
	2A 2B	CFM/SIDE THROW, FT.	562 24-28-42	750 27-33-48	937 30-37-54	1125 33-42-58	1312 34-45-63	1500 37-48-66	1682 42-51-70							
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	890 234 28-36-49 18-22-30	1188 312 33-42-49 21-25-34	1485 390 37-48-64 24-28-39	1782 468 42-51-69 25-33-43	2079 546 45-54-75 27-33-46	2376 624 48-58-79 28-36-49	2873 702 51-61-85 33-37-52							
	1A 1B	CFM/SIDE THROW, FT.	1125 30-37-52	1500 34-43-60	1875 39-48-67	2250 42-52-73	2625 46-57-78	3000 49-60-85	3375 52-64-90							
21 x 18 2.625 SQ. FT.	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	785 14	1050 21	1310 27	1575 32	1840 36	2100 40	2360 43							
	4B 4C	CFM/SIDE THROW, FT.	225 169 16-19-27 13-16-22	300 225 19-22-33 15-18-25	375 280 22-25-36 16-21-28	450 337 24-27-40 18-22-30	526 394 25-28-42 19-24-33	600 450 27-33-45 21-25-36	674 506 28-33-48 22-27-37							
	3A1	CFM/SIDE THROW, FT.	309 169 21-25-36 13-16-22	412 225 24-28-42 15-18-25	514 281 27-33-48 16-21-28	619 337 28-34-51 18-22-30	723 394 33-37-54 19-24-33	825 450 33-39-58 21-25-36	927 506 36-43-61 22-27-37							
	3A2	CFM/SIDE THROW, FT.	279 230 21-25-36 15-18-25	372 306 24-28-42 16-21-28	464 382 27-33-48 18-24-33	557 460 28-34-51 19-25-34	652 535 33-37-54 21-27-37	744 612 33-39-58 22-28-39	836 688 36-43-61 24-33-43							
	2A 2B	CFM/SIDE THROW, FT.	393 22-27-37	525 25-33-42	655 28-36-46	787 30-39-54	920 33-42-58	1050 36-45-63	1180 37-48-66							
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	450 338 22-27-37 19-24-33	600 450 25-33-42 22-27-37	750 560 28-36-46 25-30-43	900 675 30-39-54 27-33-48	1060 790 33-42-58 28-34-51	1200 900 36-45-63 33-37-54	1350 1010 37-48-66 33-42-57							
	1A 1B	CFM/SIDE THROW, FT.	787 29-35-51	1050 35-40-58	1310 38-46-66	1575 42-51-70	1840 45-54-75	2100 48-58-80	2360 51-61-85							
24 x 18 3.0 SQ. FT.	RETURN FACTORS —SP=2.5 TP NC + 6	CFM NC	900 15	1200 22	1500 28	1800 33	2100 37	2400 40	2700 43							
	4B 4C	CFM/SIDE THROW, FT.	281 169 22-27-38 14-18-24	375 225 26-30-45 16-19-27	469 281 29-35-51 18-22-30	563 337 30-37-54 19-24-33	656 394 33-40-58 21-26-35	750 450 35-42-62 22-27-38	844 506 38-46-66 24-29-40							
	4E	CFM/SIDE THROW, FT.	225 225 21-26-35 21-26-35	300 300 24-29-40 24-29-40	375 375 27-32-46 27-32-46	450 450 29-35-51 29-35-51	525 525 30-37-54 30-37-54	600 600 33-40-58 33-40-58	675 675 35-45-61 35-45-61							
	3A1	CFM/SIDE THROW, FT.	366 169 24-29-40 14-18-24	487 225 27-35-48 16-19-27	609 281 30-38-54 18-22-30	731 337 35-42-58 19-24-33	853 394 35-45-62 21-26-35	975 450 38-48-67 22-27-38	1098 506 40-51-70 24-29-40							
	3A2	CFM/SIDE THROW, FT.	300 300 25-31-43 20-23-32	400 400 29-34-50 23-27-40	500 500 32-40-58 27-31-43	600 600 34-41-61 29-32-47	700 700 40-45-65 31-34-50	800 800 40-47-70 32-40-54	900 900 43-52-74 34-40-58							
	2A 2B	CFM/SIDE THROW, FT.	450 24-29-40	600 27-35-48	750 30-38-54	900 35-42-58	1050 35-45-62	1200 38-48-67	1350 40-51-70							
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	562 338 26-30-45 21-26-35	750 450 29-35-51 24-29-40	938 562 32-40-58 27-32-46	1125 675 35-45-62 29-35-51	1313 787 37-48-67 30-37-54	1500 900 40-51-70 33-40-58	1688 1012 45-54-75 35-45-61							
1A 1B	CFM/SIDE THROW, FT.	900 30-38-53	1200 35-45-61	1500 40-51-69	1800 45-54-74	2100 48-58-80	2400 51-62-85	2700 54-66-91								

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D37.

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293		
			CFM NC	A B	A B	A B	A B	A B	A B	A B	A B	A B					
30 x 18 3.75 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 7	CFM NC	1125 15	1500 23	1875 29	2250 34	2625 38	3000 42	3375 45								
	4B 4C	CFM/SIDE THROW, FT.	394 169 24-29-40 14-18-24	525 225 27-35-48 16-19-27	657 281 30-38-54 18-22-30	788 337 35-42-58 19-24-35	918 394 35-45-62 21-26-35	1050 450 38-48-67 22-27-38	1181 506 40-51-70 24-29-40								
	4E	CFM/SIDE THROW, FT.	281 281 22-27-38 22-27-38	375 375 26-30-45 26-30-45	469 469 29-35-51 29-35-51	563 563 30-37-54 30-37-54	657 657 32-40-58 32-40-58	750 750 35-42-62 35-42-62	845 845 38-46-66 38-46-66								
	3A1	CFM/SIDE THROW, FT.	478 169 26-30-45 14-18-24	637 225 29-35-51 16-19-27	797 281 32-40-58 18-22-30	956 337 35-45-62 19-24-35	1115 394 37-48-67 21-26-35	1275 450 40-51-70 22-27-38	1434 506 45-54-75 24-29-40								
	3A2	CFM/SIDE THROW, FT.	469 327 22-27-38 19-24-32	625 437 26-30-45 22-27-37	782 546 29-35-51 26-30-42	937 656 30-37-54 27-35-46	1093 766 32-40-58 29-35-50	1250 875 35-42-62 30-38-53	1406 984 38-46-66 35-40-56								
	2A 2B	CFM/SIDE THROW, FT.	562 26-30-45	750 29-35-51	937 32-40-58	1125 35-45-62	1312 37-48-67	1500 40-51-70	1687 45-54-75								
	2C 2E	CFM/SIDE THROW, FT.	787 337 29-35-51 21-26-35	1050 450 35-40-58 24-29-40	1313 562 38-46-66 27-32-46	1575 675 42-51-70 29-35-51	1838 787 45-54-75 30-37-54	2100 900 48-58-80 33-40-58	2363 1012 51-61-85 35-45-61								
1A 1B	CFM/SIDE THROW, FT.	1125 32-40-56	1500 37-46-62	1875 42-53-72	2250 46-56-78	2625 50-61-83	3000 53-64-91	3375 56-69-96									
36 x 18 4.5 SQ. FT.	RETURN FACTORS —SP=3.6 TP NC + 8	CFM NC	1350 16	1800 24	2250 30	2700 35	3150 39	3600 42	4050 45								
	4B 4C	CFM/SIDE THROW, FT.	506 169 26-30-45 14-18-24	675 225 29-35-51 16-19-27	844 281 33-40-58 18-22-30	1013 337 35-45-62 19-24-35	1181 394 37-48-67 21-26-35	1350 450 40-51-70 22-27-38	1519 506 45-54-75 24-29-40								
	4E	CFM/SIDE THROW, FT.	339 339 22-27-38 22-27-38	452 452 26-30-45 26-30-45	565 565 29-35-51 29-35-51	678 678 30-37-54 30-37-54	791 791 33-40-58 33-40-58	904 904 35-42-62 35-42-62	1020 1020 38-46-66 38-46-66								
	3A1	CFM/SIDE THROW, FT.	591 169 27-35-48 14-18-24	787 225 32-38-54 16-19-27	984 281 37-45-62 18-22-30	1181 337 38-48-66 19-24-35	1378 394 42-51-70 21-26-35	1575 450 46-56-75 22-27-38	1772 506 50-59-80 24-29-40								
	3B	CFM/SIDE THROW, FT.	675 337 27-35-48 21-26-35	900 450 32-38-54 24-29-40	1125 562 37-45-62 27-32-46	1350 675 38-48-66 29-35-51	1575 787 42-51-70 30-37-54	1800 900 46-56-75 33-40-58	2025 1012 50-59-80 35-45-61								
	2A 2B	CFM/SIDE THROW, FT.	675 27-35-48	900 32-38-54	1125 37-45-62	1350 38-48-66	1575 42-51-70	1800 46-56-75	2025 50-59-80								
	2C 2E	CFM/SIDE THROW, FT.	1010 337 32-40-56 21-26-35	1350 450 37-46-64 24-29-40	1688 562 42-53-72 27-32-46	2025 675 46-56-78 29-35-51	2363 787 50-61-83 30-37-54	2700 900 53-64-91 33-40-58	3038 1012 56-69-96 35-45-61								
1A 1B	CFM/SIDE THROW, FT.	1350 35-40-59	1800 38-48-67	2250 45-54-77	2700 48-58-82	3150 51-62-90	3600 54-67-93	4050 59-70-101									
24 x 21 3.5 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 7	CFM NC	1050 15	1400 22	1750 28	2100 33	2450 37	2800 41	3150 44								
	4B 4C	CFM/SIDE THROW, FT.	295 230 20-25-34 17-20-29	394 306 24-29-39 19-24-32	493 382 27-32-44 20-27-37	590 460 29-37-49 22-29-39	690 535 31-37-53 24-31-42	788 612 32-41-56 25-32-44	887 688 37-42-59 27-37-49								
	3A1	CFM/SIDE THROW, FT.	410 230 25-31-42 17-20-29	547 306 29-37-51 19-24-32	684 382 32-41-58 20-27-37	820 460 37-44-61 22-29-39	957 535 37-48-66 24-31-42	1094 612 41-51-71 25-32-44	1231 688 42-54-75 27-37-49								
	3A2	CFM/SIDE THROW, FT.	375 300 25-31-42 19-22-31	500 400 29-37-51 22-25-37	625 500 32-41-58 25-29-41	750 600 37-44-61 27-31-44	875 700 37-48-66 29-32-48	1000 800 41-51-71 31-37-51	1125 900 42-54-75 32-37-54								
	2A 2B	CFM/SIDE THROW, FT.	525 27-32-48	700 31-37-54	875 34-42-61	1050 37-48-66	1225 39-51-71	1400 42-54-75	1575 48-58-80								
	2C 2E	CFM/SIDE THROW, FT.	591 459 29-37-51 24-29-41	788 612 34-41-58 27-32-48	986 764 39-48-66 31-37-54	1180 920 41-51-70 32-39-58	1380 1070 44-54-75 37-42-61	1576 1224 49-59-80 37-44-66	1774 1376 53-63-85 41-49-70								
	1A 1B	CFM/SIDE THROW, FT.	1050 34-42-59	1400 39-49-68	1750 44-56-76	2100 49-59-83	2450 53-65-88	2800 56-68-87	3150 59-73-102								

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D37.

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293		
			CFM NC	A B	A B	A B	A B	A B	A B	A B	A B	A B					
30 x 21 4.375 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1310 16		1750 23		2185 29		2625 34		3060 38		3500 41		3935 44		
	4B 4C	CFM/SIDE THROW, FT.	425 230 25-31-42 17-20-29	569 306 24-37-51 19-24-32	710 382 32-41-58 20-27-37	852 460 37-44-61 22-29-39	995 535 37-48-66 24-31-42	1138 612 41-51-71 25-32-44	1279 688 42-54-75 27-37-49								
	4E	CFM/SIDE THROW, FT.	360 295 24-29-41	480 394 27-32-48	600 492 31-37-54	720 591 32-39-58	840 690 37-42-61	960 788 37-44-66	1080 887 41-49-70								
	3A1	CFM/SIDE THROW, FT.	540 230 27-32-48 17-20-29	722 306 31-37-54 19-24-32	901 382 34-42-61 20-27-37	1082 460 37-48-66 22-29-39	1262 535 39-51-71 24-31-42	1444 612 42-54-75 25-32-44	1623 688 48-58-80 27-37-49								
	3A2	CFM/SIDE THROW, FT.	468 422 25-31-42 20-25-34	625 562 29-37-51 24-29-39	782 701 32-41-58 27-32-44	937 844 37-44-61 29-37-49	1093 983 37-48-66 31-37-53	1250 1125 41-51-71 32-41-56	1406 1264 42-54-75 37-42-61								
	2A 2B	CFM/SIDE THROW, FT.	655 29-37-51	875 34-41-58	1092 39-48-66	1312 41-51-70	1530 44-54-75	1750 49-59-80	1968 53-63-85								
	2C 2E	CFM/SIDE THROW, FT.	853 457 31-37-54 24-29-41	1138 612 37-42-61 27-32-48	1421 764 41-49-70 31-37-54	1705 920 44-54-75 32-39-58	1990 1070 48-58-80 37-42-61	2276 1224 51-61-85 37-44-66	2559 1376 54-65-90 41-49-70								
1A 1B	CFM/SIDE THROW, FT.	1310 37-42-63	1750 41-51-71	2185 48-58-82	2625 51-61-87	3060 54-66-95	3500 58-71-99	3935 63-75-107									
36 x 21 5.25 SQ. FT.	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	1575 16		2100 24		2625 30		3150 34		3675 38		4200 42		4725 45		
	4B 4C	CFM/SIDE THROW, FT.	558 230 27-32-48 17-20-29	744 306 31-37-54 19-24-32	930 382 34-42-61 20-27-37	1115 460 37-48-66 22-29-39	1306 535 39-51-71 24-31-42	1488 612 42-54-75 25-32-44	1674 688 48-58-80 27-37-49								
	4E	CFM/SIDE THROW, FT.	427 360 25-31-42 25-31-42	568 480 29-37-61 29-37-51	710 600 32-41-58 32-41-58	852 720 37-44-61 37-44-61	945 840 37-48-66 37-48-66	1135 960 41-51-71 41-51-71	1280 1080 42-54-75 42-54-75								
	3A1	CFM/SIDE THROW, FT.	672 230 29-37-51 17-20-29	897 306 34-41-58 19-24-32	1121 382 39-48-66 20-27-37	1345 460 41-51-70 22-29-39	1570 535 44-54-75 24-31-42	1794 612 49-59-80 25-32-44	2018 688 53-63-85 27-37-49								
	3A2	CFM/SIDE THROW, FT.	675 450 25-31-42 22-27-37	900 600 29-37-51 25-31-42	1125 750 32-41-58 29-34-49	1350 900 37-44-61 31-37-54	1575 1050 37-48-66 32-39-58	1800 1200 41-51-71 34-42-61	2025 1350 42-54-75 37-48-65								
	2A 2B	CFM/SIDE THROW, FT.	787 31-37-54	1050 37-42-61	1312 41-49-70	1575 44-54-75	1837 48-58-80	2100 51-61-85	2362 54-65-90								
	2C 2E	CFM/SIDE THROW, FT.	1115 460 34-42-59 24-29-41	1488 612 39-49-68 27-32-48	1861 764 44-56-76 31-37-54	2230 920 49-59-83 32-39-58	2605 1070 53-65-88 37-42-61	2976 1224 56-68-97 37-44-66	3349 1376 59-73-102 41-49-70								
1A 1B	CFM/SIDE THROW, FT.	1575 41-51-70	2100 39-58-80	2625 54-66-90	3150 58-70-99	3675 61-75-105	4200 66-80-114	4725 70-85-122									
30 x 24 5.0 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1500 17		2000 25		2500 30		3000 35		3500 39		4000 43		4500 46		
	4B 4C	CFM/SIDE THROW, FT.	450 300 25-31-42 19-22-31	600 400 29-37-51 22-25-37	750 500 32-41-58 25-29-41	900 600 33-44-61 27-31-44	1050 700 37-48-66 29-32-48	1200 800 41-51-71 31-37-51	1350 900 42-54-75 32-37-54								
	4E	CFM/SIDE THROW, FT.	375 375 25-31-42 25-31-42	500 500 29-37-51 29-37-51	625 625 32-41-58 32-41-58	750 750 33-44-61 37-44-61	875 875 37-48-66 37-48-66	1000 1000 41-51-71 41-51-71	1125 1125 42-54-75 42-54-75								
	3A1	CFM/SIDE THROW, FT.	600 300 29-37-51 19-22-31	800 400 34-41-58 22-25-37	1000 500 39-48-66 25-29-41	1200 600 41-51-70 27-31-44	1400 700 44-54-75 29-32-48	1600 800 49-59-80 31-37-51	1800 900 53-63-85 32-37-54								
	3A2	CFM/SIDE THROW, FT.	515 470 31-37-54 25-31-42	687 625 37-42-61 29-37-51	859 782 41-49-70 32-41-58	1031 937 44-54-75 33-44-61	1203 1093 48-58-80 37-48-66	1375 1250 51-61-85 41-51-71	1548 1406 54-65-90 42-54-75								
	2A 2B	CFM/SIDE THROW, FT.	750 32-41-56	1000 37-48-65	1250 42-54-73	1500 48-58-78	1750 51-61-85	2000 54-66-90	2250 58-70-97								
	2C 2E	CFM/SIDE THROW, FT.	900 600 37-42-63 29-37-51	1200 800 41-51-71 34-41-58	1500 1000 48-58-82 39-48-66	1800 1200 51-61-87 41-51-70	2100 1400 54-66-85 44-54-75	2400 1600 58-71-99 49-59-80	2700 1800 63-75-107 53-63-85								
1A 1B	CFM/SIDE THROW, FT.	1500 38-47-67	2000 45-54-76	2500 48-61-85	3000 54-65-95	3500 58-72-99	4000 62-76-106	4500 66-79-113									

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D37.

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033		400 .058		500 .090		600 .130		700 .177		800 .231		900 .293	
			CFM NC	1800 18	2400 25	3000 31	3600 36	4200 40	4800 43	5400 46						
36 x 24 6.0 SQ. FT.	RETURN FACTORS —SP=3.3 TP NC + 8	CFM NC	1800 18	2400 25	3000 31	3600 36	4200 40	4800 43	5400 46							
	4B 4C	CFM/SIDE THROW, FT.	600 300 29-37-51 19-22-31	800 400 34-41-58 22-25-37	1000 500 39-48-66 25-29-41	1200 600 41-51-70 27-31-44	1400 700 44-54-75 29-32-48	1600 800 49-59-80 31-37-51	1800 900 53-63-85 32-37-54							
	4E	CFM/SIDE THROW, FT.	450 450 25-31-42 24-31-42	600 600 29-37-51 29-37-51	750 750 32-41-58 32-41-58	900 900 35-44-61 35-44-61	1050 1050 37-48-66 37-48-66	1200 1200 41-51-71 41-51-71	1350 1350 42-54-75 42-54-75							
	3A1	CFM/SIDE THROW, FT.	750 300 31-37-54 19-22-31	1000 400 37-42-61 22-25-37	1250 500 41-49-70 25-29-41	1500 600 44-54-75 27-31-44	1750 700 48-58-80 29-32-48	2000 800 51-61-85 31-37-51	2250 900 54-65-90 32-37-54							
	3A2	CFM/SIDE THROW, FT.	676 562 27-32-48 24-29-41	900 750 34-37-54 27-32-48	1125 937 34-42-61 31-37-54	1350 1125 37-48-66 32-39-58	1575 1312 39-51-71 35-42-61	1800 1500 42-54-75 37-44-66	2025 1687 48-58-80 41-49-70							
	2A	CFM/SIDE THROW, FT.	900 32-41-56	1200 37-48-65	1500 42-54-73	1800 48-58-78	2100 51-61-85	2400 54-66-90	2700 58-70-97							
	2B	CFM/SIDE THROW, FT.	900 32-41-56	1200 37-48-65	1500 42-54-73	1800 48-58-78	2100 51-61-85	2400 54-66-90	2700 58-70-97							
	2C 2D	CFM/SIDE THROW, FT.	1200 600 37-42-63 25-31-42	1600 800 41-51-71 29-37-51	2000 1000 48-58-82 32-41-58	2400 1200 51-61-87 35-44-61	2800 1400 54-66-95 37-48-66	3200 1600 58-71-99 41-51-71	3600 1800 63-75-107 42-54-75							
	2E	CFM/SIDE THROW, FT.	1200 600 37-42-63 25-31-42	1600 800 41-51-71 29-37-51	2000 1000 48-58-82 32-41-58	2400 1200 51-61-87 35-44-61	2800 1400 54-66-95 37-48-66	3200 1600 58-71-99 41-51-71	3600 1800 63-75-107 42-54-75							
	1A 1B	CFM/SIDE THROW, FT.	1800 41-51-70	2400 48-58-80	3000 54-66-90	3600 58-70-99	4200 61-75-105	4800 66-80-114	5400 70-85-122							
36 x 30 7.5 SQ. FT.	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	2250 19	3000 26	3750 32	4500 37	5250 41	6000 44	6750 47							
	4B 4C	CFM/SIDE THROW, FT.	657 468 29-37-51 20-25-34	875 625 34-41-58 24-29-39	1093 782 39-48-66 27-32-44	1313 937 41-51-70 29-37-49	1532 1093 44-54-75 31-37-53	1750 1250 49-59-80 32-41-56	1969 1406 53-63-85 37-42-59							
	3A1	CFM/SIDE THROW, FT.	890 468 32-41-56 20-25-34	1187 625 37-48-65 24-29-39	1484 782 42-54-73 27-32-44	1781 937 48-58-78 29-37-49	2078 1093 51-61-85 31-37-53	2375 1250 54-66-90 32-41-56	2672 1406 58-70-97 37-42-59							
	3A2	CFM/SIDE THROW, FT.	787 675 31-37-54 22-27-37	1050 900 37-42-61 25-31-42	1312 1125 41-49-70 29-34-49	1575 1350 44-54-75 31-37-54	1837 1575 48-58-80 32-39-58	2100 1800 51-61-85 37-42-61	2362 2025 54-65-90 37-48-65							
	2A	CFM/SIDE THROW, FT.	1125 34-42-59	1500 39-49-68	1875 44-56-76	2250 49-59-83	2625 53-65-88	3000 56-68-97	3375 59-73-102							
	2B	CFM/SIDE THROW, FT.	1125 34-42-59	1500 39-49-68	1875 44-56-76	2250 49-59-83	2625 53-65-88	3000 56-68-97	3375 59-73-102							
	2C 2D	CFM/SIDE THROW, FT.	1312 938 37-42-63 29-37-51	1750 1250 41-51-71 34-41-58	2188 1562 48-58-82 39-48-66	2625 1875 51-61-87 41-51-70	3063 2187 54-66-95 44-54-75	3500 2500 58-71-99 49-59-80	3938 2812 63-75-107 53-63-85							
	2E	CFM/SIDE THROW, FT.	1312 938 37-42-63 29-37-51	1750 1250 41-51-71 34-41-58	2188 1562 48-58-82 39-48-66	2625 1875 51-61-87 41-51-70	3063 2187 54-66-95 44-54-75	3500 2500 58-71-99 49-59-80	3938 2812 63-75-107 53-63-85							
	1A 1B	CFM/SIDE THROW, FT.	2250 48-60-82	3000 56-68-94	3750 64-78-106	4500 68-82-116	5250 72-88-124	6000 78-94-134	6750 82-100-144							

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

- CFM** - cubic feet per minute
TP - total pressure - inches w.g.
T - throw in feet
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.
Neck Velocity – feet per minute

Performance Notes:

1. Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions. Data applies to ceiling mounted units when the maximum coanda effect applies. When no ceiling is present (exposed duct), throws are reduced by approximately 25%.
2. Sound levels in performance tables are for steel construction – **Model 6500**. Apply the following corrections for aluminum construction – **Model 6200**.
TP = Listed value x 1.25.
NC = Listed value + 4.
3. Performance data as tabulated is for supply air conditions. Correction factors for return air application - see next page.
4. Correction factors for adjustable models - see next page.
5. Correction factors for round inlets - see next page.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA CORRECTIONS:

MODELS 6500 AND 6200

CORRECTION FACTORS FOR RETURN INLET

If the unit is used as a return inlet, the performance data is obtained by applying the return corrections, as follows:

- Add the NC correction at the left side of the table to the NC value listed in the performance table.
- Multiply the listed SP factor at the left side of the table by the total pressure (TP) listed at the top of the table.

CORRECTION FACTORS FOR MODELS 6550 AND 6250 (ADJUSTABLE PATTERN CONTROLLERS) – TABLE 2

Refer to the performance data for the **Models 6500 and 6200**. Apply the corrections from Table 2 to the data for square, 4-way core styles, as follows:

- NC = listed + correction
- Total Pressure = listed x factor
- Horizontal Throw = listed
- Vertical Throw = listed x factor

Apply the throw factor to the 50 fpm terminal velocity throw only.

Example:

18" x 18", **Model 6500**, 1350 cfm, 20°F temperature difference heating, vertical projection, (Page D23).

- NC = 31 + 6 = 37
- TP = .13 x 2.1 = .273
- Throw = 36 x .9 = 32.4 feet @ 50 fpm terminal velocity.

CORRECTION FACTORS WITH SQUARE TO ROUND INLET ADAPTOR – TABLE 3

- Add the NC correction factor from Table 3 and the NC value listed in the performance tables.
- Multiply the correction factor from Table 3 by the listed total pressure in the performance tables.
- Multiply the correction factor from Table 3 by the listed throws in the performance tables.

Example:

12" x 12" unit with 10" round adaptor handling 500 cfm supply air. (Page D23).

- NC = 23 + 7 = 30
- Total Pressure = .09 x 1.65 = 0.149
- Throw = 21 x 1.15 = 24.15 feet @ 50 fpm terminal velocity.

Example:

12" x 12" unit handling 600 cfm of return air. (Page D23).

- Return NC = 28 + 4 = 32.
- Return negative SP = 1.3 x (-.13) = -.169.

TABLE 2 Correction Factors 6550/6250 Adjustable

NECK SIZE	NC (add)		TOTAL PRESSURE (multiply)		VERTICAL THROW (multiply)			
					COOLING, ΔT		HEATING, ΔT	
	H	V	H	V	20°F	0°F	20°F	40°F
6 x 6	2	6	1.2	1.5	1.3	1.1	0.8	0.6
9 x 9	2	6	1.4	2.1	1.5	1.2	0.9	0.6
12 x 12	2	6	1.4	2.1	1.6	1.3	1.0	0.6
15 x 15	2	6	1.4	2.1	1.7	1.3	1.0	0.6
18 x 18	2	6	1.4	2.1	1.7	1.3	0.9	0.6
21 x 21	2	6	1.4	2.1	1.7	1.3	0.8	0.5
24 x 24	2	6	1.6	2.2	1.5	1.1	0.7	0.3

TABLE 3 Correction Factors for SR Adaptors

SQUARE INLET	ROUND INLET	NC (add)	TP (multiply)	THROW (multiply)		
				150	100	50
6 x 6	5	7	1.65	1.10	1.10	1.15
9 x 9	6	17	3.50	1.15	1.15	1.20
9 x 9	8	4	1.40	1.10	1.10	1.10
12 x 12	8	17	3.50	1.15	1.15	1.20
12 x 12	10	7	1.65	1.10	1.10	1.15
15 x 15	10	17	3.50	1.15	1.15	1.20
15 x 15	12	9	1.90	1.10	1.10	1.15
15 x 15	14	3	1.25	1.05	1.05	1.10
18 x 18	12	17	3.50	1.15	1.15	1.20
18 x 18	14	10	2.00	1.10	1.10	1.15
18 x 18	16	5	1.45	1.10	1.10	1.10
21 x 21	14	17	3.70	1.15	1.15	1.20
21 x 21	16	11	2.25	1.10	1.10	1.15
21 x 21	18	6	1.60	1.10	1.10	1.10
21 x 21	20	3	1.20	1.05	1.05	1.10
24 x 24	16	17	3.50	1.15	1.15	1.20
24 x 24	18	12	2.35	1.10	1.10	1.15
24 x 24	20	7	1.65	1.10	1.10	1.15
24 x 24	22	4	1.33	1.05	1.05	1.10

SQUARE & RECTANGULAR INDUCTION VANE CEILING DIFFUSERS

- INDUCTION VANES
- LOUVERED FACE
- HIGH CAPACITY
- SQUARE, RECTANGULAR OR ROUND NECKS

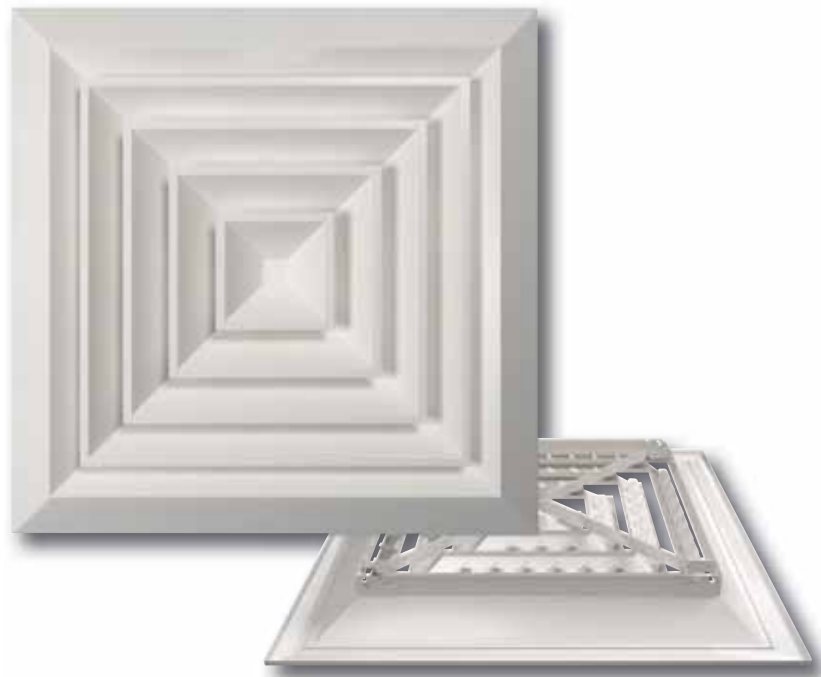
Steel Model:

6500IV Fixed Pattern

Aluminum Model:

6200IV Fixed Pattern

- Suffix '-O' adds a steel opposed blade damper
- Suffix '-OA' adds an aluminum opposed blade damper (available on aluminum models only)



Model 6500IV – front and back view

Model Series 6500IV and 6200IV Pattern Ceiling Diffusers have been specially designed to provide a high capacity, high induction, louvered face directional diffuser that can supply large volumes of air at relatively low sound levels and pressure drops. An engineered blade design with a 1/4" (6) horizontal lip on all angular discharge louvers creates a stable horizontal air pattern that is tight to the ceiling.

Induction vanes mounted behind the louvers create counter-flowing jets of primary air that promote rapid mixing of the cool primary air with the warm room air. This high induction characteristic is ideal for VAV applications involving high cooling loads as it quickly equalizes the air temperature, reduces the throw and minimizes the potential for uncomfortable drafts.

Available in a wide variety of core styles and neck sizes, a combination can be selected to suit a specified air pattern and deliver the desired volume of air to suit any particular requirement. Many frame types are also available to suit almost any mounting condition including surface mount (flat, beveled or deep drop face) and T-Bar panel types (Standard 1" (25), Fineline®, Spline, Tegular or Metal Pan Snap-in). These models therefore offer a great degree of design flexibility.

STANDARD FEATURES:

- Spring loaded core. It is removable without the use of tools.
- High neck collars for solid connection.
- Secure core attachment.
- A wide variety of frame styles to suit most ceiling applications.
- Extended panels to suit modular ceiling systems. PLS (steel) or PLA (aluminum).
- Engineered air diffusion patterns for 1, 2, 3 or 4-way blow in a wide selection of square and rectangular neck sizes (see page D42).
- Clean lines with no unsightly visible screws.
- Opposed blade damper with screwdriver slot operator.

CONSTRUCTION MATERIAL:

6500IV Series – Corrosion-resistant steel. 6200IV Series – Heavy-gauge aluminum extrusions.

FINISH OPTIONS:

AW Appliance White finish is standard. Other finishes are available.

AVAILABLE SIZES:

Unit size is determined by duct dimensions. Diffuser necks are undersized to suit ductwork.

Duct Sizes are available in 3" (76) increments.

Minimum size:

6" x 6" (152 x 152) square neck. 9" x 6" (229 x 152) rectangular neck (most core styles).

Maximum size:

Types S, B and D: 36" x 36" (914 x 914) or 36" x 24" (914 x 610) with opposed blade damper.

Types L, SP, TL, M and F: see next page.

OPTIONS & ACCESSORIES:

EX External Foil-Back Insulation (installed) – R-4.2.

MIB Molded Insulation Blanket R-6.0.

SR Square-to-round transition adaptors are available (SR04 - SR24 option [4" - 24" diameter]). See page D257.

ONA Offset Neck Adaptor:

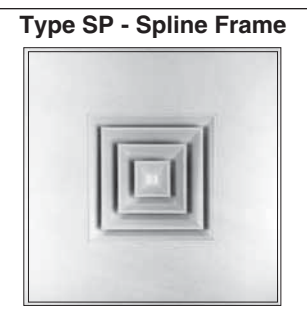
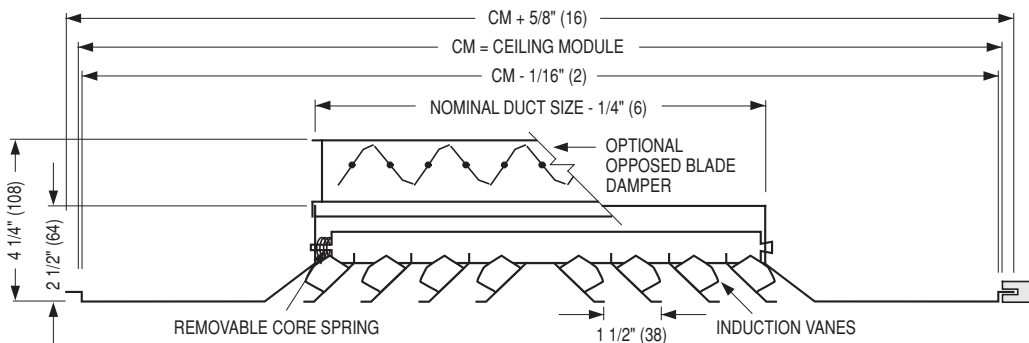
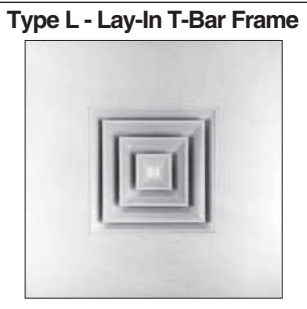
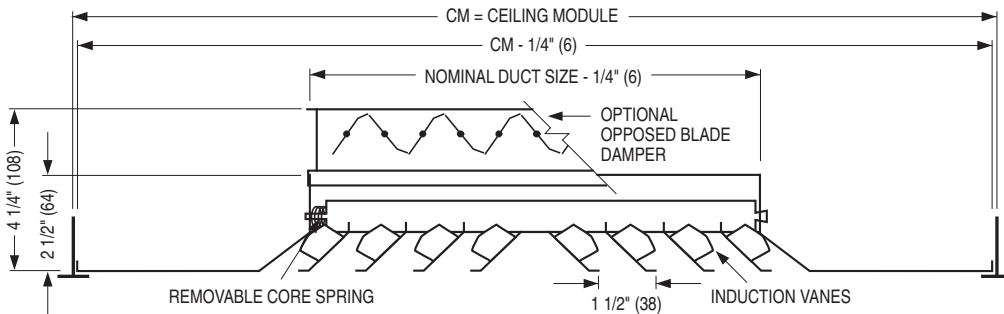
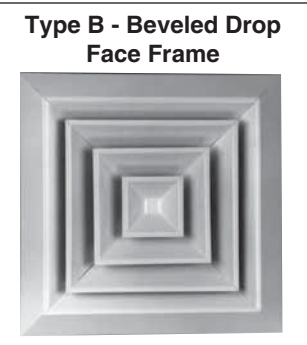
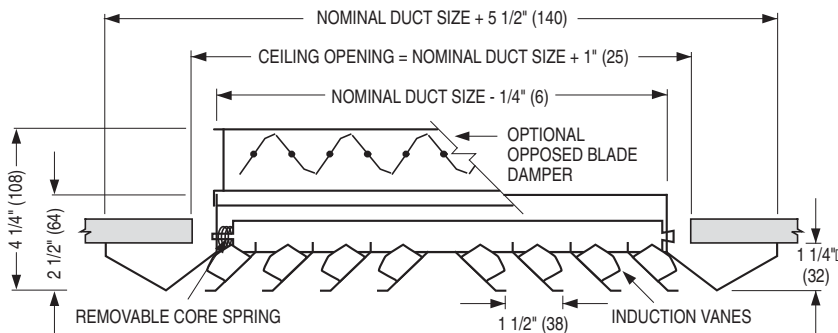
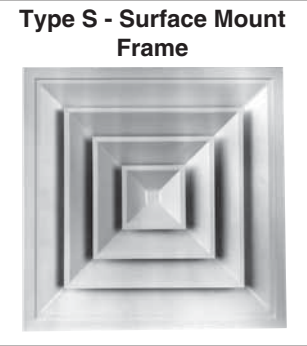
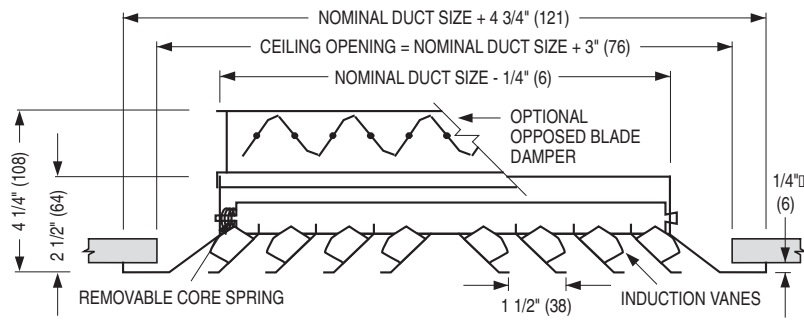
Fits outside duct and is available for square and rectangular necks (if a damper is required, order separately for remote mount. See Model OBDD). For detail drawing; see page D41.

EQT Earthquake Tabs

For additional options and accessories; see page D255.

DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6500IV AND 6200IV



SPLINE TYPE DIFFUSER FOR ONE-DIRECTIONAL EXPOSED T-BAR LAY-IN GRID OR FOR CONCEALED T-BAR GRID. (SPLINES ON TWO OPPOSITE SIDES. STEEL LIFT BRACKETS ON THE OTHER TWO SIDES).

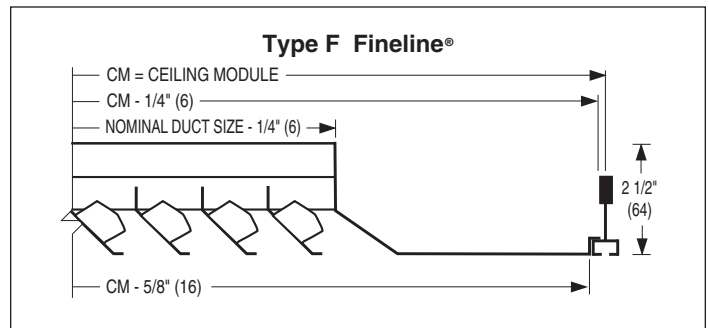
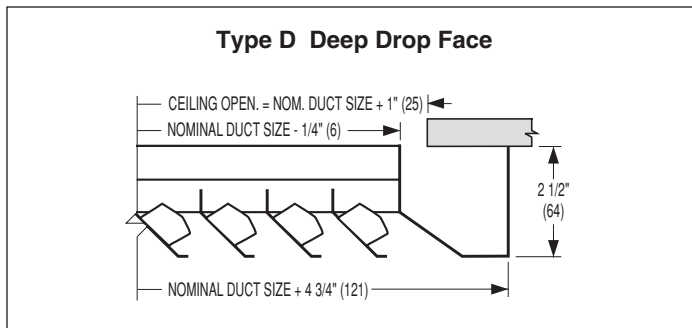
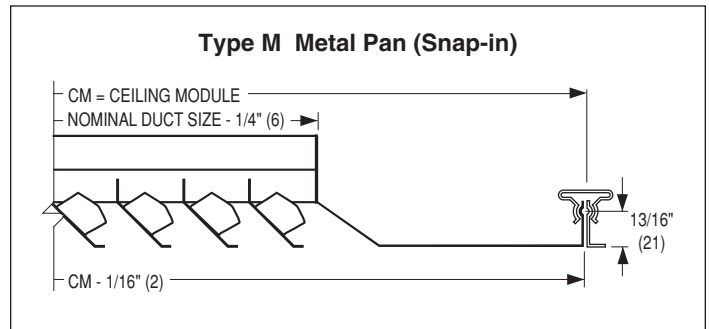
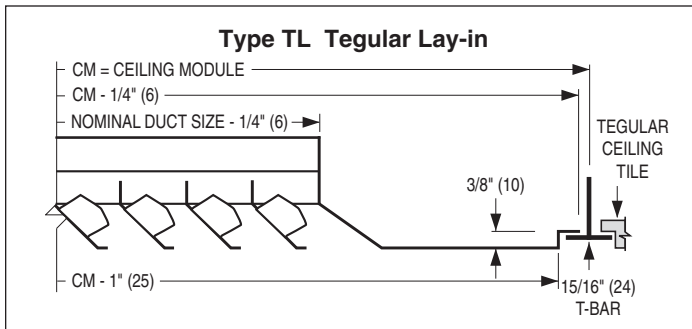
Extended Panel Diffusers Frame Types L, SP, TL, M and F

If the ceiling module is more than 3" (76) larger than the neck size of the diffuser in either or both dimensions, a steel module-sized extended panel will be added. Aluminum is available as an option. See the table at right for the maximum duct size for each module size.

Table 1		
Ceiling Module Size	Maximum Duct Size Frames L, SP and M	Maximum Duct Size Frames TL and F
12 x 12 (305 x 305)	9 x 9 (229 x 229)	6 x 6 (152 x 152)
20 x 20 (508 x 508)	15 x 15 (381 x 381)	—
24 x 12 (610 x 305)	21 x 9 (533 x 229)	18 x 6 (457 x 152)
24 x 24 (610 x 610)	21 x 21 (533 x 533)	18 x 18 (457 x 457)
48 x 24 (1219 x 610)	45 x 21 (1143 x 533)	—

DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6500IV AND 6200IV

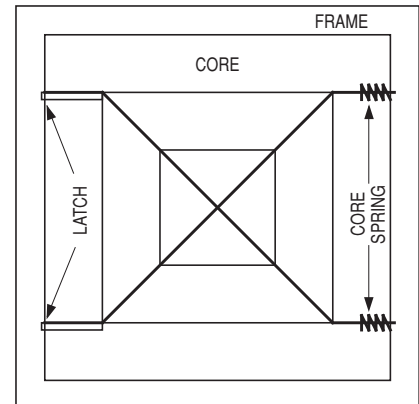


REMOVABLE CORE

- Standard feature of **Models 6500IV and 6200IV**.
- Engineered design allows easy removal without the need for tools, yet remains securely in place.

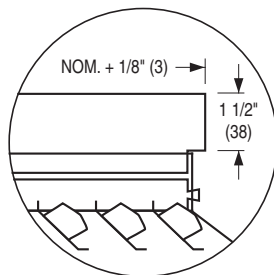
HOW TO REMOVE "REMOVABLE" CORE

To remove diffuser core, lift the complete core assembly to disengage the latch, push the core against the core spring, pull down the core slightly and remove. Reverse procedure to re-install.



OFFSET NECK ADAPTOR

ONA – Offset Neck Adaptor. Fits outside duct (if a damper is required; order separately for remote mount. See Model OBDD).



STANDARD CORE STYLES:

MODEL SERIES 6500IV AND 6200IV

Contact factory for special core configurations.

SIZES AVAILABLE

	SQUARE	RECTANGULAR	CORE	MINIMUM	MAXIMUM
 1-WAY	 1S	 1A 1B	1S 1A 1B	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838)
 2-WAY	 2S	 2A 2B	2S 2A 2B	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838)
 2-WAY CORNER	 2G	 2E 2F	2G 2E 2F	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838)
 3-WAY	 3A 3H	 3A1 (A is greater than B) 3A2 (B is less than A but greater than A/2) 3B (B is equal to A/2) 3E (B is less than A/2)	3A 3A1 3A2 3B 3E 3H	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152) 12 x 6 (305 x 152) 15 x 6 (381 x 152) 6 x 6 (152 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838) 36 x 18 (914 x 457) 36 x 15 (914 x 381) 36 x 36 (914 x 914)
 4-WAY	 4A	 4B 4C	4A 4B 4C	6 x 6 (152 x 152) 9 x 6 (229 x 152) 12 x 6 (305 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 30 (914 x 762)

Dimensions are in inches (mm).

Notes:

1. Duct sizes are available in 3" (76) increments.
2. Patterns are shown in plan view (looking down into inlet).

D

CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500IV AND 6200IV • SQUARE NECK • INDUCTION VANES

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .035	400 .062	500 .097	600 .140	700 .191	800 .249	900 .316
6 x 6 .25 SQ. FT.	RETURN FACTORS —SP=1.1 TP NC + 1	CFM NC	75 —	100 14	125 21	150 26	175 30	200 35	225 39
	4A	CFM/SIDE THROW, FT.	19 3-4-6	25 3-5-8	31 5-6-8	37 5-6-9	44 6-7-10	50 6-7-10	56 7-8-10
	3A	CFM/SIDE THROW, FT.	19 28 3-4-6 4-6-9	25 38 3-5-8 5-7-10	31 47 5-6-8 6-8-11	37 56 5-6-9 6-9-12	44 66 6-7-10 7-10-13	50 75 6-7-10 7-10-14	56 85 7-8-10 8-10-14
	2S 2G	CFM/SIDE THROW, FT.	37 6-7-10	50 7-8-11	62 8-9-13	75 9-10-14	88 10-10-14	100 10-10-15	113 10-11-16
	1S	CFM/SIDE THROW, FT.	75 7-9-12	100 8-10-14	125 9-11-15	150 10-12-18	175 10-13-18	200 11-14-19	225 12-14-20
9 x 9 .56 SQ. FT.	RETURN FACTORS —SP=1.2 TP NC + 2	CFM NC	170 —	225 18	280 24	340 30	395 35	450 39	505 42
	4A	CFM/SIDE THROW, FT.	42 5-6-10	56 6-8-11	70 8-9-12	84 8-10-13	98 9-10-14	112 9-11-15	126 10-12-16
	3A	CFM/SIDE THROW, FT.	42 63 5-6-10 7-9-11	56 85 6-8-11 8-10-14	70 106 8-9-12 9-10-15	84 127 8-10-13 10-11-16	98 148 9-10-14 10-12-17	112 169 9-11-15 10-13-18	126 190 10-12-16 11-14-19
	2S 2G	CFM/SIDE THROW, FT.	84 7-8-12	112 9-10-14	141 10-12-16	169 10-13-18	197 11-14-18	225 12-14-20	253 13-15-22
	1S	CFM/SIDE THROW, FT.	169 10-12-16	225 11-14-18	282 13-15-21	338 14-18-23	394 14-18-25	450 15-19-26	507 18-20-28
12 x 12 1.0 SQ. FT.	RETURN FACTORS —SP=1.3 TP NC + 4	CFM NC	300 14	400 21	500 27	600 32	700 37	800 40	900 43
	4A	CFM/SIDE THROW, FT.	75 6-10-12	100 9-11-14	125 10-12-17	150 11-14-18	175 11-14-19	200 12-16-20	225 14-17-22
	3A	CFM/SIDE THROW, FT.	75 112 6-10-12 9-11-15	100 150 9-11-14 11-13-17	125 187 10-12-17 11-14-19	150 225 11-14-18 12-15-21	175 262 11-14-19 13-16-22	200 300 12-16-20 14-17-24	225 338 14-17-22 15-18-25
	2S 2G	CFM/SIDE THROW, FT.	150 10-12-16	200 12-14-20	250 14-15-22	300 14-16-23	350 15-17-25	400 16-20-27	450 17-20-29
	1S	CFM/SIDE THROW, FT.	300 13-16-22	400 14-18-26	500 17-20-30	600 18-21-31	700 18-22-33	800 20-23-33	900 22-26-38
15 x 15 1.56 SQ. FT.	RETURN FACTORS —SP=1.8 TP NC + 4	CFM NC	465 14	625 23	780 29	935 34	1090 37	1250 43	1400 45
	4A	CFM/SIDE THROW, FT.	117 10-13-17	156 11-14-19	195 13-15-22	234 14-17-23	273 15-18-24	312 16-19-26	350 17-21-28
	3A	CFM/SIDE THROW, FT.	117 175 10-13-17 11-14-18	156 234 11-14-19 14-18-23	195 292 13-15-22 15-18-25	234 351 14-17-23 17-18-27	273 409 15-18-24 18-20-29	312 468 16-19-26 18-23-31	350 527 17-21-28 20-23-34
	2S 2G	CFM/SIDE THROW, FT.	234 13-16-22	312 15-18-25	390 17-20-29	468 18-22-32	546 19-23-34	625 22-25-36	700 22-28-38
	1S	CFM/SIDE THROW, FT.	467 17-20-29	625 18-23-34	780 21-26-38	935 23-29-41	1090 24-31-44	1250 26-34-46	1400 29-35-49
18 x 18 2.25 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 6	CFM NC	675 16	900 25	1125 31	1350 35	1575 40	1800 43	2025 46
	4A	CFM/SIDE THROW, FT.	168 12-15-20	225 14-16-23	281 15-19-26	337 16-20-29	394 18-22-30	450 19-23-33	506 20-25-34
	3A	CFM/SIDE THROW, FT.	168 253 12-15-20 14-18-23	225 338 14-16-23 16-20-26	281 422 15-19-26 18-22-30	337 506 16-20-29 20-26-34	394 590 18-22-30 21-26-36	450 675 19-23-33 22-28-38	506 760 20-25-34 26-29-41
	2S 2G	CFM/SIDE THROW, FT.	337 15-18-26	450 18-21-30	562 19-24-34	675 21-25-37	787 24-27-39	900 24-28-42	1012 26-31-44
	1S	CFM/SIDE THROW, FT.	675 20-26-36	900 24-29-41	1125 27-34-46	1350 29-36-49	1575 31-38-53	1800 34-42-56	2025 37-44-60

For performance notes, see D44.

D

CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500IV AND 6200IV • SQUARE NECK • INDUCTION VANES

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .035	400 .062	500 .097	600 .140	700 .191	800 .249	900 .316
21 x 21 3.06 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 8	CFM NC	915 18	1225 26	1530 32	1835 36	2140 41	2450 44	2750 47
			A B	A B	A B	A B	A B	A B	A B
	4A	CFM/SIDE THROW, FT.	230 14-17-24	306 15-20-27	382 17-22-31	460 18-24-33	535 20-27-35	612 21-27-37	688 22-31-41
	3A	CFM/SIDE THROW, FT.	230 345 12-15-21 16-20-27	306 460 14-18-23 18-22-31	382 573 15-20-27 21-25-36	460 688 16-21-29 22-27-40	535 802 18-22-31 23-29-42	612 918 18-23-32 27-31-45	688 1030 20-27-36 27-34-47
24 x 24 4.0 SQ. FT.	RETURN FACTORS —SP=2.7 TP NC + 8	CFM NC	1200 19	1600 27	2000 33	2400 37	2800 41	3200 45	3600 48
			A B	A B	A B	A B	A B	A B	A B
	4A	CFM/SIDE THROW, FT.	300 16-19-26	400 19-22-32	500 22-25-35	600 23-26-38	700 25-28-41	800 26-32-44	900 28-32-46
	3A	CFM/SIDE THROW, FT.	300 450 16-19-26 18-22-31	400 600 19-22-32 19-25-37	500 750 22-25-35 23-29-42	600 900 23-26-38 25-30-45	700 1050 25-28-41 29-33-47	800 1200 26-32-44 29-34-51	900 1350 28-32-46 31-38-54
30 x 30 6.25 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1875 20	2500 28	3125 34	3750 39	4375 43	5000 46	5625 50
			A B	A B	A B	A B	A B	A B	A B
	4A	CFM/SIDE THROW, FT.	469 20-25-34	625 23-29-38	782 27-32-44	937 29-35-49	1093 30-37-52	1250 32-40-55	1406 37-42-58
	3A	CFM/SIDE THROW, FT.	469 703 20-25-34 22-27-39	625 938 23-29-38 26-31-46	782 1172 27-32-44 28-35-51	937 1405 29-35-49 31-39-55	1093 1640 30-37-52 33-39-59	1250 1875 32-40-55 35-46-62	1406 2110 37-42-58 39-48-66
36 x 36 9.0 SQ. FT.	RETURN FACTORS —SP=3.6 TP NC + 9	CFM NC	2700 22	3600 29	4500 35	5400 40	6300 44	7200 48	8100 52
			A B	A B	A B	A B	A B	A B	A B
	4A	CFM/SIDE THROW, FT.	675 24-30-41	900 27-33-46	1125 31-37-54	1350 33-41-59	1575 35-42-62	1800 41-46-66	2025 41-51-70
	3A	CFM/SIDE THROW, FT.	675 1010 24-30-41 27-35-46	900 1350 27-33-46 32-38-54	1125 1687 31-37-54 37-45-62	1350 2025 33-41-59 38-48-66	1575 2362 35-42-62 42-51-70	1800 2700 41-46-66 46-56-75	2025 3038 41-51-70 50-59-80

D
CEILING DIFFUSERS

CFM - cubic feet per minute
 Neck Velocity - feet per minute
 TP - total pressure - inches w.g.
 NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions. Data applies to ceiling mounted units when the maximum coanda effect applies. When no ceiling is present (exposed duct), throws are reduced by approximately 25%.
2. Sound levels in performance tables are for steel construction – **Model 6500IV**. Apply the following corrections for aluminum construction – **Model 6200IV**.
 TP = Listed value x 1.25.
 NC = Listed value + 4.

3. Performance data as tabulated is for supply air conditions. Correction factors for return air application - see next page.
4. Correction factors for round inlets - see next page.
5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA CORRECTIONS :

MODEL SERIES 6500IV AND 6200IV

CORRECTION FACTORS FOR RETURN INLET

If the unit is used as a return inlet, the performance data is obtained by applying the return corrections, as follows:

- Add the NC correction at the left side of the table to the NC value listed in the performance table.
- Multiply the listed SP factor at the left side of the table by the total pressure (TP) listed at the top of the table.

Example:

12" x 12" unit handling 600 cfm of return air. (Page D43).

- Return NC = 32 + 4 = 36.
- Return negative SP = 1.3 x (- .14) = - .182.

CORRECTION FACTORS WITH SQUARE TO ROUND INLET ADAPTOR

- Add the NC correction factor from Table 2 and the NC value listed in the performance tables.
- Multiply the correction factor from Table 2 by the listed total pressure in the performance tables.
- Multiply the correction factor from Table 2 by the listed throws in the performance tables.

Example:

12" x 12" unit with 10" round adaptor handling 500 cfm supply air. (Page D43).

- NC = 27 + 7 = 34
- Total Pressure = .097 x 1.65 = 0.160
- Throw = 17 x 1.15 = 19.55 feet @ 50 fpm terminal velocity.

TABLE 2 Correction Factors for SR Adaptors

SQUARE INLET	ROUND INLET	NC (add)	TP (multiply)	THROW (multiply)		
				150	100	50
6 x 6	5	7	1.65	1.10	1.10	1.15
9 x 9	6	17	3.50	1.15	1.15	1.20
9 x 9	8	4	1.40	1.10	1.10	1.10
12 x 12	8	17	3.50	1.15	1.15	1.20
12 x 12	10	7	1.65	1.10	1.10	1.15
15 x 15	10	17	3.50	1.15	1.15	1.20
15 x 15	12	9	1.90	1.10	1.10	1.15
15 x 15	14	3	1.25	1.05	1.05	1.10
18 x 18	12	17	3.50	1.15	1.15	1.20
18 x 18	14	10	2.00	1.10	1.10	1.15
18 x 18	16	5	1.45	1.10	1.10	1.10
21 x 21	14	17	3.70	1.15	1.15	1.20
21 x 21	16	11	2.25	1.10	1.10	1.15
21 x 21	18	6	1.60	1.10	1.10	1.10
21 x 21	20	3	1.20	1.05	1.05	1.10
24 x 24	16	17	3.50	1.15	1.15	1.20
24 x 24	18	12	2.35	1.10	1.10	1.15
24 x 24	20	7	1.65	1.10	1.10	1.15
24 x 24	22	4	1.33	1.05	1.05	1.10

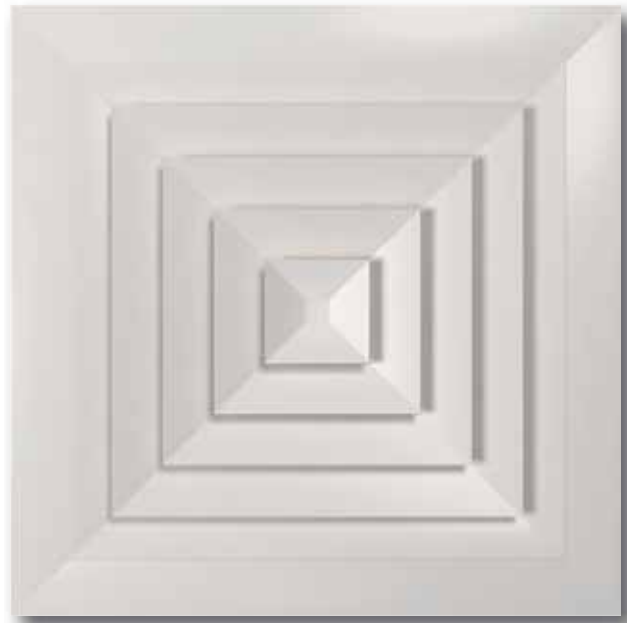
SQUARE AND RECTANGULAR PATTERN CEILING DIFFUSERS

- LOUVERED FACE
- EXTRA HIGH CAPACITY
- SQUARE, RECTANGULAR OR ROUND NECKS
- ALUMINUM

Aluminum Model:

6400 Fixed Pattern

- Suffix '-O' adds a steel opposed blade damper
- Suffix '-OA' adds an aluminum opposed blade damper



Model 6400

Model Series 6400 Fixed Pattern Ceiling Diffusers have been specially designed to provide an extra high capacity louvered face directional diffuser that can supply large volumes of air at relatively low sound levels and pressure drops. The Model 6400 differs from the 6200 Series diffuser only in that the leading edge on all angular discharge louvers is straight, without the horizontal lip. This results in a relatively deeper primary air stream emanating from the diffuser, which produces shorter throws and slightly lower sound levels. The 6400 Series relies on the ceiling coanda effect in order to maintain the catalogued throws for engineered air distribution and performance and is recommended for applications with higher ceiling heights or for heating applications to minimize stratification.

Available with a wide variety of core styles and neck sizes, a combination can be selected to suit a specified air pattern and deliver the desired volume of air to suit any particular requirement. Many frame types are also available to suit almost any mounting condition including surface mount (flat, beveled or deep drop face) and T-Bar panel types (Standard 1" (25), Finline®, Spline, Tegular or Metal Snap-in). These models therefore offer a great degree of design flexibility.

STANDARD FEATURES:

- Spring loaded core. It is removable without the use of tools.
- High neck collars for solid connection.
- Secure core attachment.
- A wide variety of frame styles to suit most ceiling applications.
- Extended panels to suit modular ceiling systems. PLS (steel) or PLA (aluminum).
- Engineered air diffusion patterns for 1, 2, 3 or 4-way blow in a wide selection of square and rectangular neck sizes (see page D49).
- Clean lines with no unsightly visible screws.
- Opposed blade damper with screwdriver slot operator.

CONSTRUCTION MATERIAL:

Aluminum.

AVAILABLE SIZES:

Unit size is determined by duct dimensions. Diffuser necks are undersized to suit ductwork.

Duct Sizes are available in 3" (76) increments.

Minimum size:

6" x 6" (152 x 152) square neck. 9" x 6" (229 x 152) rectangular neck (most core styles).

Maximum size:

Types S and B: 36" x 36" (914 x 914) or 36" x 24" (914 x 610) with opposed blade damper.

Types L, SP, TL, M and F: see next page.

FINISH OPTIONS:

AW Appliance White finish is standard. Other finishes are available.

OPTIONS & ACCESSORIES:

EX External Foil-Back Insulation (installed) – R-4.2.

MIB Molded Insulation Blanket R-6.0.

SR Square-to-round transition adaptors are available (SR04 - SR24 option [4" - 24" diameter]). See page D257.

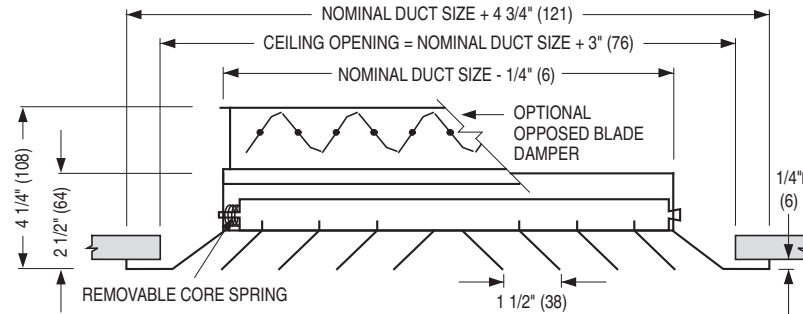
EQT Earthquake Tabs

For additional options and accessories; see page D255.

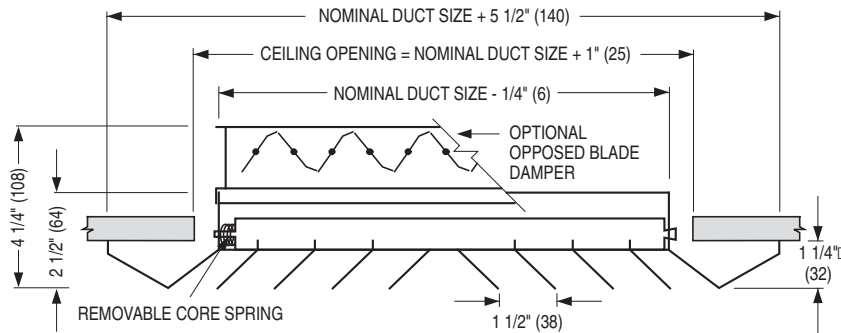
DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6400

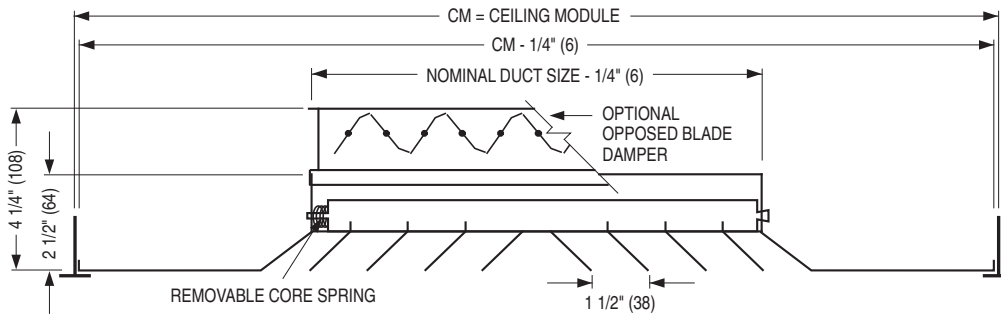
Type S
Surface Mount
Frame



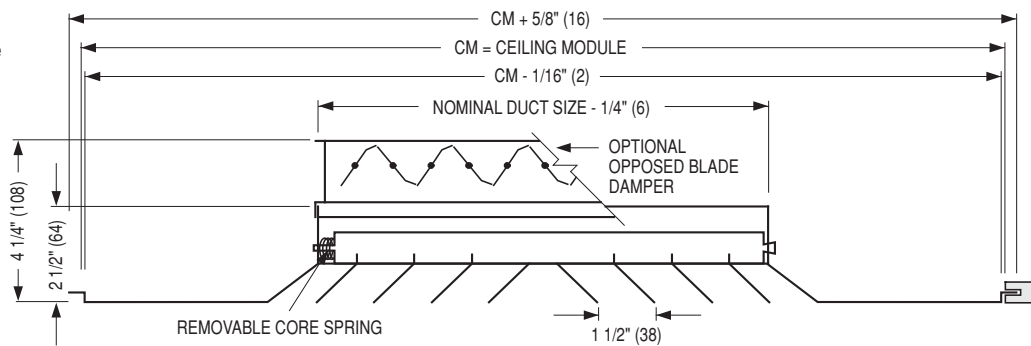
Type B
Beveled Drop
Face Frame



Type L
Lay-In
T-Bar Frame



Type SP
Spline Frame



SPLINE TYPE DIFFUSER FOR ONE-DIRECTIONAL EXPOSED T-BAR LAY-IN GRID OR FOR CONCEALED T-BAR GRID.
(SPLINES ON TWO OPPOSITE SIDES. STEEL LIFT BRACKETS ON THE OTHER TWO SIDES).

Extended Panel Diffusers Frame Types L, SP, TL, M and F

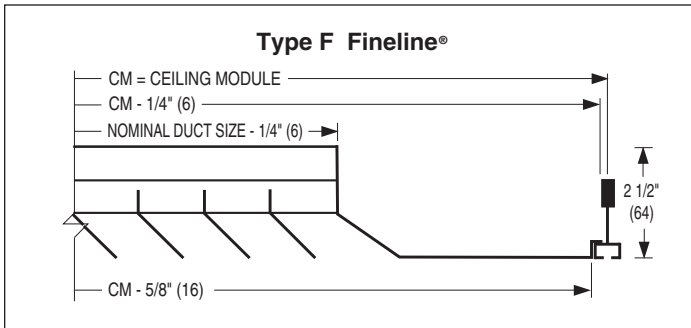
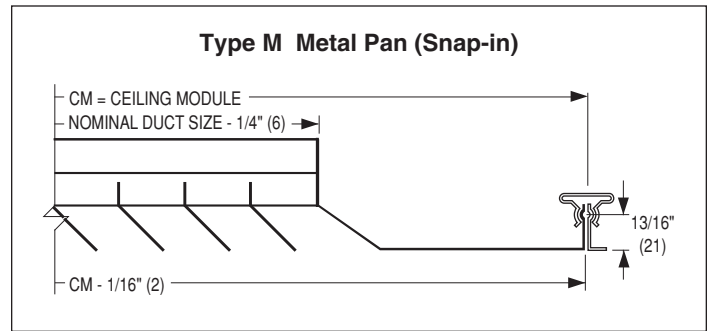
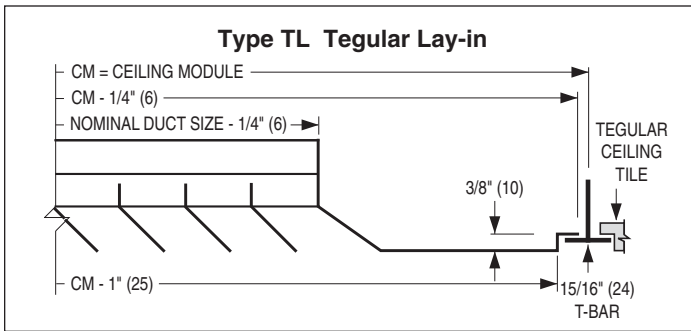
If the ceiling module is more than 3" (76) larger than the neck size of the diffuser in either or both dimensions, a steel module-sized extended panel will be added. Aluminum is available as an option.

See the table at right for the maximum duct size for each module size.

Table 1		
Ceiling Module Size	Maximum Duct Size Frames L, SP and M	Maximum Duct Size Frames TL and F
12 x 12 (305 x 305)	9 x 9 (229 x 229)	6 x 6 (152 x 152)
20 x 20 (508 x 508)	15 x 15 (381 x 381)	—
24 x 12 (610 x 305)	21 x 9 (533 x 229)	18 x 6 (457 x 152)
24 x 24 (610 x 610)	21 x 21 (533 x 533)	18 x 18 (457 x 457)
48 x 24 (1219 x 610)	45 x 21 (1143 x 533)	—

DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6400

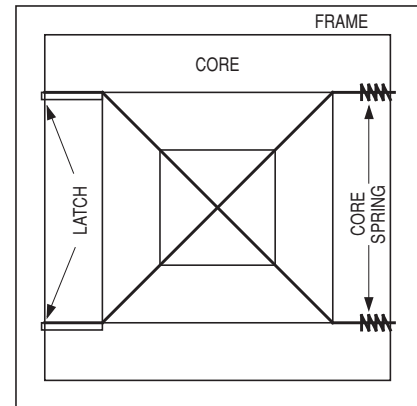


REMOVABLE CORE

- Standard feature of **Model 6400**.
- Engineered design allows easy removal without the need for tools, yet remains securely in place.

HOW TO REMOVE "REMOVABLE" CORE

To remove diffuser core, lift the complete core assembly to disengage the latch, push the core against the core spring, pull down the core slightly and remove. Reverse procedure to re-install.



D
CEILING DIFFUSERS

STANDARD CORE STYLES:

MODEL SERIES 6400

Contact factory for special core configurations.

SIZES AVAILABLE



Type 1S



Type 2S



Type 2G



Type 3A



Type 4A

	SQUARE	RECTANGULAR	CORE	MINIMUM	MAXIMUM
→ 1-WAY		 	1S 1A 1B	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838)
↕ 2-WAY		 	2S 2A 2B	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838)
↗ 2-WAY CORNER		 	2G 2C 2D 2E 2F	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838) 36 x 33 (914 x 838) 36 x 33 (914 x 838)
↕ 3-WAY		 	3A 3A1 3A2 3B 3C 3E 3H	6 x 6 (152 x 152) 9 x 6 (229 x 152) 9 x 6 (229 x 152) 12 x 6 (305 x 152) 9 x 6 (229 x 152) 15 x 6 (381 x 152) 6 x 6 (152 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 33 (914 x 838) 36 x 18 (914 x 457) 36 x 33 (914 x 838) 36 x 15 (914 x 381) 36 x 36 (914 x 914)
↕ 4-WAY		 	4A 4B 4C 4E	6 x 6 (152 x 152) 9 x 6 (229 x 152) 12 x 6 (305 x 152) 15 x 6 (381 x 152)	36 x 36 (914 x 914) 36 x 33 (914 x 838) 36 x 30 (914 x 762) 36 x 27 (914 x 686)

Dimensions are in inches (mm).

Notes:

1. Duct sizes are available in 3" (76) increments.
2. Unless otherwise specified, the "x" dimension on 3C and 4E patterns will be such that cataloged flow division is obtained.
3. Patterns are shown in plan view (looking down into inlet).

PERFORMANCE DATA:

MODEL 6400 • SQUARE NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300		400		500		600		700		800		900	
			.006 .029		.010 .051		.016 .080		.022 .116		.031 .157		.040 .205		.050 .260	
6 x 6 .25 SQ. FT.	RETURN FACTORS	—SP=1.1 TP NC + 1	CFM NC	75 —	100 10	125 17	150 22	175 26	200 31	225 35	A	B	A	B	A	B
	4A		CFM/SIDE THROW, FT.	19 4-5-8	25 5-6-9	31 6-8-10	37 6-8-11	44 8-9-12	50 8-9-12	56 9-10-13						
	3A		CFM/SIDE THROW, FT.	19 28 4-5-8 5-8-11	25 38 5-6-9 6-9-12	31 47 6-8-10 8-10-14	37 56 6-8-11 8-11-15	44 66 8-9-12 9-12-16	50 75 8-9-12 9-12-17	56 85 9-10-13 10-13-18						
	2S 2G		CFM/SIDE THROW, FT.	37 8-9-12	50 9-10-14	62 10-11-16	75 11-12-17	88 12-13-18	100 12-14-19	113 13-15-22						
	1S		CFM/SIDE THROW, FT.	75 9-11-15	100 10-12-17	125 11-14-19	150 12-15-22	175 13-16-22	200 14-17-24	225 15-18-25						
9 x 9 .56 SQ. FT.	RETURN FACTORS	—SP=1.2 TP NC + 2	CFM NC	170 —	225 14	280 20	340 26	395 31	450 35	505 38	A	B	A	B	A	B
	4A		CFM/SIDE THROW, FT.	42 5-6-10	56 6-8-11	70 8-9-12	84 8-10-13	98 9-10-14	112 9-11-15	126 10-12-16						
	3A		CFM/SIDE THROW, FT.	42 63 5-6-10 8-10-13	56 85 6-8-11 9-11-15	70 106 8-9-12 10-12-17	84 127 8-10-13 11-13-18	98 148 9-10-14 12-14-19	112 169 9-11-15 12-15-22	126 190 10-12-16 13-16-22						
	2S 2G		CFM/SIDE THROW, FT.	84 9-10-15	112 11-13-18	141 12-15-20	169 13-16-22	197 14-17-23	225 15-18-25	253 16-19-28						
	1S		CFM/SIDE THROW, FT.	169 12-15-20	225 14-17-23	282 16-19-26	338 17-22-29	394 18-22-31	450 19-24-33	507 22-25-35						
12 x 12 1.0 SQ. FT.	RETURN FACTORS	—SP=1.3 TP NC + 4	CFM NC	300 10	400 17	500 23	600 28	700 33	800 36	900 39	A	B	A	B	A	B
	4A		CFM/SIDE THROW, FT.	75 6-9-11	100 8-10-13	125 9-11-15	150 10-12-16	175 10-13-17	200 11-14-18	225 12-15-19						
	3A		CFM/SIDE THROW, FT.	75 112 6-9-11 9-11-15	100 150 8-10-13 10-12-17	125 187 9-11-15 11-14-19	150 225 10-12-16 12-15-22	175 262 10-13-17 13-16-22	200 300 11-14-18 14-17-24	225 338 12-15-19 15-18-25						
	2S 2G		CFM/SIDE THROW, FT.	150 11-13-18	200 13-15-22	250 15-17-24	300 16-18-26	350 17-19-28	400 18-22-30	450 19-22-32						
	1S		CFM/SIDE THROW, FT.	300 14-17-24	400 16-19-28	500 18-22-32	600 19-23-34	700 22-25-36	800 23-27-38	900 24-29-41						
15 x 15 1.56 SQ. FT.	RETURN FACTORS	—SP=1.8 TP NC + 4	CFM NC	465 10	625 19	780 25	935 30	1090 33	1250 38	1400 41	A	B	A	B	A	B
	4A		CFM/SIDE THROW, FT.	117 8-10-13	156 9-11-15	195 10-12-17	234 11-13-18	273 12-14-19	312 12-15-22	350 13-16-24						
	3A		CFM/SIDE THROW, FT.	117 175 8-10-13 11-13-18	156 234 9-11-15 13-15-22	195 292 10-12-17 15-17-24	234 351 11-13-18 16-18-26	273 409 12-14-19 17-19-28	312 468 12-15-22 18-22-30	350 527 13-16-24 19-22-32						
	2S 2G		CFM/SIDE THROW, FT.	234 13-16-22	312 15-18-25	390 17-20-29	468 18-22-32	546 19-23-34	625 22-25-36	700 22-28-38						
	1S		CFM/SIDE THROW, FT.	467 16-19-28	625 18-22-32	780 20-25-36	935 22-28-39	1090 23-30-42	1250 25-32-44	1400 28-34-47						
18 x 18 2.25 SQ. FT.	RETURN FACTORS	—SP=2.1 TP NC + 6	CFM NC	675 12	900 21	1125 27	1350 31	1575 36	1800 39	2025 42	A	B	A	B	A	B
	4A		CFM/SIDE THROW, FT.	168 9-11-15	225 10-12-17	281 11-14-19	337 12-15-21	394 13-16-22	450 14-17-24	506 15-18-25						
	3A		CFM/SIDE THROW, FT.	168 253 9-11-15 12-15-20	225 338 10-12-17 14-17-23	281 422 11-14-19 16-19-26	337 506 12-15-21 17-22-29	394 590 13-16-22 18-22-31	450 675 14-17-24 19-24-33	506 760 15-18-25 22-25-35						
	2S 2G		CFM/SIDE THROW, FT.	337 14-17-24	450 16-19-28	562 18-22-32	675 19-23-34	787 22-25-36	900 22-26-39	1012 24-29-41						
	1S		CFM/SIDE THROW, FT.	675 17-22-30	900 20-24-34	1125 23-28-39	1350 24-30-41	1575 26-32-44	1800 29-35-47	2025 31-37-50						

For performance notes, see page D63.

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODEL 6400 • SQUARE NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300		400		500		600		700		800		900				
			.006 .029		.010 .051		.016 .080		.022 .116		.031 .157		.040 .205		.050 .260				
21 x 21 3.06 SQ. FT.	RETURN FACTORS	—SP=2.6 TP NC + 8	CFM NC		915 14		1225 22		1530 28		1835 32		2140 37		2450 40		2750 43		
			A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
	4A	CFM/SIDE THROW, FT.	230 10-12-17	306 11-14-19	382 12-16-22	460 13-17-23	535 14-18-25	612 15-19-26	688 16-22-29										
	3A	CFM/SIDE THROW, FT.	230 345 10-12-17 13-16-22	306 460 11-14-19 15-18-25	382 573 12-16-22 17-20-29	460 688 13-17-23 18-22-32	535 802 14-18-25 19-23-34	612 918 15-19-26 22-25-36	688 1030 16-22-29 22-28-38										
24 x 24 4.0 SQ. FT.	RETURN FACTORS	—SP=2.7 TP NC + 8	CFM NC		1200 15		1600 23		2000 29		2400 33		2800 37		3200 41		3600 44		
			A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
	4A	CFM/SIDE THROW, FT.	300 11-13-18	400 13-15-22	500 15-17-24	600 16-18-26	700 17-19-28	800 18-22-30	900 19-22-32										
	3A	CFM/SIDE THROW, FT.	300 450 11-13-18 14-17-24	400 600 13-15-22 16-19-28	500 750 15-17-24 18-22-32	600 900 16-18-26 19-23-34	700 1050 17-19-28 22-25-36	800 1200 18-22-30 22-26-39	900 1350 19-22-32 24-29-41										
30 x 30 6.25 SQ. FT.	RETURN FACTORS	—SP=3.1 TP NC + 8	CFM NC		1875 16		2500 24		3125 30		3750 35		4375 39		5000 42		5625 46		
			A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
	4A	CFM/SIDE THROW, FT.	469 12-15-20	625 14-17-23	782 16-19-26	937 17-21-29	1093 18-22-31	1250 19-24-33	1406 22-25-35										
	3A	CFM/SIDE THROW, FT.	469 703 12-15-20 16-19-28	625 938 14-17-23 18-22-32	782 1172 16-19-26 20-25-36	937 1405 17-21-29 22-28-39	1093 1640 18-22-31 23-28-42	1250 1875 19-24-33 25-32-44	1406 2110 22-25-35 28-34-47										
36 x 36 9.0 SQ. FT.	RETURN FACTORS	—SP=3.6 TP NC + 9	CFM NC		2700 18		3600 25		4500 31		5400 36		6300 40		7200 44		8100 48		
			A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
	4A	CFM/SIDE THROW, FT.	675 13-16-22	900 15-18-25	1125 17-20-29	1350 18-22-32	1575 19-23-34	1800 22-25-36	2025 22-28-38										
	3A	CFM/SIDE THROW, FT.	675 1010 13-16-22 17-22-30	900 1350 15-18-25 20-24-34	1125 1687 17-20-29 23-28-39	1350 2025 18-22-32 24-30-41	1575 2362 19-23-34 26-32-44	1800 2700 22-25-36 29-35-47	2025 3038 22-28-38 31-37-50										

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300	400	500	600	700	800	900
			.006 .029	.010 .051	.016 .080	.022 .116	.031 .157	.040 .205	.050 .260
9 x 6 .375 SQ. FT.	RETURN FACTORS —SP=1.2 TP NC + 0	CFM NC	110 —	150 14	185 20	225 25	260 29	300 33	335 37
	4B	CFM/SIDE THROW, FT.	37 18 6-9-11 4-5-8	50 25 8-10-13 5-6-9	62 31 9-11-15 6-8-10	75 37 10-12-16 6-8-11	87 44 10-13-17 8-9-12	100 50 11-14-18 8-9-12	112 56 12-15-19 9-10-13
	3A1	CFM/SIDE THROW, FT.	47 18 8-9-12 4-5-8	62 25 9-10-14 5-6-9	78 31 10-11-16 6-8-10	94 37 11-12-17 6-8-11	109 44 12-13-18 8-9-12	125 50 12-14-19 8-9-12	140 56 13-15-22 9-10-13
	3A2	CFM/SIDE THROW, FT.	42 35 6-9-11 5-6-10	55 47 8-10-13 6-8-11	70 58 9-11-15 8-9-12	84 70 10-12-16 8-10-13	98 82 10-13-17 9-10-14	112 94 11-14-18 9-11-15	126 105 12-15-19 10-12-16
	2A 2B	CFM/SIDE THROW, FT.	56 9-11-14	75 10-12-16	93 11-14-18	112 12-15-19	131 13-16-22	150 14-17-22	168 15-18-24
	2C 2E	CFM/SIDE THROW, FT.	75 37 9-11-15 6-9-11	100 50 10-12-17 8-10-13	125 62 11-14-19 9-11-15	150 75 12-15-22 10-12-16	175 87 13-16-22 10-13-19	200 100 14-17-24 11-14-18	225 112 15-18-25 12-15-19
	1A 1B	CFM/SIDE THROW, FT.	112 11-13-18	150 13-15-22	187 15-17-24	225 16-18-26	262 17-19-28	300 18-22-30	337 19-22-32
12 x 6 .50 SQ. FT.	RETURN FACTORS —SP=1.6 TP NC + 1	CFM NC	150 —	200 14	250 20	300 26	350 31	400 35	450 39
	4B	CFM/SIDE THROW, FT.	56 18 9-11-14 4-5-8	75 25 10-12-16 5-6-9	94 31 11-14-18 6-8-10	113 37 12-15-19 6-8-11	131 44 13-16-22 8-9-12	150 50 14-17-22 8-9-12	169 56 15-18-24 9-10-13
	3A1	CFM/SIDE THROW, FT.	66 18 9-11-15 4-5-8	87 25 10-12-17 5-6-9	109 31 11-14-19 6-8-10	131 37 12-15-22 6-8-11	153 44 13-16-22 8-9-12	175 50 14-17-24 8-9-12	197 56 15-18-25 9-10-13
	3B	CFM/SIDE THROW, FT.	75 37 6-9-11 6-9-11	100 50 8-10-13 8-10-13	126 62 9-11-15 9-11-15	150 75 10-12-16 10-12-16	176 87 10-13-17 10-13-17	200 100 11-14-18 11-14-18	226 112 12-15-19 12-15-19
	2A 2B	CFM/SIDE THROW, FT.	75 9-11-15	100 10-12-17	125 11-14-19	150 12-15-22	175 13-16-22	200 14-17-24	225 15-18-25
	2C 2E	CFM/SIDE THROW, FT.	112 37 11-13-18 6-9-11	150 50 13-15-22 8-10-13	188 62 15-17-24 9-11-15	225 75 16-18-26 10-12-16	263 87 17-19-28 10-13-17	300 100 18-22-30 11-14-18	338 112 19-22-32 12-15-19
	1A 1B	CFM/SIDE THROW, FT.	150 11-13-18	200 13-15-22	250 15-17-24	300 16-18-26	350 17-19-28	400 18-22-30	450 19-22-32
15 x 6 .625 SQ. FT.	RETURN FACTORS —SP=1.9 TP NC + 1	CFM NC	190 —	250 15	310 21	375 27	440 32	500 36	565 40
	4B	CFM/SIDE THROW, FT.	75 18 9-11-15 4-5-8	100 25 10-12-17 5-6-9	125 31 11-14-19 6-8-10	150 37 12-15-22 6-8-11	175 44 13-16-22 8-9-12	200 50 14-17-24 8-9-12	225 56 15-18-25 9-10-13
	4E	CFM/SIDE THROW, FT.	56 37 9-11-14 8-9-12	75 50 10-12-16 9-10-14	94 62 11-14-18 10-11-16	113 75 12-15-19 11-12-17	131 87 13-16-22 12-13-18	150 100 14-17-22 12-14-19	169 112 15-18-24 13-15-22
	3A1	CFM/SIDE THROW, FT.	84 18 10-11-16 4-5-8	112 25 11-13-18 5-6-9	140 31 12-15-20 6-8-10	169 37 13-16-22 6-8-11	197 44 14-17-23 8-9-12	225 50 15-18-25 8-9-12	253 56 16-19-28 9-10-13
	2A 2B	CFM/SIDE THROW, FT.	94 10-12-17	125 11-14-19	156 12-16-22	187 13-17-23	219 14-18-25	250 15-19-26	281 16-22-29
	2C 2E	CFM/SIDE THROW, FT.	150 37 11-13-18 6-9-11	200 50 13-15-22 8-10-13	250 62 15-17-24 9-11-15	300 75 16-18-26 10-12-16	350 87 17-19-28 10-13-17	400 100 18-22-30 11-14-18	450 112 19-22-32 12-15-19
	1A 1B	CFM/SIDE THROW, FT.	188 12-15-20	250 14-17-23	312 16-19-26	375 17-22-29	438 18-22-31	500 19-24-33	563 22-25-35

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D63.

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 6 .75 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 2	CFM NC	225 —		300 16		375 22		450 28		525 33		600 37		675 41	
	4B 4C	CFM/SIDE THROW, FT.	94	18	125	25	156	31	188	37	218	44	250	50	281	56
	4E	CFM/SIDE THROW, FT.	56	56	75	75	94	94	113	113	131	131	150	150	169	169
	3A1	CFM/SIDE THROW, FT.	103	18	137	25	172	31	206	37	240	44	275	50	309	56
	2A 2B	CFM/SIDE THROW, FT.	112		150		187		225		262		300		337	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	187	37	250	50	313	62	375	75	438	87	500	100	563	112
	1A 1B	CFM/SIDE THROW, FT.	225		300		375		450		525		600		675	
21 x 6 .875 SQ. FT.	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	260 —		350 16		435 22		525 29		610 33		700 38		785 41	
	4B 4C	CFM/SIDE THROW, FT.	112	18	150	25	187	31	225	37	262	44	300	50	337	56
	4E	CFM/SIDE THROW, FT.	75	56	100	75	125	94	150	113	175	131	200	150	225	169
	3A1	CFM/SIDE THROW, FT.	122	18	162	25	203	31	244	37	284	44	325	50	365	56
	2A 2B	CFM/SIDE THROW, FT.	131		175		218		262		306		350		393	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	225	37	300	50	375	62	450	75	525	87	600	100	675	112
	1A 1B	CFM/SIDE THROW, FT.	262		350		437		525		612		700		787	
24 x 6 1.0 SQ. FT.	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	300 —		400 16		500 23		600 30		700 34		800 39		900 42	
	4B 4C	CFM/SIDE THROW, FT.	131	18	175	25	219	31	263	37	306	44	350	50	394	56
	4E	CFM/SIDE THROW, FT.	75	75	100	100	125	125	150	150	175	175	200	200	225	225
	3A1	CFM/SIDE THROW, FT.	141	18	187	25	234	31	281	37	328	44	375	50	422	56
	2A 2B	CFM/SIDE THROW, FT.	150		200		250		300		350		400		450	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	260	37	350	50	438	62	525	75	613	87	700	100	788	112
	1A 1B	CFM/SIDE THROW, FT.	300		400		500		600		700		800		900	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260								
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A	B						
30 x 6 1.25 SQ. FT.	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	375 —		500 17		625 24		750 30		875 35		1000 40		1125 43								
	4B 4C	CFM/SIDE THROW, FT.	169 18	12-15-20	4-5-8	225 25	14-17-23	5-6-9	281 31	16-19-26	6-8-10	338 37	17-22-29	6-8-11	393 44	18-22-31	8-9-12	450 50	19-24-33	8-9-12	506 56	21-25-35	9-10-13
	4E	CFM/SIDE THROW, FT.	94 94	10-12-17	10-12-17	125 125	11-14-19	11-14-19	156 156	12-16-22	12-16-22	188 188	13-17-23	13-17-23	219 219	14-18-25	14-18-25	250 250	15-19-26	15-19-26	282 282	16-22-29	16-22-29
	3A1	CFM/SIDE THROW, FT.	178 18	12-15-20	4-5-8	237 25	14-17-23	5-6-9	297 31	16-19-26	6-8-10	356 37	17-22-29	6-8-11	415 44	18-22-31	8-9-12	475 50	19-24-33	8-9-12	534 56	21-25-35	9-10-13
	2A 2B	CFM/SIDE THROW, FT.	187	12-15-20		250	14-17-23		312	16-19-26		375	17-22-29		437	18-22-31		500	19-24-33		562	21-25-35	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	337 37	14-17-24	6-9-11	450 50	16-19-28	8-10-13	563 62	18-22-32	9-11-15	675 75	19-23-34	10-12-16	788 87	22-25-36	10-13-17	900 100	22-26-39	11-14-18	1013 112	24-29-41	12-15-19
1A 1B	CFM/SIDE THROW, FT.	375	15-18-25		500	17-22-30		625	19-24-34		750	22-26-36		875	22-28-39		1000	24-30-42		1125	25-32-44		
12 x 9 .75 SQ. FT.	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	225 —		300 17		375 23		450 28		525 33		600 36		675 40								
	4B 4C	CFM/SIDE THROW, FT.	70 42	8-10-13	5-6-10	94 56	9-11-15	6-8-11	117 70	10-12-17	8-10-13	141 84	11-13-18	8-10-13	164 98	12-14-19	9-10-14	188 112	12-15-22	9-11-15	211 126	13-16-22	10-12-16
	3A1	CFM/SIDE THROW, FT.	91 42	10-12-17	5-6-10	121 56	11-14-19	6-8-11	152 70	12-16-22	8-9-12	183 84	13-17-23	8-10-13	213 98	14-18-25	9-10-14	244 112	15-19-26	9-11-15	274 126	16-22-29	10-12-16
	3A2	CFM/SIDE THROW, FT.	75 75	9-11-14	9-11-14	100 100	10-12-16	10-12-16	125 125	11-14-18	11-14-18	150 150	12-15-19	12-15-19	175 175	13-16-22	13-16-22	200 200	14-17-22	14-17-22	225 225	15-18-24	15-18-24
	2A 2B	CFM/SIDE THROW, FT.	112	11-13-18		150	13-15-22		187	15-17-24		225	16-18-26		262	17-19-28		300	18-22-30		337	19-22-32	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	141 84	11-13-18	9-11-14	188 112	13-15-22	10-12-16	234 141	15-17-24	11-14-18	281 169	16-18-26	12-15-19	328 197	17-19-28	13-16-22	375 225	18-22-30	14-17-22	422 253	19-22-32	15-18-24
1A 1B	CFM/SIDE THROW, FT.	225	13-16-22		300	15-18-25		375	17-20-29		450	18-22-32		525	19-23-34		600	22-25-36		675	22-28-38		
15 x 9 .93 SQ. FT.	RETURN FACTORS —SP=1.7 TP NC + 3	CFM NC	280 —		375 18		470 24		565 29		655 34		750 37		845 41								
	4B 4C	CFM/SIDE THROW, FT.	98 42	10-12-17	5-6-10	131 56	11-14-19	6-8-11	165 70	12-16-22	8-9-12	198 84	13-17-23	8-10-13	230 98	14-18-25	9-10-14	263 112	15-19-26	9-11-15	296 126	16-22-29	10-12-16
	4E	CFM/SIDE THROW, FT.	70 70	9-11-15	9-11-15	94 94	10-12-17	10-12-17	117 117	11-14-19	11-14-19	141 141	12-15-22	12-15-22	164 164	13-16-22	13-16-22	188 188	14-17-24	14-17-24	211 211	15-18-25	15-18-25
	3A1	CFM/SIDE THROW, FT.	120 42	11-13-18	5-6-10	159 56	13-15-22	6-8-11	200 70	15-17-24	8-9-12	240 84	16-18-26	8-10-13	279 98	17-19-28	9-10-14	319 112	18-22-30	9-11-15	359 126	19-22-32	10-12-16
	3A2	CFM/SIDE THROW, FT.	117 82	10-11-16	8-10-13	155 110	11-13-18	9-11-15	196 137	12-15-20	10-12-17	233 165	13-16-22	11-13-18	272 192	14-17-23	12-14-19	312 219	15-18-25	12-15-22	351 247	16-19-28	13-16-22
	2A 2B	CFM/SIDE THROW, FT.	140	11-13-18		187	13-15-22		235	15-17-24		281	16-18-26		328	17-19-28		375	18-22-30		422	19-22-32	
2C 2E 2D 2F	CFM/SIDE THROW, FT.	197 84	12-15-20	9-11-14	263 112	14-17-23	10-12-16	329 141	16-19-26	11-14-18	394 169	17-22-29	12-15-19	459 197	18-22-31	13-16-22	525 225	19-24-33	14-17-22	592 253	22-25-35	15-18-24	
1A 1B	CFM/SIDE THROW, FT.	281	14-17-24		375	16-19-28		470	18-22-32		563	19-23-34		656	22-25-36		750	22-26-39		845	24-29-41		

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D63.

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260	
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A
18 x 9 1.125 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 3	CFM NC	335		450		560		675		790		900		1010	
	4B 4C	CFM/SIDE THROW, FT.	126	42	169	56	211	70	254	84	296	98	338	112	380	126
	4E	CFM/SIDE THROW, FT.	99	70	132	94	164	117	197	141	230	164	263	188	296	211
	3A1	CFM/SIDE THROW, FT.	147	42	197	56	246	70	295	84	345	98	394	112	443	126
	3B	CFM/SIDE THROW, FT.	168	84	225	112	281	141	337	169	394	197	450	225	506	253
	2A 2B	CFM/SIDE THROW, FT.	163		225		281		337		394		450		506	
	2C 2E	CFM/SIDE THROW, FT.	253	84	338	112	421	141	506	169	591	197	675	225	759	253
1A 1B	CFM/SIDE THROW, FT.	337		450		562		675		788		900		1012		
21 x 9 1.125 SQ. FT.	RETURN FACTORS —SP=2.5 TP NC + 4	CFM NC	395		525		655		785		915		1050		1180	
	4B 4C	CFM/SIDE THROW, FT.	154	42	206	56	258	70	309	84	360	98	413	112	464	126
	4E	CFM/SIDE THROW, FT.	98	98	131	131	163	163	196	196	229	229	261	261	294	294
	3A1	CFM/SIDE THROW, FT.	175	42	234	56	292	70	351	84	410	98	468	112	527	126
	2A 2B	CFM/SIDE THROW, FT.	196		262		327		393		458		525		590	
	2C 2E	CFM/SIDE THROW, FT.	308	84	412	112	514	141	617	169	720	197	825	225	927	253
	1A 1B	CFM/SIDE THROW, FT.	393		524		655		786		917		1050		1180	
24 x 9 1.5 SQ. FT.	RETURN FACTORS —SP=2.9 TP NC + 4	CFM NC	450		600		750		900		1050		1200		1350	
	4B 4C	CFM/SIDE THROW, FT.	183	42	244	56	305	70	366	84	427	98	488	112	549	126
	4E	CFM/SIDE THROW, FT.	126	99	169	132	211	164	253	197	295	230	337	263	379	296
	3A1	CFM/SIDE THROW, FT.	204	42	272	56	340	70	408	84	476	98	544	112	612	126
	2A 2B	CFM/SIDE THROW, FT.	225		300		375		450		525		600		675	
	2C 2E	CFM/SIDE THROW, FT.	365	84	488	112	609	141	731	169	853	197	975	225	1097	253
	1A 1B	CFM/SIDE THROW, FT.	450		600		750		900		1050		1200		1350	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260								
			CFM NC	—	560 —	750 20	935 26	1125 32	1310 37	1500 39	1685 44	A	B	A	B	A	B	A	B				
30 x 9 1.875 SQ. FT.	RETURN FACTORS —SP=3.9 TP NC + 5	CFM NC	560		750		935		1125		1310		1500		1685								
	4B 4C	CFM/SIDE THROW, FT.	238 42	319 56	398 70	478 84	557 98	638 112	716 126	13-16-22	5-6-10	15-18-25	6-8-11	17-20-29	8-9-12	18-22-32	8-10-13	19-23-34	9-10-14	22-25-36	9-11-15	22-28-38	10-12-16
	4E	CFM/SIDE THROW, FT.	155 126	206 169	258 211	310 253	361 295	413 337	465 379	12-15-20	11-13-18	14-17-23	13-15-22	16-19-26	15-17-24	17-22-29	16-18-26	18-22-30	17-19-28	19-24-33	18-22-30	22-25-35	19-22-32
	3A1	CFM/SIDE THROW, FT.	259 42	347 56	433 70	520 84	606 98	694 112	779 126	13-16-22	5-6-10	15-18-25	6-8-11	17-20-29	8-9-12	18-22-32	8-10-13	19-23-34	9-10-14	22-25-36	9-11-15	22-28-38	10-12-16
	2A 2B	CFM/SIDE THROW, FT.	281	375	468	562	655	750	842	14-17-24		16-19-28		18-22-32		19-23-34		22-25-36		22-26-39		24-29-41	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	476 84	638 112	796 141	956 169	1113 197	1275 225	1432 253	16-19-28	9-11-14	18-22-32	10-12-16	20-25-36	11-14-18	22-28-39	12-15-19	23-30-42	13-16-22	25-32-44	14-17-22	28-34-47	15-18-24
1A 1B	CFM/SIDE THROW, FT.	562	750	937	1125	1310	1500	1685	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47		
36 x 9 2.25 SQ. FT.	RETURN FACTORS —SP=5.0 TP NC + 6	CFM NC	675		900		1125		1350		1575		1800		2025								
	4B 4C	CFM/SIDE THROW, FT.	295 42	394 56	492 70	591 84	689 98	788 112	886 126	14-17-24	5-6-10	16-19-28	6-8-11	18-22-32	8-9-12	19-23-34	8-10-13	22-25-36	9-10-14	22-26-39	9-11-15	24-29-41	10-12-16
	4E	CFM/SIDE THROW, FT.	183 155	244 206	305 258	366 310	427 361	488 413	549 465	12-15-20	12-15-20	14-17-23	14-17-23	16-19-26	16-19-26	17-22-29	17-22-29	18-22-31	18-22-31	19-24-33	19-24-33	22-25-35	22-25-35
	3A1	CFM/SIDE THROW, FT.	316 42	422 56	527 70	633 84	738 98	844 112	949 126	14-17-24	5-6-10	16-19-28	6-8-11	18-22-32	8-9-12	19-23-34	8-10-13	22-25-36	9-10-14	22-26-39	9-11-15	24-29-41	10-12-16
	2A 2B	CFM/SIDE THROW, FT.	337	450	562	675	787	900	1012	14-17-24		16-19-28		18-22-32		19-23-34		22-25-36		22-26-39		24-29-41	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	590 84	788 112	984 141	1181 169	1378 197	1575 225	1772 253	17-22-30	9-11-14	20-24-34	10-12-16	23-28-39	11-14-18	24-30-41	12-15-19	26-32-44	13-16-22	29-35-47	14-17-22	31-37-50	15-18-24
1A 1B	CFM/SIDE THROW, FT.	675	900	1125	1350	1575	1800	2025	17-22-30		20-24-34		23-28-39		24-30-41		26-32-44		29-35-47		31-37-50		
15 x 12 1.25 SQ. FT.	RETURN FACTORS —SP=1.6 TP NC + 2	CFM NC	375		500		625		750		875		1000		1125								
	4B 4C	CFM/SIDE THROW, FT.	112 75	150 100	187 125	225 150	262 175	300 200	337 225	9-11-15	6-9-11	10-12-17	8-10-13	11-14-19	9-11-15	12-15-22	10-12-16	13-16-22	10-13-17	14-17-24	11-14-18	15-18-25	12-15-19
	3A1	CFM/SIDE THROW, FT.	150 75	200 100	250 125	300 150	350 175	400 200	450 225	11-13-18	6-9-11	13-15-22	8-10-13	15-17-24	9-11-15	16-18-26	10-12-16	17-19-28	10-13-17	18-22-30	11-14-18	19-22-32	12-15-19
	3A2	CFM/SIDE THROW, FT.	117 129	156 172	195 215	234 258	273 301	312 344	351 387	8-10-13	10-11-16	9-11-15	11-13-18	10-12-17	12-15-20	11-13-18	13-16-22	12-14-19	14-17-23	12-15-22	15-18-25	13-16-22	16-19-28
	2A 2B	CFM/SIDE THROW, FT.	187	250	312	375	437	500	567	12-15-20		14-17-23		16-19-26		17-22-29		18-22-31		19-24-33		22-25-35	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	225 150	300 200	375 250	450 300	525 350	600 400	675 450	13-16-22	10-12-17	15-18-25	11-14-19	17-20-29	12-16-22	18-22-32	13-17-23	19-23-34	14-18-25	22-25-36	15-19-26	22-28-38	16-22-29
1A 1B	CFM/SIDE THROW, FT.	375	500	625	750	875	1000	1125	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44		

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 12 1.5 SQ. FT.	RETURN FACTORS —SP=1.9 TP NC + 3	CFM NC	450 —		600 20		750 26		900 31		1050 35		1200 39		1350 42	
	4B 4C	CFM/SIDE THROW, FT.	150 11-13-18	75 6-9-11	200 13-15-22	100 8-10-13	250 15-17-24	125 9-11-15	300 16-18-26	150 10-12-16	350 17-19-28	175 10-13-17	400 18-22-30	200 11-14-18	450 19-22-32	225 12-15-19
	3A1	CFM/SIDE THROW, FT.	187 12-15-20	75 6-9-11	250 14-17-23	100 8-10-13	312 16-19-26	125 9-11-15	375 17-22-29	150 10-12-16	437 18-22-31	175 10-13-17	500 19-24-33	200 11-14-18	562 22-25-35	225 12-15-1
	3A2	CFM/SIDE THROW, FT.	168 10-12-17	141 9-11-15	225 11-14-19	187 10-12-17	281 12-16-22	234 11-14-19	337 13-17-23	281 12-15-22	394 14-18-25	328 13-16-22	450 15-19-26	375 14-17-24	506 16-22-29	422 15-18-25
	2A 2B	CFM/SIDE THROW, FT.	225 13-16-22		300 15-18-25		375 17-20-29		450 18-22-32		525 19-23-34		600 22-25-36		675 22-28-38	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	300 14-17-24	150 10-12-17	400 16-19-28	200 11-14-19	500 18-22-32	250 12-16-22	600 19-23-34	300 13-17-23	700 22-25-36	350 14-18-25	800 22-26-39	400 15-19-26	900 24-29-41	450 16-22-29
	1A 1B	CFM/SIDE THROW, FT.	450 15-18-25		600 17-22-30		750 19-24-34		900 22-26-36		1050 22-28-39		1200 24-30-42		1350 25-32-44	
21 x 12 1.75 SQ. FT.	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	525 —		700 20		875 26		1050 31		1225 35		1400 39		1575 42	
	4B 4C	CFM/SIDE THROW, FT.	187 12-15-20	75 6-9-11	250 14-17-23	100 8-10-13	312 16-19-26	125 9-11-15	375 17-22-29	150 10-12-16	437 18-22-31	175 10-13-17	500 19-24-33	200 11-14-18	562 22-25-35	225 12-15-19
	4E	CFM/SIDE THROW, FT.	150 11-13-18	112 11-13-18	200 13-15-22	150 13-15-22	250 15-17-24	187 15-17-24	300 16-18-26	225 16-18-26	350 17-19-28	262 17-19-28	400 18-22-30	300 18-22-30	450 19-22-32	337 19-22-32
	3A1	CFM/SIDE THROW, FT.	225 13-16-22	75 6-9-11	300 15-18-25	100 8-10-13	375 17-20-29	125 9-11-15	450 18-22-32	150 10-12-16	525 19-23-34	175 10-13-17	600 22-25-36	200 11-14-18	675 22-28-38	225 12-15-19
	3A2	CFM/SIDE THROW, FT.	148 10-12-17	230 10-12-17	197 11-14-19	306 11-14-19	246 12-16-22	382 12-16-22	295 13-17-23	460 13-17-23	345 14-18-25	535 14-18-25	394 15-19-26	612 15-19-26	443 16-22-29	688 16-22-29
	2A 2B	CFM/SIDE THROW, FT.	262 13-16-22		350 15-18-25		437 17-20-29		525 18-22-32		612 19-23-34		700 22-25-36		787 22-28-38	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	375 15-18-25	150 10-12-17	500 17-22-30	200 11-14-19	625 19-24-34	250 12-16-22	750 22-26-36	300 13-17-23	875 22-28-39	350 14-18-25	1000 24-30-42	400 15-19-26	1125 25-32-44	450 16-22-29
1A 1B	CFM/SIDE THROW, FT.	525 16-19-28		700 18-22-32		875 20-25-36		1050 22-28-39		1225 23-30-42		1400 25-32-44		1575 28-34-47		
24 x 12 2.0 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 5	CFM NC	600 12		800 21		1000 27		1200 32		1400 36		1600 40		1800 43	
	4B 4C	CFM/SIDE THROW, FT.	225 13-16-22	75 6-9-11	300 15-18-25	100 8-10-13	375 17-20-29	125 9-11-15	450 18-22-32	150 10-12-16	525 19-23-34	175 10-13-17	600 22-25-36	200 11-14-18	675 22-28-38	225 12-15-19
	4E	CFM/SIDE THROW, FT.	150 11-13-18	150 11-13-18	200 13-15-22	200 13-15-22	250 15-17-24	250 15-17-24	300 16-18-26	300 16-18-26	350 17-19-28	350 17-19-28	400 18-22-30	400 18-22-30	450 19-22-32	450 19-22-32
	3A1	CFM/SIDE THROW, FT.	262 13-16-22	75 6-9-11	350 15-18-25	100 8-10-13	437 17-20-29	175 9-11-15	525 18-22-32	150 10-12-16	612 19-23-34	175 10-13-17	700 22-25-36	200 11-14-18	787 22-28-38	225 12-15-19
	3B	CFM/SIDE THROW, FT.	300 11-13-18	150 10-12-17	400 13-15-22	200 11-14-19	500 15-17-24	250 12-16-22	600 16-18-26	300 13-17-23	700 17-19-28	350 14-18-25	800 18-22-30	400 15-19-26	900 19-22-32	450 16-22-29
	2A 2B	CFM/SIDE THROW, FT.	300 14-17-24		400 16-19-28		500 18-22-32		600 19-23-34		700 22-25-36		800 22-26-39		900 24-29-41	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	450 15-18-25	150 10-12-17	600 17-22-30	200 11-14-19	750 19-24-34	250 12-16-22	900 22-26-36	300 13-17-23	1050 22-28-39	350 14-18-25	1200 24-30-42	400 15-19-26	1350 25-32-44	450 16-22-29
1A 1B	CFM/SIDE THROW, FT.	600 17-22-30		800 20-24-34		1000 23-28-39		1200 24-30-41		1400 26-32-44		1600 29-35-47		1800 31-37-50		

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260	
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A
30 x 12 2.5 SQ. FT.	RETURN FACTORS —SP=3.3 TP NC + 6	CFM NC	750 15		1000 23		1250 29		1500 33		1750 37		2000 41		2250 43	
	4B 4C	CFM/SIDE THROW, FT.	300	75	400	100	500	125	600	150	700	175	800	200	900	225
	4E	CFM/SIDE THROW, FT.	183	183	250	250	313	313	375	375	437	437	500	500	562	562
	3A1	CFM/SIDE THROW, FT.	337	75	450	100	562	125	675	150	787	175	900	200	1012	225
	2A 2B	CFM/SIDE THROW, FT.	375		500		625		750		875		1000		1125	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	600	150	800	200	1000	250	1200	300	1400	350	1600	400	1800	450
1A 1B	CFM/SIDE THROW, FT.	750		1000		1250		1500		1750		2000		2250		
36 x 12 3.0 SQ. FT.	RETURN FACTORS —SP=4.0 TP NC + 7	CFM NC	900 16		1200 25		1500 30		1800 34		2100 38		2400 42		2700 44	
	4B 4C	CFM/SIDE THROW, FT.	375	75	500	100	625	125	750	150	875	175	1000	200	1125	225
	4E	CFM/SIDE THROW, FT.	225	225	300	300	375	375	450	450	525	525	600	600	675	675
	3A1	CFM/SIDE THROW, FT.	412	75	550	100	687	125	825	150	962	175	1100	200	1237	225
	2A 2B	CFM/SIDE THROW, FT.	450		600		750		900		1050		1200		1350	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	750	150	1000	200	1250	250	1500	300	1750	350	2000	400	2250	450
1A 1B	CFM/SIDE THROW, FT.	900		1200		1500		1800		2100		2400		2700		
18 x 15 1.875 SQ. FT.	RETURN FACTORS —SP=2.0 TP NC + 4	CFM NC	560 14		750 21		935 28		1125 32		1310 36		1500 39		1685 43	
	4B 4C	CFM/SIDE THROW, FT.	164	117	219	156	273	195	328	234	383	273	438	312	492	351
	3A1	CFM/SIDE THROW, FT.	222	117	297	156	371	195	445	234	519	273	594	312	668	351
	3A2	CFM/SIDE THROW, FT.	168	197	225	262	281	328	337	394	394	459	450	525	506	590
	2A 2B	CFM/SIDE THROW, FT.	281		375		468		562		656		750		843	
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	329	234	438	312	547	390	657	468	766	546	876	624	985	702
1A 1B	CFM/SIDE THROW, FT.	562		750		937		1125		1312		1500		1687		

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D63.

D
CEILING DIFFUSERS

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300		400		500		600		700		800		900	
			.006 .029		.010 .051		.016 .080		.022 .116		.031 .157		.040 .205		.050 .260	
21 x 15 2.185 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 5	CFM NC	655 12		875 21		1090 28		1310 33		1530 36		1750 39		1970 43	
	4B 4C	CFM/SIDE THROW, FT.	210 13-16-22	117 8-10-13	281 15-18-25	156 9-11-15	361 17-20-29	195 10-12-17	422 18-22-32	234 11-13-18	493 19-23-34	273 12-14-19	563 22-25-36	312 12-15-22	634 22-28-38	351 13-16-22
	4E	CFM/SIDE THROW, FT.	164 12-15-20	164 12-15-20	218 14-17-24	218 14-17-24	273 16-19-26	273 16-19-26	327 17-22-29	327 17-22-29	382 18-22-31	382 18-22-31	437 19-24-33	437 19-24-33	491 22-25-35	491 22-25-35
	3A1	CFM/SIDE THROW, FT.	269 13-16-22	117 8-10-13	359 15-18-25	156 9-11-15	448 17-20-29	195 10-12-17	539 18-22-32	234 11-13-18	629 19-23-34	273 12-14-19	719 22-25-36	312 12-15-22	809 22-28-38	351 13-16-22
	3A2	CFM/SIDE THROW, FT.	230 11-13-18	213 10-12-17	306 13-15-22	284 11-14-19	382 15-17-24	355 12-16-22	460 16-18-26	426 13-17-23	535 17-19-28	498 14-18-25	612 18-22-30	569 15-19-26	688 19-22-32	641 16-22-29
	2A 2B	CFM/SIDE THROW, FT.	327 14-17-24		437 16-19-28		596 18-22-32		656 19-23-34		766 22-25-36		875 22-26-39		985 24-29-41	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	422 15-18-25	234 12-15-20	563 17-22-30	312 14-17-23	702 19-24-34	390 16-19-26	844 22-26-36	468 17-22-29	966 22-28-39	546 18-22-31	1126 24-30-42	624 19-24-33	1268 25-32-44	702 22-25-35
	1A 1B	CFM/SIDE THROW, FT.	655 17-22-30		875 20-24-34		1092 23-28-39		1312 24-30-41		1532 26-32-44		1750 29-35-47		1970 31-37-50	
24 x 15 2.5 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 6	CFM NC	750 14		1000 22		1250 29		1500 34		1750 37		2000 39		2250 44	
	4B 4C	CFM/SIDE THROW, FT.	258 13-16-22	117 8-10-13	344 15-18-25	156 9-11-15	430 17-20-29	195 10-12-17	516 18-22-32	234 11-13-18	602 19-23-34	273 12-14-19	688 22-25-36	312 12-15-22	774 22-28-38	351 13-16-22
	4E	CFM/SIDE THROW, FT.	211 13-16-22	164 12-15-20	281 15-18-25	218 14-17-24	352 17-20-29	273 16-19-26	422 18-22-32	327 17-22-29	492 19-23-34	382 18-22-31	563 22-25-36	437 19-24-33	633 22-28-38	491 22-25-35
	3A1	CFM/SIDE THROW, FT.	316 14-17-24	117 8-10-13	422 16-19-28	156 9-11-15	527 18-22-32	195 10-12-17	633 19-23-34	234 11-13-18	738 22-25-36	273 12-14-19	844 22-26-39	312 12-15-22	949 24-29-41	351 13-16-22
	3A2	CFM/SIDE THROW, FT.	300 13-16-22	225 11-13-18	400 15-18-25	300 13-15-22	500 17-20-29	375 15-17-24	600 18-22-32	450 16-18-26	700 19-23-34	525 17-19-28	800 22-25-36	600 18-22-30	900 22-28-38	675 19-22-32
	2A 2B	CFM/SIDE THROW, FT.	375 15-18-25		500 17-22-30		625 19-24-34		750 22-26-36		875 22-28-39		1000 24-30-42		1125 25-32-44	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	516 16-19-28	234 12-15-20	688 18-22-32	312 14-17-23	860 20-25-36	390 16-19-26	1032 22-28-39	468 17-22-29	1204 23-30-42	546 18-22-31	1376 25-32-44	624 19-24-33	1548 28-34-47	702 22-25-35
	1A 1B	CFM/SIDE THROW, FT.	750 18-22-32		1000 22-25-36		1250 24-29-41		1500 26-32-44		1750 28-34-47		2000 30-36-50		2250 32-38-53	
30 x 15 3.125 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 7	CFM NC	935 14		1250 23		1565 30		1875 36		2190 39		2500 40		2810 45	
	4B 4C	CFM/SIDE THROW, FT.	351 14-17-24	117 8-10-13	469 16-19-28	156 9-11-15	587 18-22-32	195 10-12-17	703 19-23-34	234 11-13-18	822 22-25-36	273 12-14-19	938 22-26-39	312 12-15-22	1054 24-29-41	351 13-16-22
	4E	CFM/SIDE THROW, FT.	258 13-16-22	211 13-16-22	344 15-18-25	281 15-18-25	430 17-20-29	352 17-20-29	516 18-22-32	422 18-22-32	602 19-23-34	492 19-23-34	688 22-25-36	583 22-25-36	775 22-28-38	633 22-28-38
	3A1	CFM/SIDE THROW, FT.	410 15-18-25	117 8-10-13	547 17-22-30	156 9-11-15	685 19-24-34	195 10-12-17	820 22-26-36	234 11-13-18	958 22-28-39	273 12-14-19	1094 24-30-42	312 12-15-22	1224 25-32-44	351 13-16-22
	3B	CFM/SIDE THROW, FT.	468 12-15-20	234 12-15-20	625 14-17-23	312 14-17-23	782 16-19-26	391 16-19-26	937 17-22-29	469 17-22-29	1095 18-22-31	547 18-22-31	1250 19-24-33	625 19-24-33	1406 22-25-35	702 22-25-35
	2A 2B	CFM/SIDE THROW, FT.	468 16-19-28		625 18-22-32		782 20-25-36		937 22-28-39		1095 23-30-42		1250 25-32-44		1405 28-34-47	
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	702 17-22-30	234 12-15-20	938 20-24-34	312 14-17-23	1175 23-28-39	390 16-19-26	1407 24-30-41	468 17-22-29	1644 26-32-44	546 18-22-31	1876 29-35-47	624 19-24-33	2108 34-37-50	702 22-25-35
	1A 1B	CFM/SIDE THROW, FT.	937 19-24-33		1250 22-28-38		1565 25-32-43		1875 28-34-46		2190 30-36-50		2500 32-39-53		2810 34-41-57	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260	
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A
36 x 15 3.75 SQ. FT.	RETURN FACTORS —SP=3.8 TP NC + 7	CFM NC	1125 13		1500 23		1875 31		2250 37		2625 40		3000 41		3375 46	
	4B	CFM/SIDE THROW, FT.	446 15-18-25	117 8-10-13	594 17-22-30	156 9-11-15	742 19-24-34	195 10-12-17	891 22-26-36	234 11-13-18	1039 22-30-39	273 12-14-19	1188 24-30-42	312 12-15-22	1336 25-32-44	351 13-16-22
	4C	CFM/SIDE THROW, FT.	306 14-17-24	258 13-16-22	408 16-19-28	344 15-18-25	510 18-22-32	430 17-20-29	612 19-23-34	516 18-22-32	714 22-25-36	602 19-23-34	816 22-26-39	688 22-25-36	918 24-29-41	775 22-28-38
	3A1	CFM/SIDE THROW, FT.	504 16-19-28	117 8-10-13	672 18-22-32	156 9-11-15	840 20-25-36	195 10-12-17	1008 22-30-39	234 11-13-18	1176 23-30-42	273 12-14-19	1344 25-32-44	312 12-15-22	1512 28-34-47	351 13-16-22
	2A 2B	CFM/SIDE THROW, FT.	562 16-19-28		750 18-22-32		937 20-25-36		1125 22-28-39		1312 23-30-42		1500 25-32-44		1682 28-34-47	
	2C 2E	CFM/SIDE THROW, FT.	890 19-24-33	234 12-15-20	1188 22-28-33	312 14-17-23	1485 25-32-43	390 16-19-26	1782 28-34-46	468 17-22-29	2079 30-36-50	546 18-22-31	2376 32-39-53	624 19-24-33	2873 34-41-57	702 22-25-35
1A 1B	CFM/SIDE THROW, FT.	1125 20-25-35		1500 23-29-40		1875 26-32-45		2250 28-35-49		2625 31-38-52		3000 33-40-57		3375 35-43-60		
21 x 18 2.625 SQ. FT.	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	785 14		1050 21		1310 27		1575 32		1840 36		2100 40		2360 43	
	4B	CFM/SIDE THROW, FT.	225 11-13-18	169 9-11-15	300 13-15-22	225 10-12-17	375 15-17-24	280 11-14-19	450 16-18-27	337 12-15-22	526 17-19-28	394 13-16-22	600 18-22-30	450 14-17-24	674 19-22-32	506 15-18-25
	3A1	CFM/SIDE THROW, FT.	309 14-17-24	169 9-11-15	412 16-19-28	225 10-12-17	514 18-22-32	281 11-14-19	619 19-23-34	337 12-15-22	723 22-25-36	394 13-16-22	825 22-26-39	450 14-17-24	927 24-29-41	506 15-18-25
	3A2	CFM/SIDE THROW, FT.	279 14-17-24	230 10-12-17	372 16-19-28	306 11-14-19	464 18-22-32	382 12-16-22	557 19-23-34	460 13-17-23	652 22-25-36	535 14-18-25	744 22-26-39	612 15-19-26	836 24-29-41	688 16-22-29
	2A 2B	CFM/SIDE THROW, FT.	393 15-18-25		525 17-22-30		655 19-24-31		787 22-26-36		920 22-28-39		1050 24-30-42		1180 25-32-44	
	2C 2E	CFM/SIDE THROW, FT.	450 15-18-25	338 13-16-22	600 17-22-30	450 15-18-25	750 19-24-31	560 17-20-29	900 22-26-36	675 18-22-32	1060 22-28-39	790 19-23-34	1200 24-30-42	900 22-25-36	1350 25-32-44	1010 22-28-38
1A 1B	CFM/SIDE THROW, FT.	787 18-22-32		1050 22-25-36		1310 24-29-41		1575 26-32-44		1840 28-34-47		2100 30-36-50		2360 32-38-53		
24 x 18 3.0 SQ. FT.	RETURN FACTORS —SP=2.5 TP NC + 6	CFM NC	900 15		1200 22		1500 28		1800 33		2100 37		2400 40		2700 43	
	4B	CFM/SIDE THROW, FT.	281 14-17-24	169 9-11-15	375 16-19-28	225 10-12-17	469 18-22-32	281 11-14-19	563 19-23-34	337 12-15-22	656 22-25-36	394 13-16-22	750 22-26-39	450 14-17-24	844 24-29-41	506 15-18-25
	4E	CFM/SIDE THROW, FT.	225 13-16-22	225 13-16-22	300 15-18-25	300 15-18-25	375 17-20-29	375 17-20-29	450 18-22-32	450 18-22-32	525 19-23-34	525 19-23-34	600 22-25-36	600 22-25-36	675 22-28-38	675 22-28-38
	3A1	CFM/SIDE THROW, FT.	366 15-18-25	169 9-11-15	487 17-22-30	225 10-12-17	609 19-24-34	281 11-14-19	731 22-26-36	337 12-15-22	853 22-28-39	394 13-16-22	975 24-30-42	450 14-17-24	1098 25-32-44	506 15-18-25
	3A2	CFM/SIDE THROW, FT.	300 14-17-24	300 11-13-18	400 16-19-28	400 13-15-22	500 18-22-32	500 15-17-24	600 19-23-34	600 16-18-26	700 22-25-36	700 17-19-28	800 22-26-39	800 18-22-30	900 24-29-41	900 19-22-32
	2A 2B	CFM/SIDE THROW, FT.	450 15-18-25		600 17-22-30		750 19-24-34		900 22-26-36		1050 22-28-39		1200 24-30-42		1350 25-32-44	
2C 2E	CFM/SIDE THROW, FT.	562 16-19-28	338 13-16-22	750 18-22-32	450 15-18-25	938 20-25-36	562 17-20-29	1125 22-28-39	675 18-22-32	1313 23-30-42	787 19-23-34	1500 25-32-44	900 22-25-36	1688 28-34-47	1012 22-28-38	
1A 1B	CFM/SIDE THROW, FT.	900 19-24-33		1200 22-28-38		1500 25-32-43		1800 28-34-46		2100 30-36-50		2400 32-39-53		2700 34-41-57		

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260	
			CFM NC	A B	A B	A B	A B	A B	A B	A B	A B	A B				
30 x 18 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 7	CFM NC	1125 15		1500 23		1875 29		2250 34		2625 38		3000 42		3375 45	
	4B 4C	CFM/SIDE THROW, FT.	394 169	15-18-25 9-11-15	525 225	17-22-30 10-12-17	657 281	19-24-34 11-14-19	788 337	22-26-36 12-15-22	918 394	22-28-39 13-16-22	1050 450	24-30-42 14-17-24	1181 506	25-32-44 15-18-25
	4E	CFM/SIDE THROW, FT.	281 281	14-17-24 14-17-24	375 375	16-19-28 16-19-28	469 469	18-22-32 18-22-32	563 563	19-23-34 19-23-34	657 657	22-25-36 22-25-36	750 750	22-26-39 22-26-39	845 845	24-29-41 24-29-41
	3A1	CFM/SIDE THROW, FT.	478 169	16-19-28 9-11-15	637 225	18-22-32 10-12-17	797 281	20-25-36 11-14-19	956 337	22-28-39 12-15-22	1115 394	23-30-42 13-16-22	1275 450	25-32-44 14-17-24	1434 506	28-34-47 15-18-25
	3A2	CFM/SIDE THROW, FT.	469 327	14-17-24 12-15-20	625 437	16-19-28 14-17-23	782 546	18-22-32 16-19-26	937 656	19-23-34 17-22-29	1093 766	22-25-36 18-22-31	1250 875	22-26-39 19-24-33	1406 984	24-29-41 22-25-35
	2A 2B	CFM/SIDE THROW, FT.	562	16-19-28	750	18-22-32	937	20-25-36	1125	22-28-39	1312	23-30-42	1500	25-32-44	1687	28-34-47
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	787 337	18-22-32 13-16-22	1050 450	22-25-36 15-18-25	1313 562	24-29-41 17-20-29	1575 675	26-32-44 18-22-32	1838 787	28-34-47 19-23-34	2100 900	30-36-50 22-25-36	2363 1012	32-38-53 22-28-38
	1A 1B	CFM/SIDE THROW, FT.	1125	20-25-35	1500	23-29-39	1875	26-33-45	2250	29-35-49	2625	31-38-52	3000	33-40-57	3375	35-43-60
36 x 18 SQ. FT.	RETURN FACTORS —SP=3.6 TP NC + 8	CFM NC	1350 16		1800 24		2250 30		2700 35		3150 39		3600 42		4050 45	
	4B 4C	CFM/SIDE THROW, FT.	506 169	16-19-28 9-11-15	675 225	18-22-32 10-12-17	844 281	22-25-36 11-14-19	1013 337	22-28-39 12-15-22	1181 394	23-30-42 13-16-22	1350 450	25-32-44 14-17-24	1519 506	28-34-47 15-18-25
	4E	CFM/SIDE THROW, FT.	339 339	14-17-24 14-17-24	452 452	16-19-28 16-19-28	565 565	18-22-32 18-22-32	678 678	19-23-34 19-23-34	791 791	22-25-36 22-25-36	904 904	22-26-39 22-26-39	1020 1020	24-29-41 24-29-41
	3A1	CFM/SIDE THROW, FT.	591 169	17-22-30 9-11-15	787 225	20-24-34 10-12-17	984 281	23-28-39 11-14-19	1181 337	24-30-41 12-15-22	1378 394	26-32-44 13-16-22	1575 450	29-35-47 14-17-24	1772 506	31-37-50 15-18-25
	3B	CFM/SIDE THROW, FT.	675 337	13-16-22 13-16-22	900 450	15-18-25 15-18-25	1125 562	17-20-29 17-20-29	1350 675	18-22-32 18-22-32	1575 787	19-23-34 19-23-34	1800 900	22-25-36 22-25-36	2025 1012	22-28-38 22-28-38
	2A 2B	CFM/SIDE THROW, FT.	675	17-22-30	900	20-24-34	1125	23-28-39	1350	24-30-41	1575	26-32-44	1800	29-35-47	2025	31-37-50
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	1010 337	20-25-35 13-16-22	1350 450	23-29-40 15-18-25	1688 562	26-33-45 17-20-29	2025 675	29-35-49 18-22-32	2363 787	31-38-52 19-23-34	2700 900	33-40-57 22-25-36	3038 1012	35-43-60 22-28-38
	1A 1B	CFM/SIDE THROW, FT.	1350	22-25-37	1800	24-30-42	2250	28-34-48	2700	30-36-51	3150	32-39-56	3600	34-42-58	4050	37-44-63
24 x 21 SQ. FT.	RETURN FACTORS —SP=2.1 TP NC + 7	CFM NC	1050 15		1400 22		1750 28		2100 33		2450 37		2800 41		3150 44	
	4B 4C	CFM/SIDE THROW, FT.	295 230	12-15-20 10-12-17	394 306	14-17-23 11-14-19	493 382	16-19-26 12-16-22	590 460	17-22-29 13-17-23	690 535	18-22-31 14-18-25	788 612	19-24-33 15-19-26	887 688	22-25-35 16-22-29
	3A1	CFM/SIDE THROW, FT.	410 230	15-18-25 10-12-17	547 306	17-22-30 11-14-19	684 382	19-24-34 12-16-22	820 460	22-26-36 13-17-23	957 535	22-28-39 14-18-25	1094 612	24-30-42 15-19-26	1231 688	25-32-44 16-22-29
	3A2	CFM/SIDE THROW, FT.	375 300	15-18-25 11-13-18	500 400	17-22-30 13-15-22	625 500	19-24-34 15-17-24	750 600	22-26-36 16-18-26	875 700	22-28-39 17-19-28	1000 800	24-30-42 18-22-30	1125 900	25-32-44 19-22-32
	2A 2B	CFM/SIDE THROW, FT.	525	16-19-28	700	18-22-32	875	20-25-36	1050	22-28-39	1225	23-30-42	1400	25-32-44	1575	28-34-47
	2C 2D 2E 2F	CFM/SIDE THROW, FT.	591 459	17-22-30 14-17-24	788 612	20-24-34 16-19-28	986 764	23-28-39 18-22-32	1180 920	24-30-41 19-23-34	1380 1070	26-32-44 22-25-36	1576 1224	29-35-47 22-26-39	1774 1376	31-37-50 24-29-41
	1A 1B	CFM/SIDE THROW, FT.	1050	20-25-35	1400	23-29-40	1750	26-33-45	2100	29-35-49	2450	31-38-52	2800	33-40-51	3150	35-43-60

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: A x .82 = B.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300 .006 .029		400 .010 .051		500 .016 .080		600 .022 .116		700 .031 .157		800 .040 .205		900 .050 .260	
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A
30 x 21 4.375 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1310 16		1750 23		2185 29		2625 34		3060 38		3500 41		3935 44	
	4B 4C	CFM/SIDE THROW, FT.	425 230	15-18-25 10-12-17	569 306	17-22-30 11-14-19	710 382	19-24-34 12-16-22	852 460	22-26-36 13-17-23	995 535	22-28-39 14-18-25	1138 612	24-30-42 15-19-26	1279 688	25-32-44 16-22-29
	4E	CFM/SIDE THROW, FT.	360 295	14-17-24 14-17-24	480 394	16-19-28 16-19-28	600 492	18-22-32 18-22-32	720 591	19-23-34 19-23-34	840 690	22-25-36 22-25-36	960 788	22-26-39 22-26-39	1080 887	24-29-41 24-29-41
	3A1	CFM/SIDE THROW, FT.	540 230	16-19-28 10-12-17	722 306	18-22-32 11-14-19	901 382	20-25-36 12-16-22	1082 460	22-28-39 13-17-23	1262 535	23-30-42 14-18-25	1444 612	25-32-44 15-19-26	1623 688	28-34-47 16-22-29
	3A2	CFM/SIDE THROW, FT.	468 422	15-18-25 12-15-20	625 562	17-22-30 14-17-23	782 701	19-24-34 16-19-26	937 844	22-26-36 17-22-29	1093 983	22-28-39 18-22-31	1250 1125	24-30-42 19-24-33	1406 1264	25-32-44 22-25-36
	2A 2B	CFM/SIDE THROW, FT.	655	17-22-30	875	20-24-34	1092	23-28-39	1312	24-30-41	1530	26-32-44	1750	29-35-47	1968	31-37-50
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	853 457	18-22-32 14-17-24	1138 612	22-25-36 16-19-28	1421 764	24-29-41 18-22-32	1705 920	26-32-44 19-23-34	1990 1070	28-34-47 22-25-36	2276 1224	30-36-50 22-26-39	2559 1376	32-38-53 24-29-41
1A 1B	CFM/SIDE THROW, FT.	1310	22-25-37	1750	24-30-42	2185	28-34-48	2625	30-36-51	3060	32-39-56	3500	34-42-58	3935	37-44-63	
36 x 21 5.25 SQ. FT.	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	1575 16		2100 24		2625 30		3150 34		3675 38		4200 42		4725 45	
	4B 4C	CFM/SIDE THROW, FT.	558 230	16-19-28 10-12-17	744 306	18-22-32 11-14-19	930 382	20-25-36 12-16-22	1115 460	22-28-39 13-17-23	1306 535	23-30-42 14-18-25	1488 612	25-32-44 15-19-26	1674 688	28-34-47 16-22-29
	4E	CFM/SIDE THROW, FT.	427 360	15-18-25 15-18-25	568 480	17-22-30 17-22-30	710 600	19-24-34 19-24-34	852 720	22-26-36 22-26-36	945 840	22-28-39 22-28-39	1135 960	24-30-42 24-30-42	1280 1080	25-32-44 25-32-44
	3A1	CFM/SIDE THROW, FT.	672 230	17-22-30 10-12-17	897 306	20-24-34 11-14-19	1121 382	23-28-39 12-16-22	1345 460	24-30-41 13-17-23	1570 535	26-32-44 14-18-25	1794 612	29-35-47 15-19-26	2018 688	31-37-50 16-22-29
	3A2	CFM/SIDE THROW, FT.	675 450	15-18-25 13-16-22	900 600	17-22-30 15-18-25	1125 750	19-24-34 17-20-29	1350 900	22-26-36 18-22-32	1575 1050	22-28-39 19-23-34	1800 1200	24-30-42 22-25-36	2025 1350	25-32-44 22-28-38
	2A 2B	CFM/SIDE THROW, FT.	787	18-22-32	1050	22-25-36	1312	24-29-41	1575	26-32-44	1837	28-34-47	2100	30-36-50	2362	32-38-53
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	1115 460	20-25-35 14-17-24	1488 612	23-29-40 16-19-28	1861 764	26-33-45 18-22-32	2230 920	29-35-49 19-23-34	2605 1070	31-38-52 22-25-36	2976 1224	33-40-57 22-26-39	3349 1376	35-43-60 24-29-41
1A 1B	CFM/SIDE THROW, FT.	1575	24-30-41	2100	23-34-47	2625	32-39-53	3150	34-41-58	3675	36-44-62	4200	39-47-67	4725	41-50-72	
30 x 24 5.0 SQ. FT.	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1500 17		2000 25		2500 30		3000 35		3500 39		4000 43		4500 46	
	4B 4C	CFM/SIDE THROW, FT.	450 300	15-18-25 11-13-18	600 400	17-22-30 13-15-22	750 500	19-24-34 15-17-24	900 600	22-26-36 16-18-26	1050 700	22-28-39 17-19-28	1200 800	24-30-42 18-22-30	1350 900	25-32-44 19-22-32
	4E	CFM/SIDE THROW, FT.	375 375	15-18-25 15-18-25	500 500	17-22-30 17-22-30	625 625	19-24-34 19-24-34	750 750	22-26-36 22-26-36	875 875	22-28-39 22-28-39	1000 1000	24-30-42 24-30-42	1125 1125	25-32-44 25-32-44
	3A1	CFM/SIDE THROW, FT.	600 300	17-22-30 11-13-18	800 400	20-24-34 13-15-22	1000 500	23-28-39 15-17-24	1200 600	24-30-41 16-18-26	1400 700	26-32-44 17-19-28	1600 800	29-35-47 18-22-30	1800 900	31-37-50 19-22-32
	3A2	CFM/SIDE THROW, FT.	515 470	18-22-32 15-18-25	687 625	22-25-36 17-22-30	859 782	24-29-41 19-24-34	1031 937	26-32-44 22-26-36	1203 1093	28-34-47 22-28-39	1375 1250	30-36-50 24-30-42	1548 1406	32-38-53 25-32-44
	2A 2B	CFM/SIDE THROW, FT.	750	19-24-33	1000	22-28-38	1250	25-32-43	1500	28-34-46	1750	30-36-50	2000	32-39-53	2250	34-41-57
	2C 2E 2D 2F	CFM/SIDE THROW, FT.	900 600	22-25-37	1200 800	24-30-42	1500 1000	28-34-48	1800 1200	30-36-51	2100 1400	32-39-56	2400 1600	34-42-58	2700 1800	37-44-63
1A 1B	CFM/SIDE THROW, FT.	1500	35-43-61	2000	41-49-69	2500	44-55-77	3000	49-59-86	3500	53-65-90	4000	56-69-96	4500	60-72-103	

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

For performance notes, see page D63.

PERFORMANCE DATA:

MODEL 6400 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300		400		500		600		700		800		900	
			.006 .029		.010 .051		.016 .080		.022 .116		.031 .157		.040 .205		.050 .260	
36 x 24 6.0 SQ. FT.	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	1800 18		2400 25		3000 31		3600 36		4200 40		4800 43		5400 46	
	4B 4C	CFM/SIDE THROW, FT.	600 17-22-30	300 11-13-18	800 20-24-34	400 13-15-22	1000 23-28-39	500 15-17-24	1200 24-30-41	600 16-18-26	1400 26-32-44	700 17-19-28	1600 29-35-47	800 18-22-30	1800 31-37-50	900 19-22-32
	4E	CFM/SIDE THROW, FT.	450 15-18-25	450 15-18-25	600 17-22-30	600 17-22-30	750 19-24-34	750 19-24-34	900 22-26-36	900 22-26-36	1050 22-28-39	1050 22-28-39	1200 24-30-42	1200 24-30-42	1350 25-32-41	1350 25-32-44
	3A1	CFM/SIDE THROW, FT.	750 18-22-32	300 11-13-18	1000 22-25-36	400 13-15-22	1250 24-29-41	500 15-17-24	1500 26-32-44	600 16-18-26	1750 28-34-47	700 17-19-28	2000 30-36-50	800 18-22-30	2250 32-38-53	900 19-22-32
	3A2	CFM/SIDE THROW, FT.	676 16-19-28	562 14-17-24	900 18-22-32	750 16-19-28	1125 20-25-36	937 18-22-32	1350 22-28-39	1125 19-23-34	1575 23-30-42	1312 22-25-36	1800 25-32-44	1500 22-26-39	2025 28-34-47	1687 24-29-41
	2A	CFM/SIDE THROW, FT.	900 19-24-33		1200 22-28-38		1500 25-32-43		1800 28-34-46		2100 30-36-50		2400 32-39-53		2700 34-41-57	
	2C 2D	CFM/SIDE THROW, FT.	1200 22-25-37	600 15-18-25	1600 24-30-42	800 17-22-30	2000 28-34-48	1000 19-24-34	2400 30-36-51	1200 22-26-36	2800 32-39-56	1400 22-28-39	3200 34-42-58	1600 24-30-42	3600 37-44-63	1800 25-32-44
	2E	CFM/SIDE THROW, FT.														
	1A	CFM/SIDE THROW, FT.	1800 24-30-41		2400 28-34-47		3000 32-39-53		3600 34-41-58		4200 36-44-62		4800 39-47-67		5400 41-50-72	
	1B	CFM/SIDE THROW, FT.														
36 x 30 7.5 SQ. FT.	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	2250 19		3000 26		3750 32		4500 37		5250 41		6000 44		6750 47	
	4B 4C	CFM/SIDE THROW, FT.	657 17-22-30	468 12-15-20	875 20-24-34	625 14-17-23	1093 23-28-39	782 16-19-26	1313 24-30-41	937 17-22-29	1532 26-32-44	1093 18-22-31	1750 29-35-47	1250 19-24-33	1969 31-37-50	1406 22-25-35
	3A1	CFM/SIDE THROW, FT.	890 19-24-33	468 12-15-20	1187 22-28-38	625 14-17-23	1484 25-32-43	782 16-19-26	1781 28-34-46	937 17-22-29	2078 30-36-50	1093 18-22-31	2375 32-39-53	1250 19-24-33	2672 34-41-57	1406 22-25-35
	3A2	CFM/SIDE THROW, FT.	787 18-22-32	675 13-16-22	1050 22-25-36	900 15-18-25	1312 24-29-41	1125 17-20-29	1575 26-32-44	1350 18-22-32	1837 28-34-47	1575 19-23-34	2100 30-36-50	1800 22-25-36	2362 32-38-53	2025 22-28-38
	2A	CFM/SIDE THROW, FT.	1125 20-25-35		1500 23-29-40		1875 26-33-45		2250 29-35-49		2625 31-38-52		3000 33-40-57		3375 35-43-60	
	2C 2D	CFM/SIDE THROW, FT.	1312 22-25-37	938 17-22-30	1750 24-30-42	1250 20-24-34	2188 28-34-48	1562 23-28-39	2625 30-36-51	1875 24-30-41	3063 32-39-56	2187 26-32-44	3500 34-42-58	2500 29-35-47	3938 37-44-63	2812 31-37-50
	2E	CFM/SIDE THROW, FT.														
	1A	CFM/SIDE THROW, FT.	2250 24-30-41		3000 28-34-47		3750 32-39-53		4500 34-41-58		5250 36-44-62		6000 39-47-67		6750 41-50-72	
	1B	CFM/SIDE THROW, FT.														

Notes:

1. Core style 4E is sized to give equal flow as near as possible in directions A and B.
2. For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

CFM - cubic feet per minute
VP - velocity pressure - inches w.g.
TP - total pressure - inches w.g.
T - throw in feet
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.
Neck Velocity - feet per minute

Performance Notes:

1. Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions. Data applies to ceiling mounted units when the maximum coanda effect applies. When no ceiling is present (exposed duct), throws are reduced by approximately 30% with a downward projection of approximately 30 degrees.
2. Performance data as tabulated is for supply air conditions. Correction factors for return air application - see next page.
3. Correction factors for round inlets - see next page.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA CORRECTIONS:

MODEL 6400

CORRECTION FACTORS WITH SQUARE TO ROUND INLET ADAPTOR – TABLE 2

- Add the NC correction factor from Table 2 and the NC value listed in the performance tables.
- Multiply the correction factor from Table 2 by the listed total pressure in the performance tables.
- Multiply the correction factor from Table 2 by the listed throws in the performance tables.

Example:

12" x 12" unit with 10" round adaptor handling 500 cfm supply air. (Page D50).

- $NC = 23 + 7 = 30$
- Total Pressure = $.08 \times 1.65 = 0.132$
- Throw = $15 \times 1.15 = 17.25$ feet @ 50 fpm terminal velocity.

TABLE 2 Correction Factors for SR Adaptors

SQUARE INLET	ROUND INLET	NC (add)	TP (multiply)	THROW (multiply)		
				150	100	50
6 x 6	5	7	1.65	1.10	1.10	1.15
9 x 9	6	17	3.50	1.15	1.15	1.20
9 x 9	8	4	1.40	1.10	1.10	1.10
12 x 12	8	17	3.50	1.15	1.15	1.20
12 x 12	10	7	1.65	1.10	1.10	1.15
15 x 15	10	17	3.50	1.15	1.15	1.20
15 x 15	12	9	1.90	1.10	1.10	1.15
15 x 15	14	3	1.25	1.05	1.05	1.10
18 x 18	12	17	3.50	1.15	1.15	1.20
18 x 18	14	10	2.00	1.10	1.10	1.15
18 x 18	16	5	1.45	1.10	1.10	1.10
21 x 21	14	17	3.70	1.15	1.15	1.20
21 x 21	16	11	2.25	1.10	1.10	1.15
21 x 21	18	6	1.60	1.10	1.10	1.10
21 x 21	20	3	1.20	1.05	1.05	1.10
24 x 24	16	17	3.50	1.15	1.15	1.20
24 x 24	18	12	2.35	1.10	1.10	1.15
24 x 24	20	7	1.65	1.10	1.10	1.15

CORRECTION FACTORS FOR RETURN INLET

If the unit is used as a return inlet, the performance data is obtained by applying the return corrections, as follows:

- Add the NC correction at the left side of the table to the NC value listed in the performance table.
- Multiply the SP factor at the left side of the table by the total pressure (TP) listed at the top of the table.

Example:

12" x 12" unit handling 600 cfm of return air. (Page D50).

- Return NC = $28 + 4 = 32$.
- Return negative SP = $1.3 \times (-.116) = -.151$.

RECOMMENDED MAXIMUM AIRFLOW – TABLE 3

Diffuser mounting height and air temperature differential (ΔT) are both to be considered when selecting diffusers. As air travels from a diffuser, room air is entrained into the supply air stream and the delivery pattern thickens.

If the volume or throw requirement is too great, the lower part of the supply air stream can intrude into the occupied zone causing objectionable drafts. Consult Table 3 to verify selection.

TABLE 3 Maximum Recommended Airflow

CEILING HEIGHT (ft.)	MAX. AIRFLOW PER DIFFUSER (CFM)				MAX. REC. COOLING TEMP. DIFFERENTIAL ΔT
	4-way	3-way	2-way (2A, 2B)	1-way & 2S	
7	400	300	200	100	15°F
8	600	450	300	150	20°F
9	1200	900	600	300	25°F
10	1800	1350	900	450	25°F
12	3200	2400	1600	800	30°F
14	4800	3600	2400	1200	30°F
16	6000	4500	3000	1500	30°F

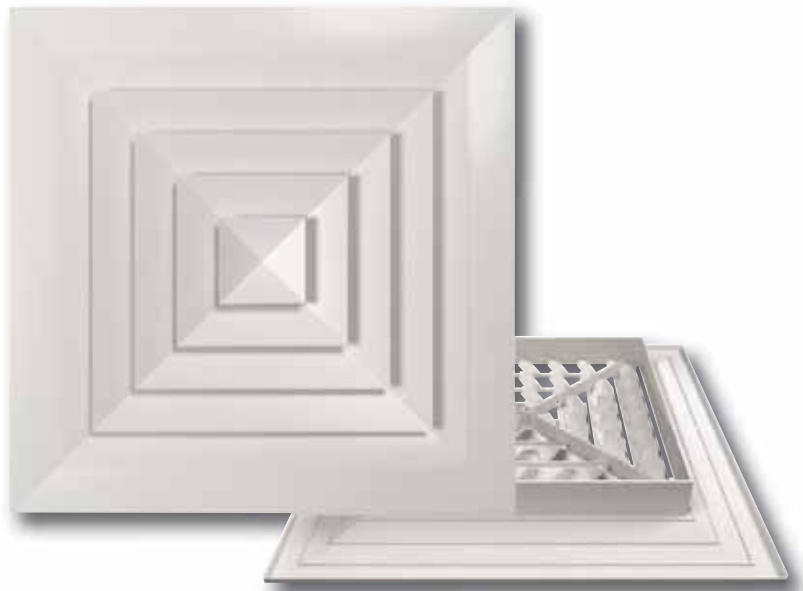
SQUARE AND RECTANGULAR INDUCTION VANE CEILING DIFFUSERS

- INDUCTION VANES
- LOUVERED FACE
- EXTRA HIGH CAPACITY
- 1, 2, 3 OR 4-WAY BLOW PATTERN
- SQUARE, RECTANGULAR OR ROUND NECKS
- EXTRUDED ALUMINUM

Extruded Aluminum Model:

6400IV Fixed Pattern

- Suffix '-O' adds a steel opposed blade damper
- Suffix '-OA' adds an aluminum opposed blade damper



Model 6400IV – face and rear

Model Series 6400IV Induction Vane Pattern Ceiling Diffuser has been specially designed for optimum performance in both heating and cooling applications. The 6400IV is a high capacity, high induction, louvered face directional diffuser that can supply large volumes of air at relatively low sound levels and pressure drops.

The diffuser features aerodynamically designed straight angled louvers on 1 1/2" (38) centers. The induction vanes, mounted on the back of each louver are also spaced on 1 1/2" (38) centers and angled at 45 degrees. Vane sets on adjacent parallel louvers run in opposite directions and cause primary air to emerge from each louver at alternating angles. The induction vanes create counter-flowing jets of turbulent discharge air that promote high induction rates and rapid temperature equalization. This high induction characteristic is ideal for VAV applications involving both high cooling and heating loads, producing superior room air mixing while minimizing the potential for uncomfortable drafts in the occupied space.

Available in a wide variety of core styles and neck sizes, a combination can be selected to suit a specified air pattern and deliver the desired volume of air to suit any particular requirement. Many frame types are also available to suit almost any mounting condition including surface mount (flat, beveled or deep drop face) and T-Bar panel types (Standard 1" (25), Fineline®, Spline, Tegular or Metal Pan Snap-in). These models therefore offer a great degree of design flexibility.

STANDARD FEATURES:

- Spring loaded core. It is removable without the use of tools.
- High neck collars for solid connection.
- Secure core attachment.
- A wide variety of frame styles to suit most ceiling applications.
- Extended panels to suit modular ceiling systems. PLS (steel) or PLA (aluminum).
- Engineered air diffusion patterns for 1, 2, 3 or 4-way blow in a wide selection of square and rectangular neck sizes (see page D68).
- Clean lines with no unsightly visible screws.
- Opposed blade damper with screwdriver slot operator for square and rectangular necks.

CONSTRUCTION MATERIAL:

Extruded aluminum.

AVAILABLE SIZES:

Unit size is determined by duct dimensions. Diffuser necks are undersized to suit ductwork.

Duct Sizes are available in 3" (76) increments.

Minimum size:

6" x 6" (152 x 152) square neck. 9" x 6" (229 x 152) rectangular neck (most core styles).

Maximum size:

Types S, B and D: 36" x 36" (914 x 914) or 36" x 24" (914 x 610) with OBD.

Types L, SP, TL, M and F: see next page.

FINISH OPTIONS:

AW Appliance White finish is standard. Other finishes are available.

OPTIONS & ACCESSORIES:

- EX External Foil-Back Insulation (installed) – R-4.2.
- MIB Molded Insulation Blanket R-6.0.
- SR Square-to-round transition adaptors are available (SR04 - SR24 option [4" - 24" diameter]). See page D257.

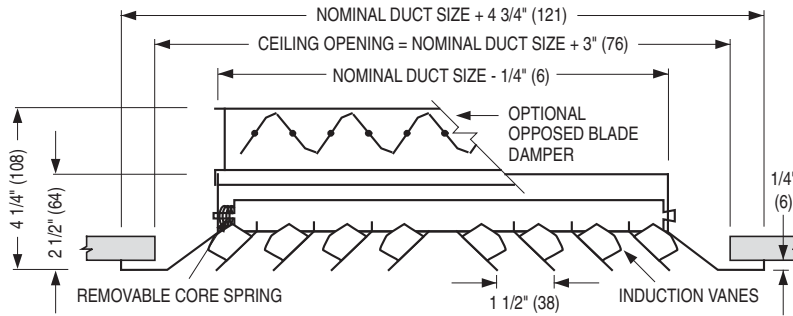
EQT Earthquake Tabs

For additional options and accessories; see page D255.

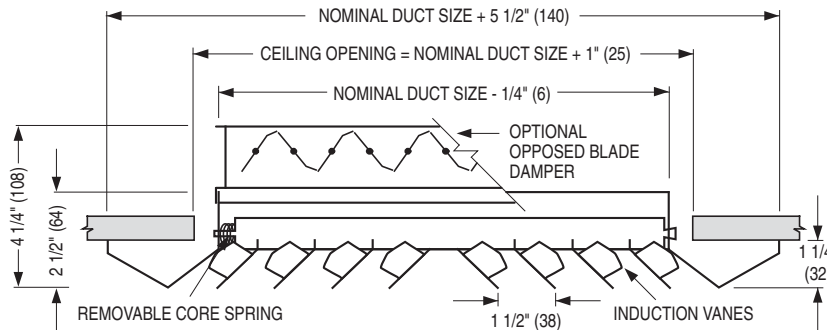
DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6400

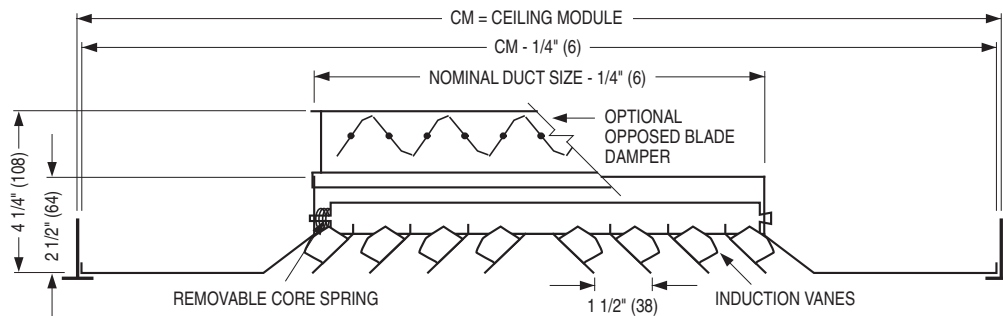
Type S
Surface Mount
Frame



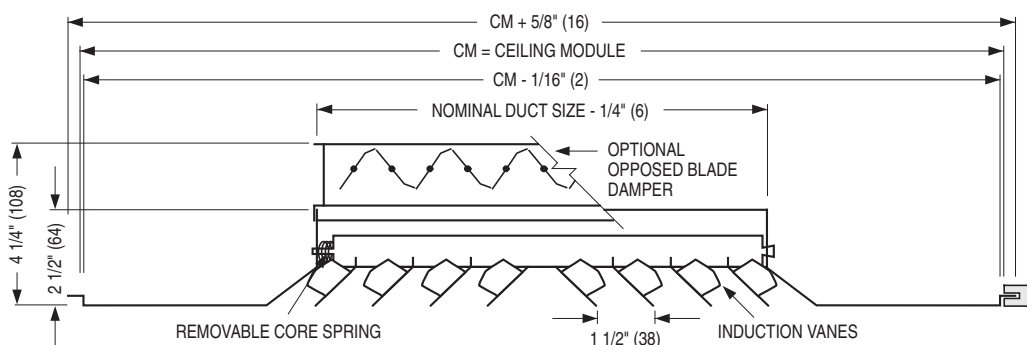
Type B
Beveled Drop
Face Frame



Type L
Lay-In
T-Bar Frame



Type SP
Spline Frame



SPLINE TYPE DIFFUSER FOR ONE-DIRECTIONAL EXPOSED T-BAR LAY-IN GRID OR FOR CONCEALED T-BAR GRID. (SPLINES ON TWO OPPOSITE SIDES. STEEL LIFT BRACKETS ON THE OTHER TWO SIDES).

Extended Panel Diffusers Frame Types L, SP, TL, M and F

If the ceiling module is more than 3" (76) larger than the neck size of the diffuser in either or both dimensions, a steel module-sized extended panel will be added. Aluminum is available as an option.

See the table at right for the maximum duct size for each module size.

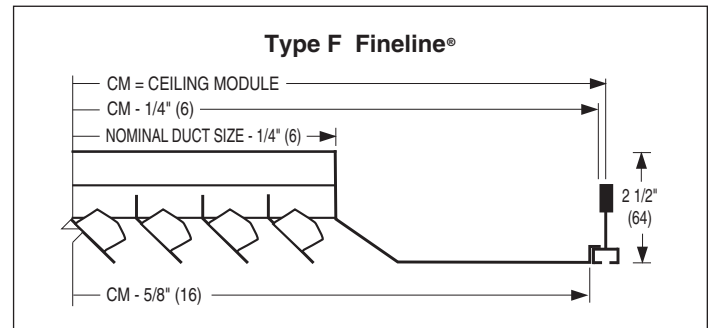
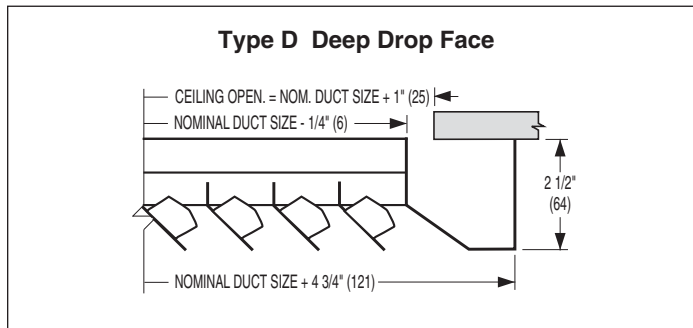
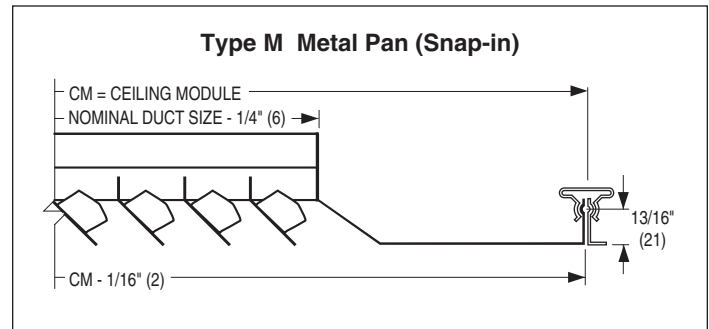
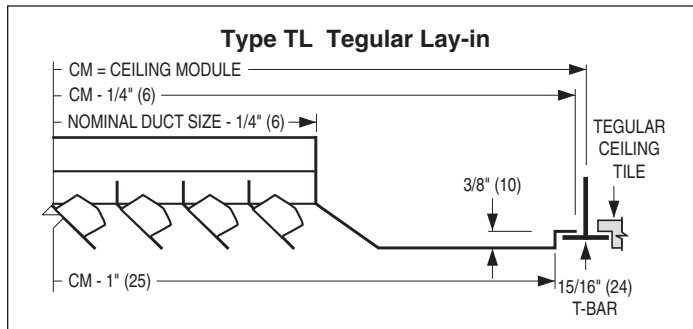
Table 1

Ceiling Module Size	Maximum Duct Size Frames L, SP and M	Maximum Duct Size Frames TL and F
12 x 12 (305 x 305)	9 x 9 (229 x 229)	6 x 6 (152 x 152)
20 x 20 (508 x 508)	15 x 15 (381 x 381)	—
24 x 12 (610 x 305)	21 x 9 (533 x 229)	18 x 6 (457 x 152)
24 x 24 (610 x 610)	21 x 21 (533 x 533)	18 x 18 (457 x 457)
48 x 24 (1219 x 610)	45 x 21 (1143 x 533)	—

D
CEILING DIFFUSERS

DIMENSIONAL DATA AND FRAME TYPES:

MODEL SERIES 6400IV

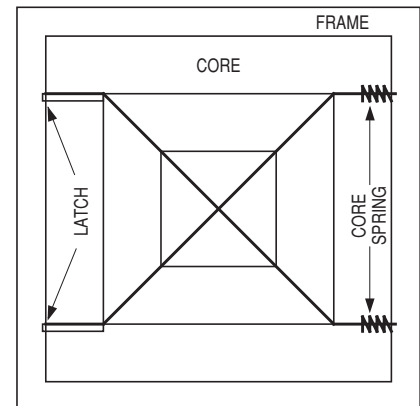


SPRING LOADED REMOVABLE CORE

- Standard feature of **Model 6400IV**.
- Engineered design permits fast and easy removal for speedy "through the neck" installation in hard duct drops and for access to optional air balancing devices.
- No tools required.
- No unsightly, retaining screws visible to spoil smooth aesthetic lines.
- Latching mechanism ensures core remains securely in place.

HOW TO REMOVE CORE

To remove diffuser core, lift the complete core assembly to disengage the latch, push the core sideways against the core springs, pull down the core slightly and remove. Reverse procedure to re-install.















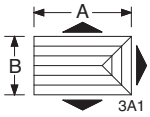
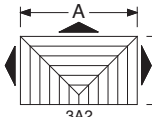



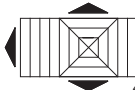


STANDARD CORE STYLES:

MODEL 6400IV

Contact factory for special core configurations.

SIZES AVAILABLE

	SQUARE	RECTANGULAR	CORE	MINIMUM	MAXIMUM	
 Type 1S	 1S	 1A	 1B	1S	6 x 6 (152 x 152)	36 x 36 (914 x 914)
				1A	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				1B	9 x 6 (229 x 152)	36 x 33 (914 x 838)
 Type 2S	 2S	 2A	 2B	2S	6 x 6 (152 x 152)	36 x 36 (914 x 914)
				2A	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				2B	9 x 6 (229 x 152)	36 x 33 (914 x 838)
 Type 2G	 2G	 2C	 2D	2G	6 x 6 (152 x 152)	36 x 36 (914 x 914)
				2C	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				2D	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				2E	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				2F	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				2F	9 x 6 (229 x 152)	36 x 33 (914 x 838)
 Type 3A	 3A	 3A1 (A is greater than B)	 3A2 (B is less than A but greater than A/2)	3A	6 x 6 (152 x 152)	36 x 36 (914 x 914)
				3A1	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				3A2	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				3B	12 x 6 (305 x 152)	36 x 18 (914 x 457)
				3C	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				3E	15 x 6 (381 x 152)	36 x 15 (914 x 381)
 Type 4A	 4A	 4B	 4C	4A	6 x 6 (152 x 152)	36 x 36 (914 x 914)
				4B	9 x 6 (229 x 152)	36 x 33 (914 x 838)
				4C	12 x 6 (305 x 152)	36 x 30 (914 x 762)
				4E	15 x 6 (381 x 152)	36 x 27 (914 x 686)
				4E	15 x 6 (381 x 152)	36 x 27 (914 x 686)
				4E	15 x 6 (381 x 152)	36 x 27 (914 x 686)

Dimensions are in inches (mm).

Notes:

1. Duct sizes are available in 3" (76) increments.
2. Specify the "x" dimension for 3C and 4E patterns.
These are non-standard, custom fabrication core styles.
3. Patterns are shown in plan view (looking down into inlet).

D
CEILING DIFFUSERS

ADPI – AIR DIFFUSION PERFORMANCE INDEX ANALYSIS

ROOM TEMPERATURE/VELOCITY TRAVERSE

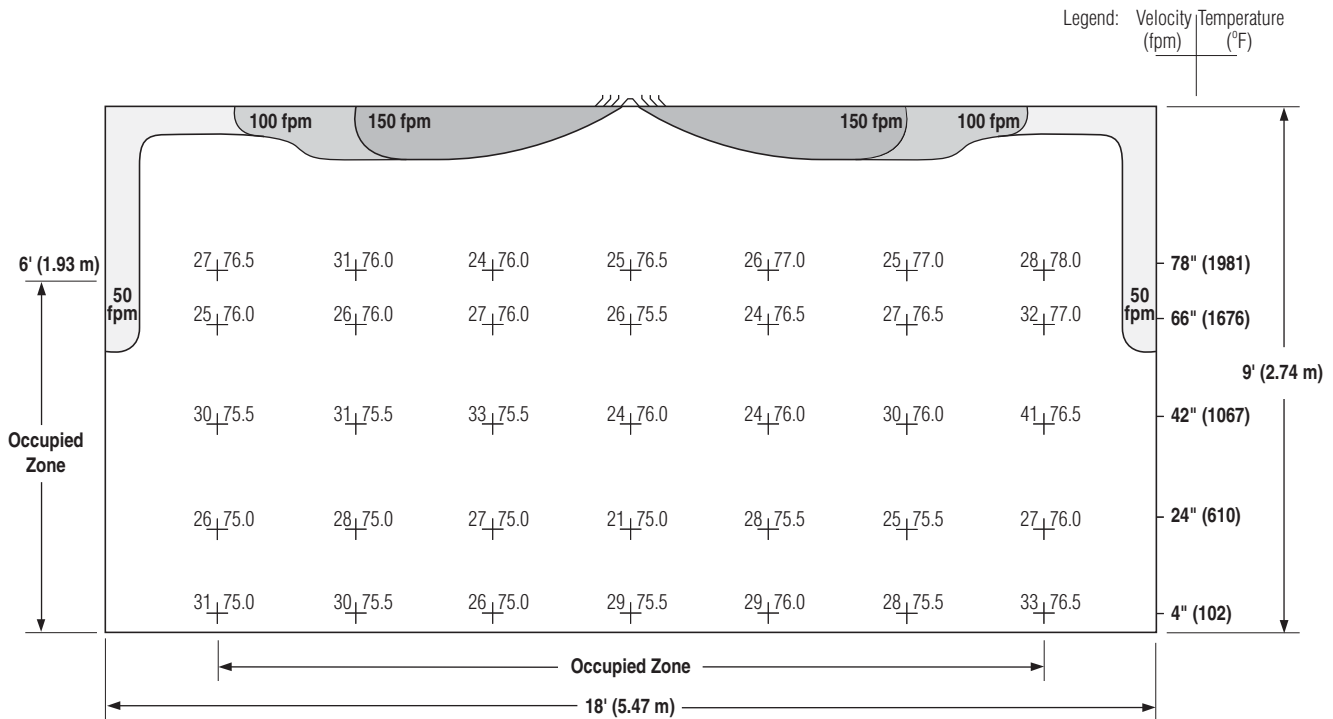


Figure 1. ADPI Analysis.

Air Diffusion Performance Index (ADPI) is a single number rating of air diffuser performance when in cooling mode. ADPI relates the space conditions of local traverse temperatures and velocities to occupants' thermal comfort.

Extensive studies have determined relationships between local temperatures, velocities and comfort reaction. On the basis of the temperature and velocity at a specific point, an effective draft temperature can be calculated for that location.

Equation for Effective Draft Temperature:

$$\varnothing = (t_x - t_c) - 0.07 (V_x - 30)$$

where: \varnothing = effective draft temperature

t_x = local air temperature (°F).

t_c = ambient temperature (setpoint, °F).

V_x = local air velocity (fpm).

Research has shown that a high percentage of people are comfortable when the effective draft temperature is between -3 and +2 at a velocity less than 70 fpm. ADPI is defined as the percentage of locations in the occupied space, which meet this comfort criteria and therefore represents the overall comfort level of an occupied space. The higher the ADPI number, the higher the comfort level in the space. For most commercial applications including offices, ADPI values of 80 or higher are desired.

ADPI values vary as the ratio of the throw (T) to the characteristic length (L) vary, for a particular diffuser and flow rate. Throw values (T) at 50 fpm terminal velocity are used for diffusers in most commercial and institutional buildings. Length (L) is measured from the center of the diffuser to the closest wall, or to the meeting point with the throw of another diffuser.

Ranges of T/L to yield desired values of the ADPI for various types of supply air outlet are provided in the Space Air Diffusion Chapter in the ASHRAE Fundamentals Handbook. Using louvered ceiling diffusers, for an ADPI greater than 80, the suggested range of T_{50}/L is 1.0 – 3.4.

These T/L guideline values were developed from testing a particular air outlets' ADPI at several cooling room loads via the method reported in ANSI/ASHRAE Standard 113 1990, "Method of Testing for Room Air Diffusion." The ADPI T/L technique uses isothermal throw data as cataloged and determined under ANSI/ASHRAE Standard 70 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

Figure 1 is an example in a single plane of a temperature and velocity traverse to determine the ADPI for a space, based upon the method prescribed in ANSI/ASHRAE Standard 113.

Notes on Figure 1.

Test Room Size: 18' x 24' x 9'

Diffuser: 6400IV, 12" x 12" neck, 4-way pattern.

Supply Air: 400 cfm @ 56°F

Setpoint: 76°F ($\Delta T = 20^\circ F$)

Cooling Load: 20.1 Btuh/sq.ft.

Throw: 13 ft. (@50 fpm terminal velocity)

$T_{50}/L = 1.45$

ADPI = 100

APPLICATION AND AIR PATTERN GUIDELINES

The use of overhead ceiling diffusers is currently far and away the most popular and economical way to introduce conditioned air into an occupied space. Commercial buildings require cooling a predominant amount of the time and overhead cooling is a well understood science. Most ceiling diffusers perform extremely well, even in variable volume applications during the cooling mode.

Ceiling diffusers take advantage of a phenomenon known as the coanda or ceiling effect. A low pressure zone is developed at the ceiling and the air projection tends to stick to or hug the ceiling as its travels away from the diffuser. This characteristic of non-free air jets usually enables the ventilation of conditioned spaces without undesirable cold air drafts dropping into the occupied zone during the cooling mode. High levels of occupant comfort and satisfaction can therefore be achieved.

Conversely, overhead heating which may be required intermittently, particularly in the perimeter of a building is usually more of a compromise. The natural buoyancy of warm heating air tends to keep the air pattern up at or near the ceiling. If the air is too warm, stratification and short circuiting may result, where the air does not have an opportunity to mix well with the room air and the warmth therefore does not reach the occupied space. ASHRAE recommends a maximum temperature differential of 15°F ΔT for comfort heating.

Figure 2 illustrates a traditional pattern diffuser (e.g. Nailor Model 6400) with angled louvers, developed for high capacity at low sound levels. A distinct directional (4-way) air pattern is produced with a partial downblow component, but at low flows as typically encountered in VAV systems, the air may fall away from the

ceiling or dump, producing drafts in the occupied space during cooling. Air emanates from this diffuser design at an angle of approximately 20 degrees down from the ceiling. It is therefore not recommended for ceiling heights below 10' 6" due to the possibility of excessive velocities in the occupied space. Figure 3 illustrates the currently popular pattern diffuser, which features the addition of a horizontal lip on the leading edge of the louvers (e.g. Nailor Models 6200 and 6500). This feature was added by most manufacturers to help maintain good ceiling effect at low flows during cooling when VAV systems became predominant. However this design increases the risk of stratification and short circuiting during the heating mode.

The Nailor 6400IV Induction Vane Diffuser has been designed to optimize performance in both heating and cooling applications. Figure 4 illustrates a typical isovel envelope for the Nailor 6400IV diffuser. The depth of the envelope is somewhere between the aforementioned diffuser designs. Induction vanes increase turbulence as the conditioned air enters the space, resulting in an increase in room air induction and more rapid temperature equalization. Notice that the induction vanes also produce an increase in the spread of the air stream. This produces a more evenly distributed air pattern with shorter throws. Diffuser placement flexibility is therefore increased and the potential for opposing diffuser air streams colliding and entering the occupied space is reduced.

The Nailor 6400IV diffuser is therefore the perfect choice for commercial applications where comfort cooling and heating is desired.

D
CEILING DIFFUSERS

6400IV Diffuser Air Pattern Smoke Test

The photo in Figure 5 illustrates how the induction vanes on a 4-way blow pattern generate turbulence and increase room air induction at the point of discharge. Rapid mixing of primary and room air and temperature equalization is achieved; resulting in gentle, draftless air movement in the occupied space, ensuring a high degree of occupant comfort.

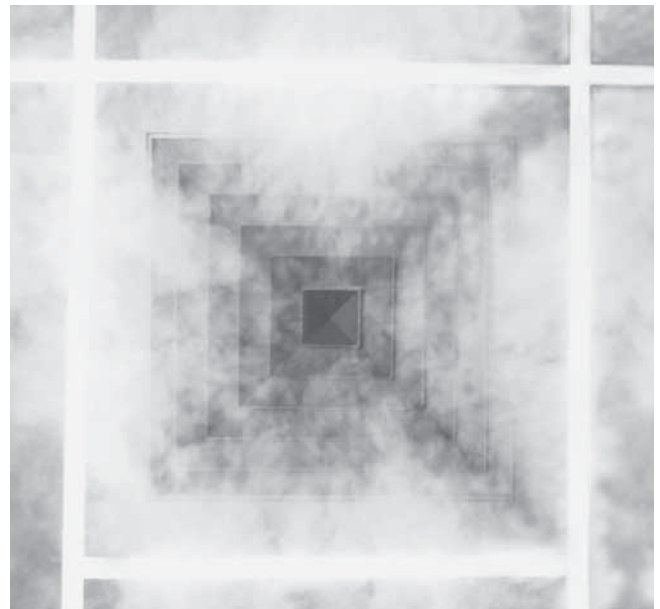


Figure 5. Laboratory Smoke Test.
6400IV Induction Vane Diffuser, 4-way Blow Pattern.

Figure 2.
Traditional Pattern Diffuser.

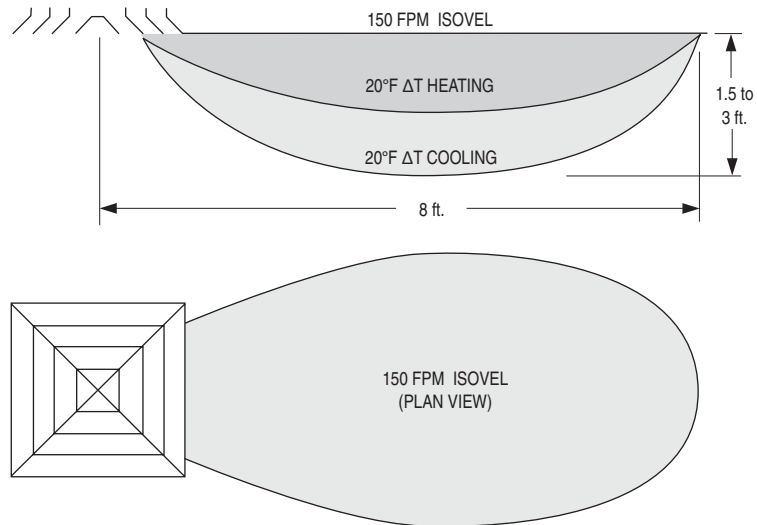


Figure 3.
Pattern Diffuser with Horizontal Lip on Louvers.

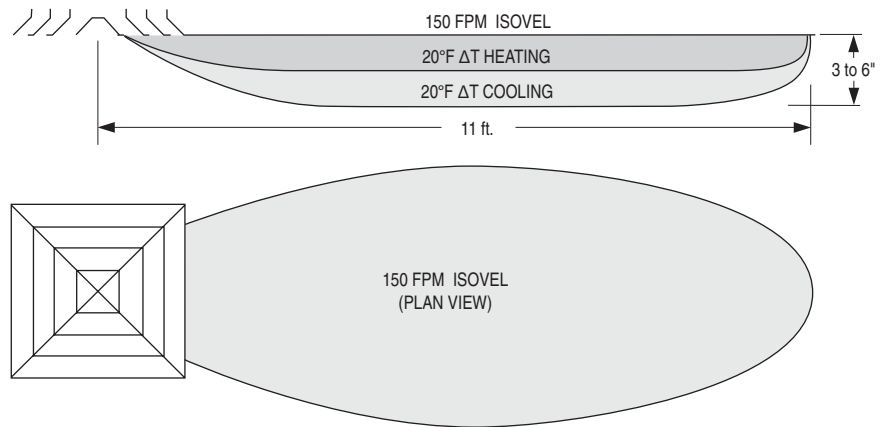
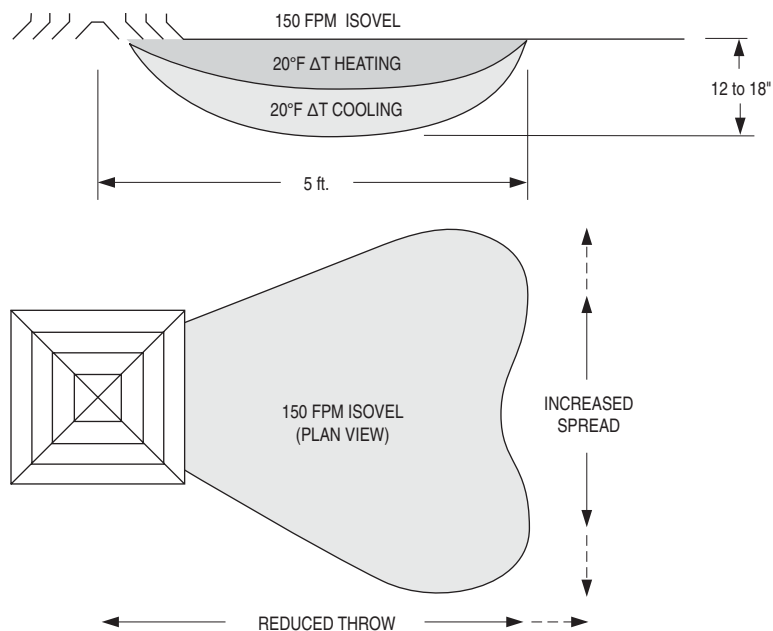


Figure 4.
6400IV Series
Induction Vane Diffuser



Note:

These illustrations are provided for guidance purposes in order to illustrate the relative difference between pattern ceiling diffusers with and without induction vanes. The 150 fpm throw isovel for a 12" x 12" neck @ 400 cfm is illustrated. A 4-way diffuser is shown, but the airstream projection is only shown in one direction for reasons of space and is the same for the other three sides.

PERFORMANCE DATA:

MODEL 6400IV • SQUARE NECK

Core Style 4A • 4-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.012	.026	.046	.072	.103	.140
6 x 6	Airflow, CFM	25	50	75	100	125	150	175
	Throw	1-2-2	2-2-4	2-3-5	3-5-7	3-6-8	4-6-10	4-7-12
	Noise Criteria	—	—	—	—	15	21	26
9 x 9	Airflow, CFM	56	113	169	225	281	338	394
	Throw	2-2-3	2-3-5	3-5-7	4-5-9	4-6-11	5-8-13	6-9-16
	Noise Criteria	—	—	—	—	18	24	29
12 x 12	Airflow, CFM	100	200	300	400	500	600	700
	Throw	2-2-4	3-4-7	4-5-10	5-7-13	6-8-16	7-10-19	8-11-22
	Noise Criteria	—	—	—	13	20	27	32
15 x 15	Airflow, CFM	156	313	469	625	781	938	1094
	Throw	2-3-5	3-5-8	4-6-12	6-8-15	7-10-19	8-12-23	9-14-26
	Noise Criteria	—	—	—	15	22	29	34
18 x 18	Airflow, CFM	225	450	675	900	1125	1350	1575
	Throw	3-3-6	4-6-10	6-8-15	7-10-19	9-12-24	10-15-28	12-17-33
	Noise Criteria	—	—	—	16	23	30	35
21 x 21	Airflow, CFM	306	613	919	1225	1531	1838	2144
	Throw	3-4-6	4-6-11	6-9-17	8-11-22	10-14-27	11-17-32	13-19-37
	Noise Criteria	—	—	—	18	25	31	36
24 x 24	Airflow, CFM	400	800	1200	1600	2000	2400	2800
	Throw	3-4-7	5-7-12	7-10-18	9-12-24	10-15-29	12-18-35	14-21-41
	Noise Criteria	—	—	12	19	26	32	37

Performance Notes:

1. All pressures are in inches w.g..

2. Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions. Data applies to ceiling mounted units when the maximum coanda effect applies. When no ceiling is present (exposed duct), throws are reduced by approximately 25%.

3. Tests conducted on diffuser only without damper using ideal straight rigid inlet condition. Other inlet conditions may affect performance.

Correction factors for addition of a neck mounted opposed blade damper (fully open):

Total Pressure: Multiply catalog value by x 1.20.

Noise Criteria: Add + 4 to catalog value.

4. Correction factor for round inlets, see next page.

5. Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts. Dash (—) in space indicates an Noise Criteria of less than 10.

6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA:

MODEL 6400IV • SQUARE NECK

Core Style 3A • 3-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.012	.026	.046	.072	.103	.140
6 x 6	Airflow, CFM	25	50	75	100	125	150	175
	Throw, Side A	1-1-2 (6)	2-2-4 (13)	2-3-5 (19)	3-4-7 (25)	3-5-8 (31)	4-5-10 (37)	4-6-11 (44)
	Throw, Side B	2-2-3 (9)	2-3-5 (19)	3-4-6 (28)	3-5-8 (38)	4-5-10 (47)	5-6-12 (56)	5-7-14 (66)
	Noise Criteria	—	—	—	—	15	21	26
9 x 9	Airflow, CFM	56	113	169	225	281	338	394
	Throw, Side A	2-2-3 (14)	2-3-5 (28)	3-4-7 (42)	4-5-9 (56)	4-6-11(70)	5-7-13 (84)	6-8-15 (99)
	Throw, Side B	2-2-4 (21)	3-4-7 (43)	4-5-9 (64)	5-7-12 (84)	6-8-15 (105)	7-9-18 (127)	8-11-21 (148)
	Noise Criteria	—	—	—	—	18	24	29
12 x 12	Airflow, CFM	100	200	300	400	500	600	700
	Throw, Side A	2-2-4 (25)	3-4-7 (50)	4-5-10 (75)	5-7-13 (100)	6-8-16 (125)	7-10-19 (150)	8-11-22 (175)
	Throw, Side B	2-3-5 (38)	3-5-8 (75)	5-6-12 (113)	6-8-16 (150)	7-10-19 (188)	8-12-23 (225)	10-14-27 (263)
	Noise Criteria	—	—	—	13	20	27	32
15 x 15	Airflow, CFM	156	313	469	625	781	938	1094
	Throw, Side A	2-3-5 (39)	3-5-8 (78)	4-6-12 (117)	6-8-15 (156)	7-10-19 (195)	8-12-23 (235)	9-14-26 (273)
	Throw, Side B	3-3-6 (59)	4-6-10 (117)	6-8-15 (176)	7-10-20 (234)	9-13-24 (293)	10-15-29 (352)	12-17-34 (410)
	Noise Criteria	—	—	—	15	22	29	34
18 x 18	Airflow, CFM	225	450	675	900	1125	1350	1575
	Throw, Side A	3-3-6 (56)	4-6-10 (113)	6-8-15 (169)	7-10-19 (225)	9-12-24 (281)	10-15-28 (338)	12-17-33 (394)
	Throw, Side B	3-4-6 (84)	5-6-12 (169)	6-9-17 (253)	8-12-22 (338)	10-14-28 (422)	12-17-33 (506)	13-20-38 (591)
	Noise Criteria	—	—	—	16	23	30	35

Core Style 2S • 2-way opposite blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.014	.031	.056	.087	.126	.171
6 x 6	Airflow, CFM	25	50	75	100	125	150	175
	Throw	2-2-3	2-3-5	3-4-7	4-5-10	5-6-12	5-7-14	6-9-16
	Noise Criteria	—	—	—	—	17	23	28
9 x 9	Airflow, CFM	56	113	169	225	281	338	394
	Throw	2-3-4	3-4-7	4-6-11	5-7-14	6-9-17	7-11-20	8-12-23
	Noise Criteria	—	—	—	13	20	27	32
12 x 12	Airflow, CFM	100	200	300	400	500	600	700
	Throw	2-3-5	4-5-9	5-7-13	6-9-16	7-11-20	9-13-24	10-14-28
	Noise Criteria	—	—	—	15	22	29	34
15 x 15	Airflow, CFM	156	313	469	625	781	938	1094
	Throw	3-3-6	4-6-10	6-8-15	7-10-20	9-13-24	10-15-29	12-17-33
	Noise Criteria	—	—	—	17	24	31	36
18 x 18	Airflow, CFM	225	450	675	900	1125	1350	1575
	Throw	3-4-6	4-6-11	6-9-17	8-11-22	10-14-27	11-17-32	13-19-37
	Noise Criteria	—	—	—	18	25	32	37
21 x 21	Airflow, CFM	306	613	919	1225	1531	1838	2144
	Throw	3-4-7	5-7-13	7-10-18	9-13-24	11-15-30	13-18-36	15-21-42
	Noise Criteria	—	—	13	20	27	33	38
24 x 24	Airflow, CFM	400	800	1200	1600	2000	2400	2800
	Throw	3-4-7	5-7-13	7-10-20	9-13-26	11-16-32	13-20-38	15-23-44
	Noise Criteria	—	—	14	21	28	34	39

For performance notes, see page D79.

PERFORMANCE DATA:

MODEL 6400IV • SQUARE NECK

Core Style 2G • 2-way corner blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.014	.031	.056	.087	.126	.171
6 x 6	Airflow, CFM	25	50	75	100	125	150	175
	Throw	2-2-3	2-3-5	3-5-7	4-5-10	5-6-12	5-7-14	4-9-16
	Noise Criteria	—	—	—	—	17	23	28
9 x 9	Airflow, CFM	56	113	169	225	281	338	394
	Throw	2-3-4	3-4-7	4-6-11	5-7-14	6-9-17	7-11-20	8-12-23
	Noise Criteria	—	—	—	13	20	27	32
12 x 12	Airflow, CFM	100	200	300	400	500	600	700
	Throw	2-3-5	4-5-9	5-7-13	6-9-16	7-11-20	9-13-24	10-14-28
	Noise Criteria	—	—	—	15	22	29	34
15 x 15	Airflow, CFM	156	313	469	625	781	938	1094
	Throw	3-3-6	4-6-10	6-8-15	7-10-20	9-13-24	10-15-29	12-17-33
	Noise Criteria	—	—	—	17	24	31	36
18 x 18	Airflow, CFM	225	450	675	900	1125	1350	1575
	Throw	3-4-6	4-6-11	6-9-17	8-11-22	10-14-27	11-17-32	13-19-37
	Noise Criteria	—	—	—	18	25	32	37

Core Style 1S • 1-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.014	.031	.056	.087	.126	.171
6 x 6	Airflow, CFM	25	50	75	100	125	150	175
	Throw	2-3-4	3-4-7	4-6-10	5-7-13	6-9-18	7-10-20	5-12-23
	Noise Criteria	—	—	—	—	17	23	28
9 x 9	Airflow, CFM	56	113	169	225	281	338	394
	Throw	2-3-5	4-5-9	5-7-13	6-9-17	8-11-21	9-13-25	10-15-29
	Noise Criteria	—	—	—	13	20	27	32
12 x 12	Airflow, CFM	100	200	300	400	500	600	700
	Throw	2-3-5	4-5-10	5-8-13	7-10-19	8-12-23	10-14-28	11-17-32
	Noise Criteria	—	—	—	15	22	29	34
15 x 15	Airflow, CFM	156	313	469	625	781	938	1094
	Throw	3-3-6	4-6-11	6-8-16	8-11-21	9-13-26	11-16-31	13-18-36
	Noise Criteria	—	—	—	17	24	31	36
18 x 18	Airflow, CFM	225	450	675	900	1125	1350	1575
	Throw	3-4-6	5-6-12	6-9-17	8-12-23	10-15-28	12-17-33	14-20-39
	Noise Criteria	—	—	—	18	25	32	37
21 x 21	Airflow, CFM	306	613	919	1225	1531	1838	2144
	Throw	3-4-7	5-7-13	7-10-19	9-13-25	11-16-31	13-19-38	15-22-44
	Noise Criteria	—	—	13	20	27	33	38
24 x 24	Airflow, CFM	400	800	1200	1600	2000	2400	2800
	Throw	3-4-7	5-7-14	7-11-20	10-14-27	12-17-33	14-20-40	16-24-46
	Noise Criteria	—	—	14	21	28	34	39

For performance notes, see page D79.

PERFORMANCE DATA:

MODEL 6400IV • RECTANGULAR NECK

Core Style 4B • 4-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.01	.016	.022	.031
	Total Pressure	.003	.012	.026	.046	.072	.103	.140
9 x 6	Airflow, CFM	38	75	113	150	188	225	263
	Throw, Side A	2-2-3 (13)	2-3-5 (25)	3-4-7 (38)	4-5-10 (50)	5-6-12 (63)	5-7-14 (75)	6-9-16 (88)
	Throw, Side B	1-2-2 (6)	2-2-4 (12)	2-3-5 (18)	3-4-7 (25)	3-5-8 (31)	4-8-10 (37)	4-6-11 (43)
	Noise Criteria	—	—	—	11	22	26	29
12 x 6	Airflow, CFM	50	100	150	200	250	300	350
	Throw, Side A	2-3-4 (19)	2-4-7 (37)	4-5-10 (56)	5-7-12 (75)	6-8-15 (94)	7-10-18 (113)	8-11-21 (131)
	Throw, Side B	1-2-2 (6)	2-2-4 (13)	2-3-5 (18)	3-4-7 (25)	3-5-8 (31)	4-5-10 (37)	4-6-11 (44)
	Noise Criteria	—	—	—	12	19	25	30
12 x 9	Airflow, CFM	75	150	225	300	375	450	525
	Throw, Side A	2-3-4 (24)	3-4-7 (47)	4-6-11 (70)	5-7-14 (94)	6-9-17 (117)	7-11-20 (141)	8-12-23 (164)
	Throw, Side B	2-2-3 (14)	2-3-5 (28)	3-4-7 (42)	4-5-9 (56)	4-6-11 (70)	5-7-13 (84)	6-8-15 (98)
	Noise Criteria	—	—	—	13	20	27	32
15 x 9	Airflow, CFM	94	188	281	375	469	563	656
	Throw, Side A	2-3-4 (33)	3-4-8 (65)	4-6-11 (98)	6-8-15 (131)	7-10-18 (165)	8-11-20 (198)	9-13-25 (230)
	Throw, Side B	2-2-3 (14)	2-3-5 (28)	3-4-7 (48)	4-5-9 (56)	4-6-11 (70)	5-7-13 (84)	6-8-15 (98)
	Noise Criteria	—	—	—	14	21	28	32
18 x 9	Airflow, CFM	113	225	338	450	563	675	788
	Throw, Side A	2-3-5 (42)	3-5-8 (85)	5-7-12 (126)	6-8-16 (169)	7-10-19 (211)	8-12-23 (254)	10-14-27 (296)
	Throw, Side B	2-2-3 (14)	2-3-5 (28)	3-4-7 (42)	4-5-9 (56)	4-6-11 (70)	5-7-13 (84)	6-8-15 (98)
	Noise Criteria	—	—	—	15	22	29	33
21 x 9	Airflow, CFM	131	263	394	525	656	788	919
	Throw, Side A	2-3-4 (51)	4-5-9 (103)	5-7-13 (154)	6-9-17 (206)	8-11-21 (258)	9-13-25 (309)	10-15-29 (360)
	Throw, Side B	2-2-3 (14)	2-3-5 (28)	3-4-7 (42)	4-5-9 (56)	4-6-11 (70)	5-7-13 (84)	6-8-15 (98)
	Noise Criteria	—	—	—	16	23	30	34
15 x 12	Airflow, CFM	125	250	375	500	625	750	875
	Throw, Side A	2-3-5 (38)	4-5-9 (75)	5-7-12 (112)	6-9-16 (150)	7-11-20 (187)	9-12-24 (225)	10-14-28 (262)
	Throw, Side B	2-2-4 (25)	3-4-7 (50)	4-5-10 (75)	5-7-13 (100)	6-8-16 (125)	7-10-19 (150)	8-11-22 (175)
	Noise Criteria	—	—	—	15	22	29	34
18 x 12	Airflow, CFM	5-29-0	10-26-0	3-25-1	8-22-1	1-19-2	6-18-2	11-15-2
	Throw, Side A	2-3-5 (50)	4-5-9 (100)	5-7-13 (150)	6-9-17 (200)	8-11-21 (250)	9-13-25 (300)	10-15-28 (351)
	Throw, Side B	2-2-4 (25)	3-4-7 (50)	3-5-10 (74)	5-7-13 (99)	6-8-16 (124)	7-10-19 (149)	8-11-22 (173)
	Noise Criteria	—	—	—	16	23	30	35
21 x 12	Airflow, CFM	175	350	525	700	875	1050	1225
	Throw, Side A	2-3-5 (53)	4-5-9 (125)	5-7-13 (187)	7-9-18 (250)	8-11-22 (312)	9-13-26 (375)	11-15-30 (437)
	Throw, Side B	2-2-4 (35)	3-4-7 (50)	4-5-10 (75)	5-7-13 (100)	6-8-16 (125)	7-10-19 (150)	8-11-22 (175)
	Noise Criteria	—	16	—	16	23	31	36
24 x 12	Airflow, CFM	200	400	600	800	1000	1200	1400
	Throw, Side A	3-3-6 (75)	4-6-10 (150)	6-8-15 (225)	7-10-19 (300)	9-12-24 (375)	10-15-28 (450)	12-17-33 (525)
	Throw, Side B	2-2-4 (25)	3-4-7 (50)	4-5-10 (75)	5-7-13 (100)	6-8-16 (125)	7-10-19 (150)	8-11-22 (175)
	Noise Criteria	—	17	—	17	24	31	36
18 x 15	Airflow, CFM	186	375	563	750	938	1125	1313
	Throw, Side A	2-3-5 (54)	4-5-9 (110)	5-7-12 (164)	6-9-16 (219)	7-10-19 (273)	9-12-24 (328)	10-14-28 (383)
	Throw, Side B	2-3-5 (39)	3-5-8 (78)	5-6-12 (117)	6-8-15 (156)	7-11-20 (195)	8-12-22 (234)	9-14-26 (273)
	Noise Criteria	—	16	—	17	24	31	37
21 x 18	Airflow, CFM	263	525	785	1050	1310	1575	1840
	Throw, Side A	3-3-6 (76)	4-6-10 (200)	6-8-15 (225)	7-10-19 (300)	9-12-24 (375)	10-15-28 (450)	12-17-33 (526)
	Throw, Side B	3-3-6 (56)	4-6-10 (112)	6-8-15 (169)	7-10-19 (225)	9-12-24 (280)	10-15-28 (337)	12-17-33 (394)
	Noise Criteria	—	18	13	19	26	33	38
24 x 18	Airflow, CFM	300	600	900	1200	1500	1800	2100
	Throw, Side A	3-4-6 (94)	4-6-11 (187)	6-9-16 (281)	8-11-21 (375)	9-14-26 (469)	11-16-32 (563)	13-19-37 (656)
	Throw, Side B	3-3-6 (56)	4-6-10 (112)	6-8-15 (169)	7-10-19 (225)	9-10-24 (280)	10-15-28 (337)	12-17-33 (394)
	Noise Criteria	—	—	14	20	27	34	39

For performance notes, see page D79.

PERFORMANCE DATA:

MODEL 6400IV • RECTANGULAR NECK

Core Style 3B • 3-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.012	.026	.046	.072	.103	.140
12 x 6	Airflow, CFM	50	100	150	200	250	300	350
	Throw, Side A	2-2-4 (25)	3-4-7 (50)	4-5-10 (75)	5-7-13 (100)	6-8-16 (125)	7-10-19 (150)	8-12-22 (175)
	Throw, Side B	2-2-3 (13)	2-3-5 (25)	3-4-7 (38)	4-5-10 (50)	5-6-12 (63)	5-7-14 (75)	6-8-15 (88)
	Noise Criteria	—	—	—	12	19	27	30
18 x 9	Airflow, CFM	113	225	338	450	563	675	788
	Throw, Side A	3-3-6 (57)	3-6-10 (113)	6-8-15 (169)	7-10-19 (225)	9-12-24 (282)	10-15-28 (338)	12-17-33 (394)
	Throw, Side B	2-3-4 (28)	3-4-7 (56)	4-6-11 (84)	5-7-14 (113)	6-9-17 (141)	7-11-20 (169)	8-12-23 (199)
	Noise Criteria	—	—	—	15	22	29	23
24 x 12	Airflow, CFM	200	400	600	800	1000	1200	1400
	Throw, Side A	3-4-6 (100)	4-6-11 (200)	6-9-17 (300)	8-11-22 (400)	10-14-27 (500)	11-17-32 (600)	13-19-37 (700)
	Throw, Side B	2-3-5 (50)	4-5-9 (100)	5-7-13 (150)	6-9-16 (200)	7-11-20 (250)	9-13-24 (300)	10-14-28 (350)
	Noise Criteria	—	—	—	17	24	31	36

Core Style 3A2 • 3-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.012	.026	.046	.072	.103	.140
9 x 6	Airflow, CFM	38	75	113	150	188	225	263
	Throw, Side A	2-2-3 (15)	2-3-5 (28)	3-4-7 (42)	4-5-10 (56)	5-6-12 (70)	5-7-14 (84)	6-9-16 (98)
	Throw, Side B	2-2-3 (12)	2-3-5 (23)	3-4-7 (35)	4-5-9 (47)	4-6-11 (58)	5-7-13 (70)	6-8-15 (82)
	Noise Criteria	—	—	—	11	22	26	29
12 x 9	Airflow, CFM	75	150	225	300	375	450	525
	Throw, Side A	2-3-4 (25)	3-4-6 (50)	4-5-10 (75)	5-7-13 (100)	6-9-16 (125)	7-10-19 (150)	8-12-23 (175)
	Throw, Side B	2-2-4 (25)	3-4-7 (50)	4-6-10 (75)	5-7-13 (100)	6-8-16 (125)	7-10-20 (150)	8-11-22 (175)
	Noise Criteria	—	—	—	13	20	27	32
15 x 9	Airflow, CFM	94	188	281	375	469	563	656
	Throw, Side A	2-3-5 (39)	3-5-8 (78)	5-6-12 (117)	6-8-15 (156)	7-10-19 (196)	8-12-22 (235)	9-14-26 (274)
	Throw, Side B	2-3-4 (27)	3-4-7 (55)	4-6-11 (82)	5-7-14 (109)	6-9-17 (137)	7-11-20 (164)	8-12-23 (191)
	Noise Criteria	—	—	—	14	21	28	32
15 x 12	Airflow, CFM	125	250	375	500	625	750	875
	Throw, Side A	2-3-5 (39)	3-5-8 (78)	5-6-12 (117)	6-8-15 (156)	7-10-19 (195)	8-12-23 (234)	9-14-26 (273)
	Throw, Side B	2-3-5 (43)	3-5-8 (86)	5-6-12 (129)	6-8-15 (172)	7-10-19 (215)	8-12-23 (258)	9-14-26 (301)
	Noise Criteria	—	—	—	15	22	29	34
18 x 15	Airflow, CFM	188	375	563	750	938	1125	1313
	Throw, Side A	3-3-6 (56)	4-6-10 (113)	6-8-15 (168)	7-10-19 (225)	9-12-24 (281)	10-15-28 (338)	12-17-33 (394)
	Throw, Side B	4-4-7 (66)	5-7-12 (131)	7-9-17 (197)	8-11-21 (262)	10-13-26 (328)	11-16-30 (394)	13-18-35 (459)
	Noise Criteria	—	—	—	17	24	31	37

Performance Notes:

- All pressures are in inches w.g..
- Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions. Data applies to ceiling mounted units when the maximum coanda effect applies. When no ceiling is present (exposed duct), throws are reduced by approximately 25%.
- Tests conducted on diffuser only without damper using ideal straight rigid inlet condition. Other inlet conditions may affect performance. Correction factors for addition of a neck mounted opposed blade damper (fully open):
Total Pressure: Multiply catalog value by x 1.20.
Noise Criteria: Add + 4 to catalog value.
- Correction factor for round inlets, see next page.
- Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts. Dash (—) in space indicates an Noise Criteria of less than 10.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA:

MODEL 6400IV • RECTANGULAR NECK

Core Style 3E • 3-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.012	.026	.046	.072	.103	.140
15 x 6	Airflow, CFM	63	125	188	250	313	375	438
	Throw, Side A	2-3-5 (38)	4-5-9 (75)	5-7-12 (113)	6-9-16 (150)	7-11-20 (188)	9-12-24 (225)	10-14-28 (263)
	Throw, Side B	2-2-3 (13)	2-3-5 (25)	3-4-7 (38)	4-5-10 (50)	5-6-12 (63)	5-7-14 (75)	6-9-16 (88)
	Noise Criteria	—	—	—	12	19	26	31
21 x 9	Airflow, CFM	131	263	394	525	656	788	919
	Throw, Side A	2-3-5 (75)	4-5-9 (150)	5-7-13 (225)	6-9-17 (300)	8-11-21 (375)	9-13-25 (450)	10-15-29 (525)
	Throw, Side B	2-3-4 (28)	3-4-7 (56)	4-6-11 (84)	5-7-14 (113)	6-9-17 (141)	7-11-20 (169)	8-12-23 (197)
	Noise Criteria	—	—	—	16	23	30	34
24 x 9	Airflow, CFM	150	300	450	600	750	900	1050
	Throw, Side A	2-3-5 (94)	4-5-10 (188)	5-8-14 (281)	7-10-19 (375)	8-12-23 (469)	10-14-28 (563)	11-17-32 (656)
	Throw, Side B	2-3-4 (28)	3-4-7 (56)	4-6-11 (84)	5-7-14 (113)	6-9-17 (141)	7-11-20 (169)	8-12-23 (197)
	Noise Criteria	—	—	—	17	24	31	36

Core Style 3A1 • 3-way blow pattern



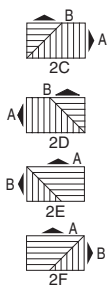
Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.012	.026	.046	.072	.103	.140
9 x 6	Airflow, CFM	38	75	113	150	188	225	263
	Throw, Side A	2-2-3 (16)	3-3-6 (31)	3-5-8 (47)	4-6-10 (62)	5-7-13 (78)	6-8-15 (93)	7-9-18 (109)
	Throw, Side B	1-2-2 (6)	2-2-4 (12)	2-3-5 (19)	3-4-7 (25)	3-5-8 (31)	4-5-10 (37)	4-6-11 (44)
	Noise Criteria	—	—	—	11	22	26	29
12 x 6	Airflow, CFM	50	100	150	200	250	300	350
	Throw, Side A	2-2-4 (22)	3-4-6 (44)	4-5-9 (66)	5-6-12 (88)	6-8-15 (109)	6-9-17 (131)	7-11-20 (153)
	Throw, Side B	1-2-2 (6)	2-2-4 (13)	2-3-5 (19)	3-4-7 (25)	3-5-8 (32)	4-5-10 (38)	4-6-11 (44)
	Noise Criteria	—	—	—	12	19	26	30
12 x 9	Airflow, CFM	75	150	225	300	375	450	525
	Throw, Side A	2-3-4 (30)	3-4-7 (61)	4-6-11 (91)	5-7-14 (122)	6-9-17 (152)	7-11-20 (183)	8-12-23 (213)
	Throw, Side B	2-2-3 (14)	2-3-5 (28)	3-4-7 (42)	4-5-9 (56)	4-6-11 (70)	5-7-13 (84)	6-8-15 (98)
	Noise Criteria	—	—	—	13	20	27	32
15 x 9	Airflow, CFM	94	188	281	375	469	563	656
	Throw, Side A	2-3-5 (40)	3-5-8 (80)	5-7-12 (119)	6-8-16 (159)	7-10-19 (199)	8-12-23 (239)	10-14-27 (279)
	Throw, Side B	2-2-3 (14)	2-3-5 (28)	3-4-7 (42)	4-5-9 (56)	4-6-11 (70)	5-7-13 (84)	6-8-15 (98)
	Noise Criteria	—	—	—	14	21	28	32
15 x 12	Airflow, CFM	125	250	375	500	625	750	875
	Throw, Side A	2-3-5 (50)	4-5-9 (100)	5-7-13 (150)	6-9-17 (200)	8-11-21 (250)	9-13-25 (300)	10-15-29 (350)
	Throw, Side B	2-2-4 (25)	3-4-7 (50)	4-5-10 (75)	5-7-12 (100)	6-8-15 (125)	7-10-18 (150)	8-11-21 (175)
	Noise Criteria	—	—	—	15	22	29	34
18 x 12	Airflow, CFM	150	300	450	600	750	900	1050
	Throw, Side A	2-3-5 (63)	4-5-9 (125)	5-7-13 (188)	7-9-18 (250)	8-11-22 (313)	9-13-26 (375)	11-15-30 (437)
	Throw, Side B	2-2-4 (25)	3-4-7 (50)	4-5-10 (75)	5-7-12 (100)	6-8-15 (125)	7-10-18 (150)	8-11-21 (175)
	Noise Criteria	—	—	—	16	23	30	35
18 x 15	Airflow, CFM	186	375	563	750	938	1125	1313
	Throw, Side A	3-3-6 (74)	4-6-10 (149)	6-8-15 (223)	8-12-24 (297)	9-12-24 (371)	10-15-28 (445)	12-17-33 (520)
	Throw, Side B	2-3-5 (39)	3-5-8 (78)	5-6-12 (117)	6-8-15 (156)	7-10-19 (195)	8-12-22 (234)	9-14-26 (273)
	Noise Criteria	—	—	—	17	24	31	37

For performance notes, see page D79.

PERFORMANCE DATA:

MODEL 6400IV • RECTANGULAR NECK

Core Styles 2C, 2D, 2E and 2F • 2-way corner blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.014	.031	.056	.087	.126	.171
9 x 6	Airflow, CFM	38	75	113	150	188	225	263
	Throw, Side A	2-3-4 (25)	3-4-7 (50)	4-6-10 (75)	5-7-14 (100)	6-9-17 (125)	7-10-20 (150)	8-12-23 (175)
	Throw, Side B	2-2-3 (13)	2-3-5 (25)	3-4-7 (38)	4-5-10 (50)	5-6-12 (63)	5-7-14 (75)	6-9-16 (88)
	Noise Criteria	—	—	—	11	18	25	29
12 x 6	Airflow, CFM	50	100	150	200	250	300	350
	Throw, Side A	2-3-5 (38)	4-5-9 (75)	5-7-12 (113)	6-9-16 (150)	7-11-20 (188)	9-12-24 (225)	10-14-28 (263)
	Throw, Side B	2-2-3 (13)	2-3-5 (25)	3-4-7 (38)	4-5-10 (50)	5-6-12 (63)	5-7-14 (75)	6-9-16 (88)
	Noise Criteria	—	—	—	12	19	26	30
12 x 9	Airflow, CFM	75	150	225	300	375	450	525
	Throw, Side A	2-3-5 (47)	4-5-9 (94)	5-7-13 (140)	6-9-17 (188)	8-11-21 (234)	9-13-25 (281)	10-15-29 (328)
	Throw, Side B	2-3-4 (28)	3-4-7 (56)	4-6-11 (84)	5-7-14 (112)	6-9-17 (140)	7-11-20 (169)	8-12-23 (197)
	Noise Criteria	—	—	—	13	20	27	32
15 x 9	Airflow, CFM	94	188	281	375	469	563	656
	Throw, Side A	2-3-5 (66)	4-5-9 (132)	5-7-13 (197)	7-9-18 (262)	8-11-22 (328)	9-13-26 (394)	11-15-30 (459)
	Throw, Side B	2-3-4 (28)	3-4-7 (56)	4-6-11 (84)	5-7-14 (113)	6-9-17 (141)	7-11-20 (169)	8-12-23 (197)
	Noise Criteria	—	—	—	14	21	28	32
18 x 9	Airflow, CFM	113	225	338	450	563	675	788
	Throw, Side A	2-3-5 (85)	4-5-10 (169)	5-8-14 (254)	7-10-19 (338)	8-12-23 (421)	10-14-27 (506)	11-16-32 (591)
	Throw, Side B	2-3-4 (28)	3-4-7 (56)	4-6-11 (85)	5-7-14 (113)	6-9-17 (141)	7-11-20 (169)	8-12-23 (197)
	Noise Criteria	—	—	—	15	22	29	33
15 x 12	Airflow, CFM	125	250	375	500	625	750	875
	Throw, Side A	2-3-5 (75)	4-5-9 (150)	5-7-13 (225)	6-9-17 (300)	8-11-21 (375)	9-13-25 (450)	9-15-29 (525)
	Throw, Side B	2-3-5 (50)	4-5-9 (100)	5-7-13 (150)	6-9-17 (200)	8-11-21 (250)	9-13-25 (300)	10-15-29 (350)
	Noise Criteria	—	—	—	15	22	29	34
18 x 12	Airflow, CFM	150	300	450	600	750	900	1050
	Throw, Side A	2-3-5 (100)	4-5-10 (200)	5-8-14 (300)	7-10-19 (400)	8-12-23 (500)	10-14-29 (600)	11-17-32 (700)
	Throw, Side B	2-3-5 (50)	4-5-9 (100)	5-9-13 (150)	6-9-17 (200)	8-11-21 (250)	9-13-25 (300)	10-15-29 (350)
	Noise Criteria	—	—	—	18	25	31	36

Core Style 2A • 2-way opposite blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.014	.031	.056	.087	.126	.171
15 x 9	Airflow, CFM	94	188	281	375	469	563	656
	Throw, Side	2-3-5 (47)	3-5-8 (94)	5-6-12 (141)	6-8-15 (188)	7-10-19 (234)	8-12-23 (282)	9-14-26 (328)
	Noise Criteria	—	—	—	14	21	28	32
18 x 9	Airflow, CFM	113	225	338	450	563	675	788
	Throw, Side	2-3-5 (57)	4-5-9 (113)	5-7-12 (169)	6-9-16 (225)	7-11-20 (282)	9-12-24 (338)	10-14-28 (394)
	Noise Criteria	—	—	—	15	22	29	33
21 x 9	Airflow, CFM	131	263	394	525	656	788	919
	Throw, Side	2-3-5 (66)	3-5-9 (132)	5-7-13 (197)	6-9-17 (263)	8-11-21 (328)	9-13-26 (394)	11-15-30 (460)
	Noise Criteria	—	—	—	15	23	30	34
15 x 12	Airflow, CFM	125	250	375	500	625	750	875
	Throw, Side	2-3-5 (63)	4-5-10 (125)	5-7-14 (188)	7-10-18 (250)	8-12-23 (313)	10-14-27 (375)	11-16-31 (438)
	Noise Criteria	—	—	—	15	22	29	34
18 x 12	Airflow, CFM	150	300	450	600	750	900	1050
	Throw, Side	3-3-6 (75)	4-6-10 (150)	6-8-15 (225)	7-10-20 (300)	9-13-24 (375)	10-15-29 (450)	12-17-33 (525)
	Noise Criteria	—	—	—	16	23	30	35
21 x 12	Airflow, CFM	175	350	525	700	875	1050	1225
	Throw, Side	3-3-6 (88)	4-6-11 (175)	6-8-16 (263)	8-11-21 (350)	9-13-25 (438)	11-16-30 (525)	12-18-35 (613)
	Noise Criteria	—	16	—	17	24	31	36
24 x 12	Airflow, CFM	200	400	600	800	1000	1200	1400
	Throw, Side	3-4-6 (100)	4-6-11 (200)	6-9-17 (300)	8-11-22 (400)	10-14-27 (500)	11-17-32 (600)	13-19-37 (700)
	Noise Criteria	—	—	—	18	25	31	36

For performance notes, see page D79.

PERFORMANCE DATA:

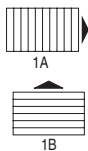
MODEL 6400IV • RECTANGULAR NECK

Core Style 2B • 2-way opposite blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.014	.031	.056	.087	.126	.171
9 x 6	Airflow, CFM	38	75	113	150	188	225	263
	Throw	2-2-4 (19)	3-4-7 (38)	4-5-10 (57)	5-7-12 (75)	6-8-15 (94)	7-10-18 (113)	8-11-21 (132)
	Noise Criteria	—	—	—	11	18	26	29
12 x 6	Airflow, CFM	50	100	150	200	250	300	350
	Throw	2-3-4 (25)	3-4-7 (50)	4-6-11 (75)	5-7-14 (100)	6-9-17 (125)	7-11-20 (150)	8-12-23 (175)
	Noise Criteria	—	—	—	12	19	26	30
12 x 9	Airflow, CFM	75	150	225	300	375	450	525
	Throw	2-3-4 (38)	3-4-8 (75)	4-6-11 (113)	6-8-15 (150)	7-10-18 (188)	8-11-21 (225)	9-13-25 (263)
	Noise Criteria	—	—	—	15	23	30	34

Core Styles 1A and 1B • 1-way blow pattern



Nominal Neck Size	Neck Velocity, FPM	100	200	300	400	500	600	700
	Velocity Pressure	.001	.002	.006	.010	.016	.022	.031
	Total Pressure	.003	.014	.031	.056	.087	.126	.171
9 x 6	Airflow, CFM	38	75	113	150	188	225	263
	Throw	2-3-4	4-5-9	5-7-12	6-9-16	7-11-20	9-12-24	10-14-28
	Noise Criteria	—	—	—	11	18	26	29
12 x 6	Airflow, CFM	50	100	150	200	250	300	350
	Throw	2-3-5	4-5-9	5-7-13	6-9-17	8-11-21	9-13-25	10-15-29
	Noise Criteria	—	—	—	13	20	27	32
15 x 6	Airflow, CFM	63	125	188	250	313	375	438
	Throw	2-3-5	4-5-9	5-7-13	6-9-17	8-11-21	9-13-25	10-15-29
	Noise Criteria	—	—	—	12	19	26	31
18 x 6	Airflow, CFM	75	150	225	300	375	450	525
	Throw	2-3-5	4-5-9	5-7-13	6-9-17	8-11-21	9-13-26	11-15-30
	Noise Criteria	—	—	—	12	20	27	32
21 x 6	Airflow, CFM	88	175	263	350	438	525	613
	Throw	2-3-5	4-5-10	5-7-14	7-10-18	8-12-22	10-14-27	11-16-31
	Noise Criteria	—	—	—	13	21	28	33
24 x 6	Airflow, CFM	100	200	300	400	500	600	700
	Throw	2-3-5	4-5-10	5-8-14	7-10-19	8-12-23	10-14-28	11-20-32
	Noise Criteria	—	—	—	15	22	28	33
21 x 9	Airflow, CFM	131	263	394	525	656	788	919
	Throw	3-3-6	4-6-10	6-8-15	7-10-20	9-13-25	10-15-29	12-18-34
	Noise Criteria	—	—	—	16	23	30	35
24 x 9	Airflow, CFM	150	300	450	600	750	900	1050
	Throw	3-4-6	4-6-11	6-9-16	8-11-21	9-14-26	11-16-31	13-19-36
	Noise Criteria	—	—	—	17	24	31	36

Performance Notes:

1. All pressures are in inches w.g..
2. Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions. Data applies to ceiling mounted units when the maximum coanda effect applies. When no ceiling is present (exposed duct), throws are reduced by approximately 25%.

3. Tests conducted on diffuser only without damper using ideal straight rigid inlet condition. Other inlet conditions may affect performance. Correction factors for addition of a neck mounted opposed blade damper (fully open):
Total Pressure: Multiply catalog value by x 1.20.
Noise Criteria: Add + 4 to catalog value.

4. Correction factor for round inlets, see next page.
5. Noise Criteria (NC) values are based upon 10dB room absorption, re 10⁻¹² watts. Dash (—) in space indicates an Noise Criteria of less than 10.
6. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

PERFORMANCE DATA CORRECTIONS:

MODEL 6400IV

Correction Factors For Round Necks (Square to Round Inlet Adaptors).

- Add the NC correction factor from Table 1 and the NC value listed in the performance tables.
- Multiply the correction factor from Table 1 by the listed total pressure in the performance tables.
- Multiply the correction factor from Table 1 by the listed throws in the performance tables.

Example:

12" x 12" unit with a 4A core and a 10" round adaptor handling 500 cfm supply air. (Page D72).

- $NC = 20 + 7 = 27$
- Total Pressure = $.072 \times 1.65 = 0.119$
- Throw = $16 \times 1.15 = 18.40$ feet @ 50 fpm terminal velocity.

TABLE 1 Correction Factors for SR Adaptors

SQUARE INLET	ROUND INLET	NC (add)	TP (multiply)	THROW (multiply)		
				150	100	50
6 x 6	5	7	1.65	1.10	1.10	1.15
9 x 9	6	17	3.50	1.15	1.15	1.20
9 x 9	8	4	1.40	1.10	1.10	1.10
12 x 12	8	17	3.50	1.15	1.15	1.20
12 x 12	10	7	1.65	1.10	1.10	1.15
15 x 15	10	17	3.50	1.15	1.15	1.20
15 x 15	12	9	1.90	1.10	1.10	1.15
15 x 15	14	3	1.25	1.05	1.05	1.10
18 x 18	12	17	3.50	1.15	1.15	1.20
18 x 18	14	10	2.00	1.10	1.10	1.15
18 x 18	16	5	1.45	1.10	1.10	1.10
21 x 21	14	17	3.70	1.15	1.15	1.20
21 x 21	16	11	2.25	1.10	1.10	1.15
21 x 21	18	6	1.60	1.10	1.10	1.10
21 x 21	20	3	1.20	1.05	1.05	1.10
24 x 24	16	17	3.50	1.15	1.15	1.20
24 x 24	18	12	2.35	1.10	1.10	1.15
24 x 24	20	7	1.65	1.10	1.10	1.15

TABLE 2 Maximum Recommended Airflow

CEILING HEIGHT (ft.)	MAX. AIRFLOW PER DIFFUSER (CFM)				MAX. REC. COOLING TEMP. DIFFERENTIAL ΔT
	4-way	3-way	2-way (2A, 2B)	1-way & 2S	
7	400	300	200	100	15°F
8	600	450	300	150	20°F
9	1200	900	600	300	25°F
10	1800	1350	900	450	25°F
12	3200	2400	1600	800	30°F
14	4800	3600	2400	1200	30°F
16	6000	4500	3000	1500	30°F

Recommended Maximum Airflow

Diffuser mounting height and air temperature differential (ΔT) are both to be considered when selecting diffusers. As air travels from a diffuser, room air is entrained into the supply air stream and the delivery pattern thickens.

If the volume or throw requirement is too great, the lower part of the supply air stream can intrude into the occupied zone causing objectionable drafts. Consult Table 2 to verify selection.

HOW TO ORDER

ALUMINUM PATTERN CEILING DIFFUSERS

MODEL SERIES 6200, 6250, 6200IV AND 6200-MRI

EXAMPLE: 6200 - O - 9 x 9 - 24 x 24 - L - AW - 4A - PLS - SR08

1. **Model**
 6200 Fixed Pattern
 6250 Adjustable Pattern
 6200IV Induction Vanes
 6200-MRI 100% Aluminum
2. **Damper**
 (model suffix)
 – None
 O Steel (standard)
 OA Aluminum
 (Damper not available on 6200-MRI)
3. **Neck Size**
 Width x Height (inches)
4. **Ceiling Module Size**
Panel Size
 (Types L, SP, M, TL and F)
Imperial (inches)
 12 x 12, 20 x 20, 24 x 12, 24 x 24,
 48 x 24
Metric (mm)
 300 x 300, 500 x 500, 600 x 300,
 600 x 600, 1200 x 600
5. **Frame Type**
 S Surface Mount Flat
 B Surface Mount Bevelled
 L Lay-in T-Bar
 SP Spline
 M Metal Pan
 TL Tegular (Drop Face)
 F Fineline®

7. **Core Style**
 See below
- OPTIONS AND ACCESSORIES:**
8. **Transition Collar**
 (Square to round)
 SR04 to SR24
 4" to 24" dia.
 (Transition Collar not available on the Model 6200-MRI)
 *ONA Offset Neck Adaptor
9. **Earthquake Tabs**
 EQT Earthquake Tabs
10. **External Insulation**
 EX Foil-back (installed), R-4.2
 *MIB Molded Insulation Blanket,
 R-6.0
11. **Extended Panel***
 PLS Steel (default)
 PLA Aluminum
12. **Air Balancing Devices**
 (order separately)
Rectangular Neck:
 EGL Equalizing Grid (long)
 EGS Equalizing Grid (short)
 DEGL Damper/Equalizing Grid (long)
 DEGS Damper/Equalizing Grid (short)

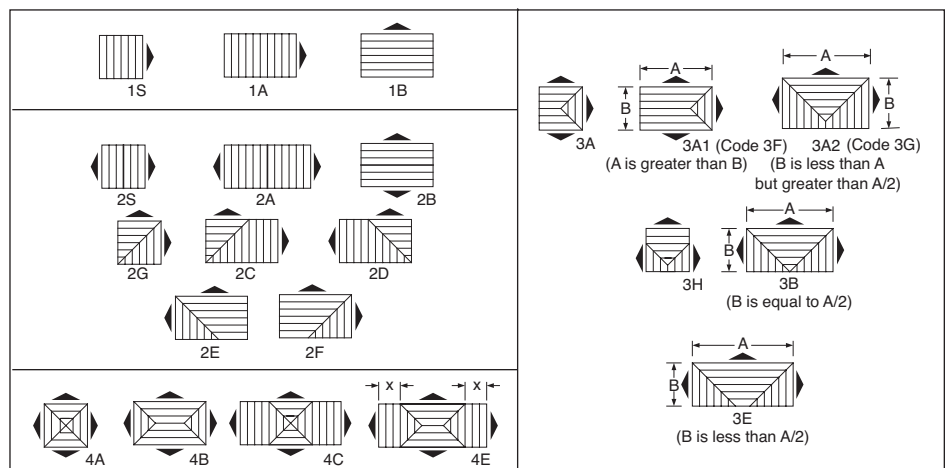
- Round Neck:**
- 4250 Radial Sliding Damper
 - 4275 Radial Opposed Blade Damper
 - 4675 Butterfly Damper
 - EGR Equalizing Grid
 - DEGR Damper/Equalizing Grid

Notes:

1. Consult price pages as to limitations of module, neck size and core style combinations.
2. *Where required, a steel extended modular panel is standard when the ceiling module is more than 3 larger than the neck in either or both dimensions. Aluminum is available as an option with the exception of Model 6200-MRI which includes as standard, an aluminum extended modular panel. Applicable to Frame Type L, SP, M, TL and F.
3. *ONA Offset Neck Adaptor is for Model Series 6500IV and 6200IV. Not available on models with -O opposed blade damper.
4. *MIB Molded Insulation Blanket is available for Frame Types L, TL and F with a 24 x 24 ceiling module only, 15 x 15 maximum neck size and "SR" square-to-round transition collar.

6. **Finish**
 AW Appliance White (default)
 AL Aluminum
 BK Black
 BW British White
 MI Mill
 PC Prime Coat
 PPA Paint Prepared
 SP Special Custom Color

PATTERNS ARE SHOWN IN PLAN VIEW (LOOKING DOWN INTO INLET)



HOW TO ORDER

ALUMINUM PATTERN CEILING DIFFUSERS

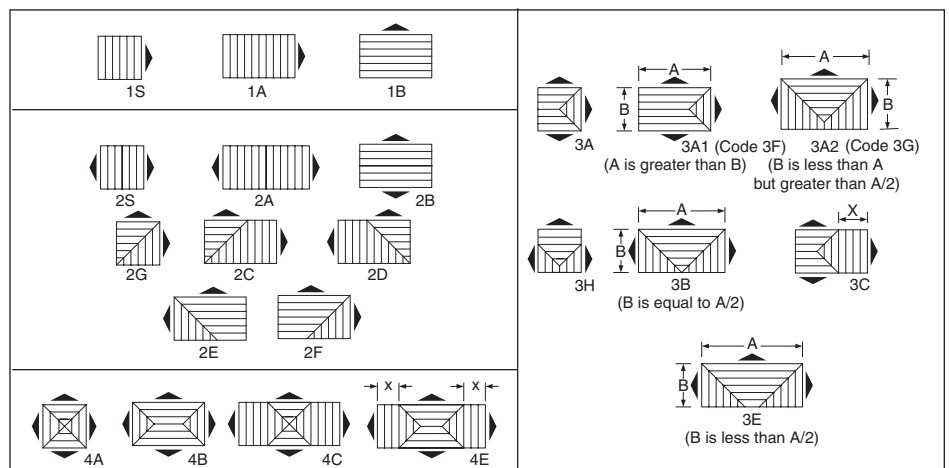
MODEL SERIES 6400 AND 6400IV

EXAMPLE: 6400 - O - 9 x 9 - 24 x 24 - L - AW - 4A - SR08 - PLS

- | | | |
|---|---|---|
| <p>1. Model
6400 Fixed Pattern
6400IV Induction Vanes</p> <p>2. Damper
(model suffix)
– None
O Steel (standard)
OA Aluminum</p> <p>3. Neck Size
Width x Height (inches)</p> <p>4. Ceiling Module Size
Panel Size
(Types L, SP, M, TL, F and DL only)
Imperial (inches)
12 x 12, 20 x 20, 24 x 12, 24 x 24,
48 x 24
Metric (mm)
300 x 300, 500 x 500, 600 x 300,
600 x 600, 1200 x 600</p> <p>5. Frame Type
S Surface Mount Flat
B Surface Mount Bevelled
D Deep Drop
L Lay-in T-Bar
SP Spline
M Metal Pan
TL Tegular (Drop Face)
F Finline®</p> | <p>6. Finish
AW Appliance White (default)
AL Aluminum
BK Black
BW British White
MI Mill
PC Prime Coat
PPA Paint Prepared Aluminum
SP Special Custom Color</p> <p>7. Core Style
See below</p> <p>OPTIONS AND ACCESSORIES:</p> <p>8. Transition Collar
(Square to round)
SR04 to SR24
4" to 24" dia.</p> <p>9. Earthquake Tabs
EQT Earthquake Tabs</p> <p>10. External Insulation
EX Foil-back (installed), R-4.2
*MIB Molded Insulation Blanket,
R-6.0</p> <p>11. Extended Panel**
PLS Steel (default)
PLA Aluminum</p> | <p>12. Air Balancing Devices
(order separately)
Rectangular Neck:
EGL Equalizing Grid (long)
EGS Equalizing Grid (short)
DEGL Damper/Equalizing Grid
(long)
DEGS Damper/Equalizing Grid
(short)</p> <p>Round Neck:
4250 Radial Sliding Damper
4275 Radial Opposed Blade Damper
4675 Butterfly Damper
EGR Equalizing Grid
DEGR Damper/Equalizing Grid</p> |
|---|---|---|

- Notes:**
- Consult price pages as to limitations of module, neck size and core style combinations.
 - *MIB Molded Insulation Blanket is available for Frame Types L, TL and F with a 24 x 24 ceiling module only, 15 x 15 maximum neck size and "SR" square-to-round transition collar.
 - **Extended modular panels where required are steel construction as standard. Aluminum is available as an option. Applicable to Frame Types L, SP, M, TL, F and DL only.

PATTERNS ARE SHOWN IN PLAN VIEW (LOOKING DOWN INTO INLET)



HOW TO SPECIFY

SUGGESTED SPECIFICATION:

6500 and 6550 – Steel Construction

Furnish and install **Nailor** (select one) **Model 6500 or 6550** (steel) **Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. Model 6500 shall incorporate fixed pattern discharge louvers for a horizontal throw pattern. Model 6550 shall incorporate fixed pattern discharge louvers and adjustable vanes for a vertical or horizontal throw pattern. The entire core assembly shall be removable without the use of tools. The directional pattern shall be supplied as a 4, 3, 2 or 1-way discharge pattern as specified. The core is to be interchangeable with all other frame styles of equal size. The square or rectangular duct connection collar shall be an integral part of the frame assembly. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper constructed of heavy gauge corrosion-resistant steel shall be provided with all units.

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

SUGGESTED SPECIFICATION:

6500IV – Steel Construction

Furnish and install **Nailor Model 6500IV** (steel) **Induction Vane Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The core assembly shall have a fixed pattern for horizontal throw and shall include induction vanes for rapid mixing of supply air with room air. The entire core assembly shall be removable without the use of tools. The directional pattern shall be supplied as a 4, 3, 2 or 1-way discharge pattern as specified. The core is to be interchangeable with all other frame styles of equal size. The square or rectangular duct connection collar shall be an integral part of the frame assembly. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper constructed of heavy gauge corrosion-resistant steel shall be provided with all units.

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

SUGGESTED SPECIFICATION:

6500FP – Steel Construction Face and Fiberglass Backpan

Furnish and install **Nailor** (select one or more) **Model 6500FP** (steel) **Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The face of the diffuser and core assembly shall be constructed of corrosion-resistant steel. All units shall include a one piece molded fiberglass backpan with foil back vapor barrier of 6.0 R-value. The ceiling diffuser shall be high capacity with a 4-way discharge pattern that provides a tight horizontal pattern from maximum to minimum airflow. The spring-loaded core shall be fully removable in the field without the use of tools for the purpose of installation or cleaning. The pre-scored diffuser plenum shall accommodate spin-in or tab-lock inlet collars (by others). The finish shall be AW Appliance White (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

SUGGESTED SPECIFICATION:

6200 and 6250 – Aluminum Construction

Furnish and install **Nailor** (select one) **Model 6200 or 6250** (aluminum) **Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. Model 6200 shall incorporate fixed pattern discharge louvers for a horizontal throw pattern. Model 6250 shall incorporate fixed pattern discharge louvers and adjustable vanes for a vertical or horizontal throw pattern. If an extended panel is required; the material shall be constructed of heavy gauge, corrosion-resistant steel (aluminum is optional). The entire core assembly shall be removable without the use of tools. The directional pattern shall be supplied as a 4, 3, 2 or 1-way discharge pattern as specified. The core is to be interchangeable with all other frame styles of equal size. The square or rectangular duct connection collar shall be an integral part of the frame assembly. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper constructed of heavy gauge corrosion-resistant steel (aluminum is optional) shall be provided with all units.

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

SUGGESTED SPECIFICATION:

6200IV – Aluminum Construction

Furnish and install **Nailor Model 6200IV** (aluminum) **Induction Vane Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The core assembly shall have a fixed pattern for horizontal throw and shall include induction vanes for rapid mixing of supply air with room air. If an extended panel is required; the material shall be constructed of heavy gauge, corrosion-resistant steel (aluminum is optional). The entire core assembly shall be removable without the use of tools. The directional pattern shall be supplied as a 4, 3, 2 or 1-way discharge pattern as specified. The core is to be interchangeable with all other frame styles of equal size. The square or rectangular duct connection collar shall be an integral part of the frame assembly. The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper constructed of heavy gauge corrosion-resistant steel (aluminum is optional) shall be provided with all units. The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

SUGGESTED SPECIFICATION:

6200-MRI – 100% Aluminum Construction

Furnish and install **Nailor Model 6200-MRI** (aluminum) **Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. Model 6200-MRI shall incorporate fixed pattern discharge louvers for a horizontal throw pattern. The core assembly shall be fixed and is non-removable. The directional pattern shall be supplied as a 4, 3, 2 or 1-way discharge pattern as specified. The square or rectangular duct connection collar shall be an integral part of the frame assembly. The finish shall be AW Appliance White (optional finishes are available).

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

SUGGESTED SPECIFICATION:

6400 – Aluminum Construction

Furnish and install **Nailor Model 6400** (aluminum) **High Capacity Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The units shall be constructed from extruded aluminum with miscellaneous steel components. Blades and frame shall have reinforced staked mitered corners for high quality appearance and function. Diffusers shall consist of an outer frame assembly to suit any application shown, which includes an integral collar for connection to the square or rectangular duct size indicated. If an extended panel is required; the material shall be constructed of heavy gauge, corrosion-resistant steel (aluminum is optional). A square to round transition collar shall be supplied where indicated to facilitate attachment of round duct.

An inner core assembly consisting of fixed deflection louvers capable of producing the airflow discharge indicated on the plans shall be securely held in place by a spring loaded mechanism without the need for visible screws. The core shall be fully removable in the field without the use of tools for the purpose of installation, cleaning or damper adjustment.

The finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper constructed of heavy gauge corrosion-resistant steel (aluminum is optional) shall be provided with all units.

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

SUGGESTED SPECIFICATION:

6400IV – Aluminum Construction

Furnish and install **Nailor Model 6400IV** (aluminum) **High Capacity Induction Vane Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. Diffusers shall be designed for optimum performance in both heating and cooling applications. The diffusers shall be constructed from extruded aluminum with miscellaneous steel components. Blades and frame shall have reinforced staked mitered corners for high quality appearance and function. Diffusers shall consist of an outer frame assembly to suit any application shown, which includes an integral collar for connection to the square or rectangular duct size indicated. If an extended panel is required; the material shall be constructed of heavy gauge, corrosion-resistant steel (aluminum is optional). A square to round transition collar shall be supplied where indicated to facilitate attachment of round duct.

An inner core assembly consisting of fixed deflection louvers on 1 1/2" (38) centers, capable of producing either a 4, 3, 2 or 1-way horizontal airflow discharge pattern as indicated on the plans shall be securely held in place by a spring loaded mechanism without the need for visible screws. The deflection angle of each louver shall be constant (diffuser designs with a horizontal lip at the point of discharge are not acceptable). Aluminum induction vanes on 1 1/2" (38) centers shall be mounted in extrusion slots and welded to the rear of each louver of the inner core. The vanes shall be orientated at 45° in opposite direction on alternating louvers to promote rapid temperature equalization and ensure high induction and rapid mixing of the primary and room air. The core shall be fully removable in the field without the use of tools for the purpose of installation, cleaning or damper adjustment. Diffuser finish shall be AW Appliance White (optional finishes are available).

(Optional) An opposed blade damper constructed of heavy gauge corrosion-resistant steel (aluminum is optional) shall be provided with all units.

The manufacturer shall provide published performance data for the diffuser, which shall be tested in accordance with ANSI/ASHRAE Standard 70-2006.

PRODUCT OVERVIEW OPTIONS AND ACCESSORIES FOR CEILING DIFFUSERS

MOUNTING FRAMES

- Surface mount adapter frames for plaster and sheet rock ceilings are available in steel and aluminum. They simplify installation, save time and allow ceiling plenum access.

OPTIONS

- A selection of optional items that are available on ceiling diffusers.

FINISHES

- Selection of standard and non-standard finishes to choose from.
- Baked enamel paint in custom colors to suit architect.

AIR BALANCING DEVICES

- Dampers for round and square necks.
- Equalizing grids.
- Volume extractors.

Effective air balancing of an HVAC System requires the correct selection, specification and installation of the right product to suit the system design.

Nailor offers a comprehensive range of models and options to cover all applications.

Nailor balancing devices are:

- Easy to select and specify. Many items can be ordered or specified as diffuser accessories.
- Designed to offer a smooth, accurate and predictable response during adjustment for precise air metering.
- Designed to provide quick access and adjustment.
- Engineered with attention to optimizing airflow, in order to minimize noise, turbulence and pressure drop.

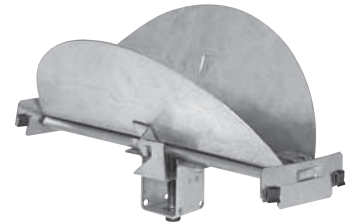
Model DFA
Drywall/Plaster Frame
Surface Mount
Ceiling Adapter



Model 4275
Radial Opposed
Blade Damper



Model 4250
Radial Sliding Blade Damper



Model 4675
Butterfly Damper



Model OBD
Opposed Blade Damper
Steel, Neck Mount



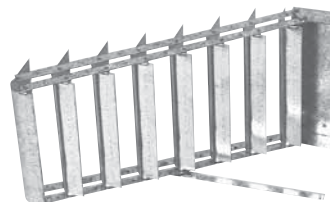
Model OBDD
Opposed Blade Damper
Steel, Duct Mount



Model EGR
Equalizing Grid



Model DEGR
Damper with Equalizing Grid



Model EX-1
Volume Extractor

Mounting Frames

DFS (Steel), DFA (Aluminum) Drywall/Plaster Frame

The DF Series are for mounting in finished drywall or plaster ceilings to accept any standard lay-in type grille, register, diffuser or other ceiling component. Installation of the air outlet is as simple as inserting them in a standard lay-in T-Bar type ceiling system.

The DF Series simplifies and reduces installation time compared with surface mount type diffusers. This is especially true where flexible duct is utilized.

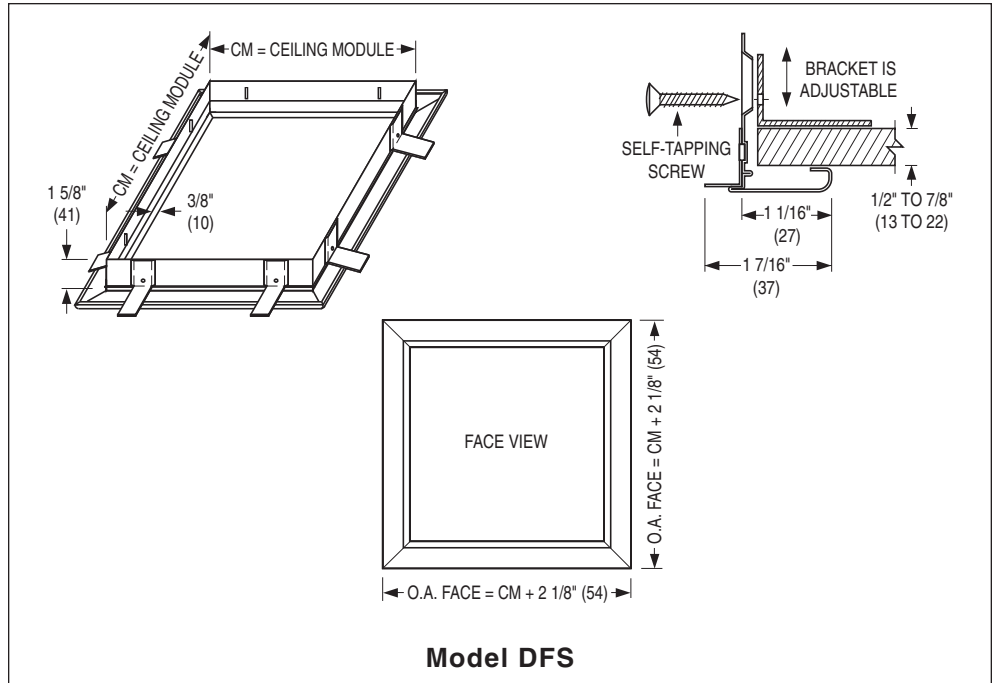
A major benefit is that the DF Series allows access to the ceiling plenum space above for maintenance purposes without the need for separate access doors. The finished appearance is professional and aesthetically pleasing.

Standard Finish: AW Appliance White. Other finishes are available.

Model DFS is installed quickly and easily using adjustable fastening angle brackets which adapt to various ceiling thicknesses. Frames are roll-formed corrosion-resistant steel with staked and mitered corners.

IMPERIAL MODULES		METRIC MODULES
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
16 x 16	406 x 406	400 x 400
20 x 20	508 x 508	500 x 500
24 x 12	610 x 305	600 x 300
24 x 24	610 x 610	600 x 600

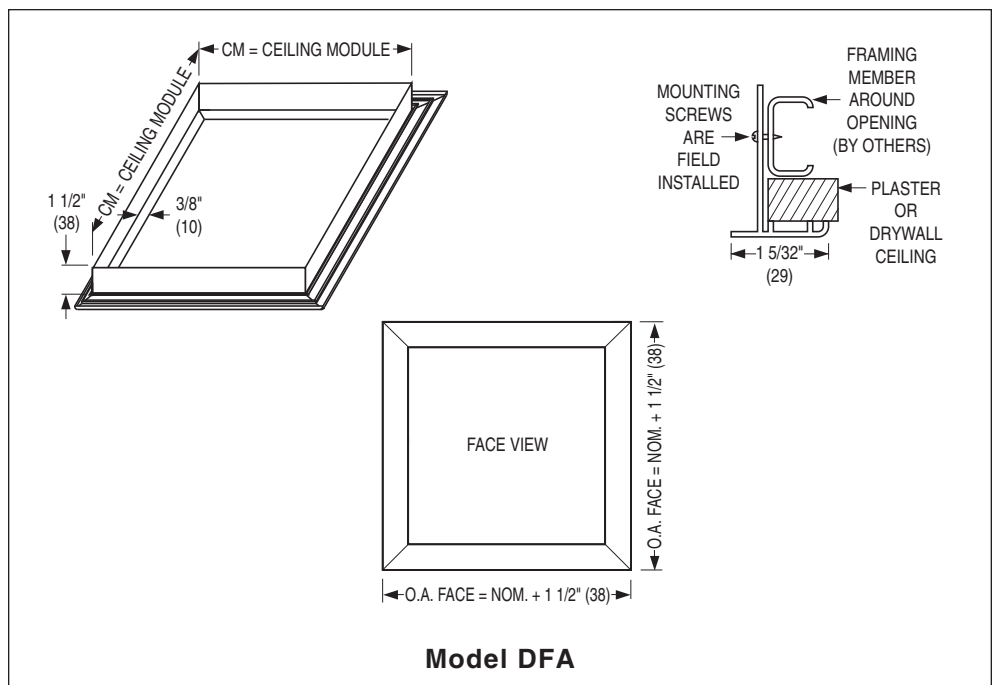
Ceiling opening = CM + 1/4" (6)



Model DFA requires framing of the ceiling opening with 'C' channel or wood studs for attachment with mounting screws (by others).

IMPERIAL MODULES		METRIC MODULES
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
16 x 16	406 x 406	400 x 400
20 x 20	508 x 508	500 x 500
24 x 12	610 x 305	600 x 300
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 12	1219 x 305	1200 x 300
48 x 24	1219 x 1219	1200 x 600
60 x 12	1524 x 305	1500 x 300

Ceiling opening = CM + 1/4" (6)



Options and Finishes

OPTIONS:

EQT Earthquake Tabs

Earthquake (seismic) retaining safety tabs are available; factory installed on diffusers when required by local building code that units be independently restrained and safety wired to supporting structure.

SC Safety Chain

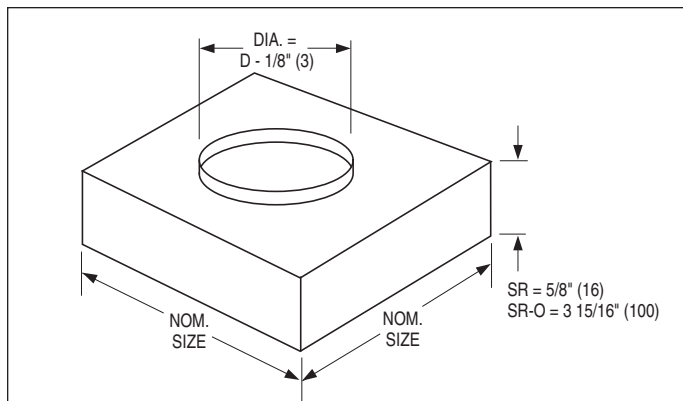
An optional safety chain is available on all of Nailor's round ceiling diffusers.

GK Foam Gaskets

Foam gasket is available on a selection of surface mount diffusers.

SR Square to Round Transition Collar

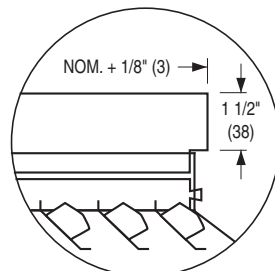
Transition collars are for use on Nailor square neck diffusers where a round duct connection is required. Round necks are sized for flexible or hard duct connection. SR's are shipped loose for field installation and are supplied with barbed S clips.



Square Neck Size (inches)	Round Neck Size D (inches)
6 x 6	4, 5, 6
8 x 8	4, 5, 6, 7, 8
9 x 9	6, 7, 8, 9
10 x 10	6, 7, 8, 9, 10
12 x 12	6, 8, 9, 10, 12
14 x 14	6, 8, 9, 10, 12, 14
15 x 15	6, 8, 10, 12, 14, 15
16 x 16	6, 8, 10, 12, 14, 15, 16
18 x 18	6, 8, 10, 12, 14, 15, 16, 18
20 x 20	6, 8, 10, 12, 14, 15, 16, 18, 20
21 x 21	6, 8, 10, 12, 14, 15, 16, 18, 20
22 x 22	6, 8, 10, 12, 14, 16, 18, 20
24 x 24	6, 8, 10, 12, 14, 15, 16, 18, 20, 24

ONA Offset Neck Adaptor

Fits outside duct (if a damper is required; order separately for remote mount. See Model OBDD).



EXTERNAL FOIL BACK INSULATION

EX External Insulation Blanket - Factory Installed

An optional 1 1/2" thick foil back insulation is available installed on a majority of Nailor ceiling diffusers. The insulation has an R value of 4.2.

EXB External Insulation Blanket - Ships Loose

This insulation is the same as above but is shipped loose for field installation.

MIB Molded Insulation Blanket - Factory Installed

The molded insulation is available as an option on various 24" x 24" square diffusers. The insulation has an R value of 6.0.

FINISHES:

AW Appliance White (standard)

A white finish that is currently the industry standard. Closely matches standard finishes supplied by the majority of T-Bar ceiling system manufacturers. (No additional cost).

AL Aluminum

Contains suspended metal particles to give the appearance of a silver grey metallic or anodized finish. (No additional cost).

BW British White

Matches most white ceiling tiles. (No additional cost)

BK Black

This black has a matte finish. (Additional cost)

BA Black Interior/Appliance White Face

Optional on perforated diffusers. AW Appliance White is applied on the perforated face and BK Black is applied on the interior of the backpan for a discreet appearance. (No additional cost)

SP Special

The Nailor range of diffusers are available in any color for special architectural consideration. Custom colors are individually mixed to match customer supplied samples. (Additional cost)

ALSO AVAILABLE:

MI Mill Finish

(No additional cost).

PPA Paint Prepared Aluminum (Washed only)

Aluminum models only. (No additional cost).

PC Prime Coat Paint

(Additional cost).

Air Balancing Devices

Radial Opposed Blade Damper

A unique method of controlling volume through a diffuser providing premium design quality and performance. The multi-blade perimeter design offers true radial flow at any setting.

A screwdriver slot, accessible through the diffuser, requires only a half turn to adjust from fully closed to fully open. The damper is designed to fit directly on the neck of the diffuser. Simple, convenient and accurate installation and operation.

Available with an optional operator arm. **Model 4275-OA** allows damper adjustment on the **UNI Diffusers** without removing the inner cone assembly.

Model 4275

	Nominal size (inches)							Nominal Size (mm)								
	5	6	8	10	12	14	15	16	127	152	203	254	305	356	381	406
A	4 7/8	5 7/8	7 7/8	9 7/8	11 7/8	13 7/8	14 7/8	15 7/8	124	149	200	251	302	352	378	403
B	1 1/8	1 5/8	2 1/2	2 1/4	2 7/8	3 3/8	3 3/4	4 3/8	29	41	64	57	73	86	95	111
C	1 5/8			2 1/2				41				64				

Radial Sliding Blade Damper

The **Model 4250** is a neck mounted radial sliding blade damper used in round neck diffuser applications to provide fine volume control. Gang operated radial blades slide at right angles to the duct with minimal protrusion above the diffuser neck; allowing the damper to work effectively in flexible duct applications.

Available in sizes 6", 8", 10", 12" and 14" (152, 203, 254, 305 and 356).

Model 4250

Butterfly Damper

The **Model 4675 Butterfly Damper** is an economical damper for volume balancing in round neck diffusers. Adjustable friction pivots hold the blades at the required setting. Adjusted from the face of the diffuser.

Not recommended for use with flexible duct.

Model 4675

	Nominal Size (inches)					Nominal size (mm)				
	6	8	10	12	14	152	203	254	305	356
A	5 7/8	7 7/8	9 7/8	11 7/8	13 7/8	149	200	251	302	352
B	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	64	89	114	140	165

D

CEILING DIFFUSERS

Air Balancing Devices

OPPOSED BLADE DAMPERS

Nailor Opposed Blade Dampers feature heavy gauge, roll-formed, corrosion-resistant steel or extruded aluminum blades and frame with miscellaneous steel components. Mill finish.

The gang operated multi-blade design with blades closing at 45 degrees permits fine volume control for accurate balancing with minimum disturbance to the airflow pattern. Blades are individually pivoted on 1" (25) centers.

DIFFUSER MOUNT MODELS:

OBD Steel

OBD-A Aluminum

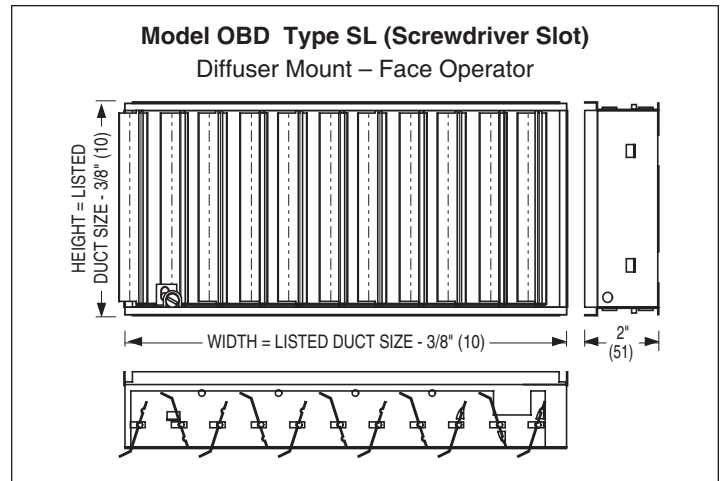
This style of damper mounts directly on the neck and are sized to suit most **Nailor** diffusers. Uses steel barbed S-clips for easy field mounting or removal when ordered separately. Supplied as standard with a screwdriver slot operator (Type SL).

Can be specified as an integral part of the diffuser model by adding a - O (steel) or - OA (aluminum) suffix to the diffuser model.

Available with Type DL Lever Operator for use with 6200, 6400 and 6500 Series Pattern Diffusers and 6600 Series Plaque Diffusers. Permits balancing without removing the diffuser inner core assembly.

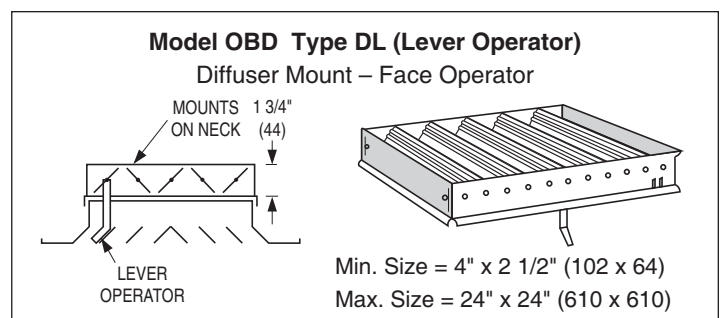
Type SL Operator

The SL Operator incorporates a screwdriver slot, which adjusts from the face of the diffuser. This operator is the standard supplied when ordered separately.



Type DL Operator

The DL Operator incorporates a lever that adjusts without the use of tools. The lever operator extends through the diffuser face.



Air Balancing Devices

DUCT MOUNT MODELS:

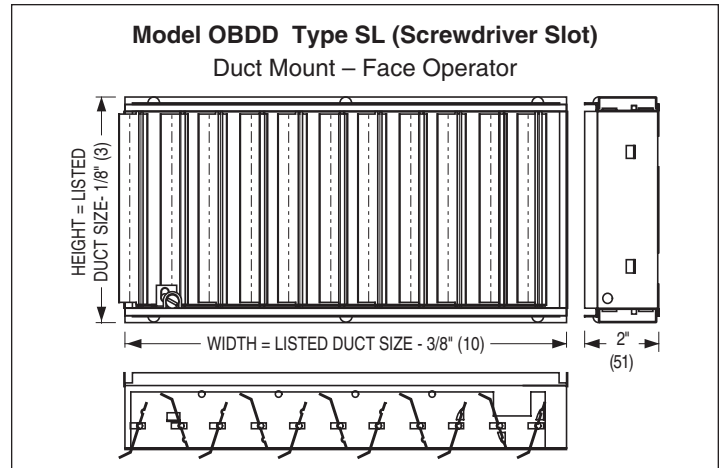
OBDD Steel

OBDD-A Aluminum

Designed to be field mounted independently in the duct, separate from and behind the diffuser. They are sized to suit and offer a friction fit in nominally sized ducts. They are secured with 1/2" (13) long sheet metal screws (by others) through the double walled sub-frame. Min. Size = 4" x 2 1/2" (102 x 64). Max. Size = 24" x 24" (610 x 610).

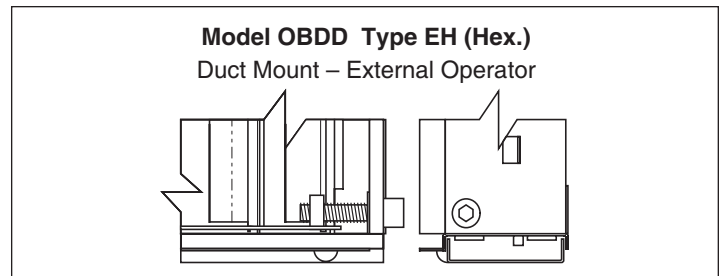
Type SL Operator

These models are supplied with a screwdriver slot face operator that is accessed from inside the duct by removing the diffuser.



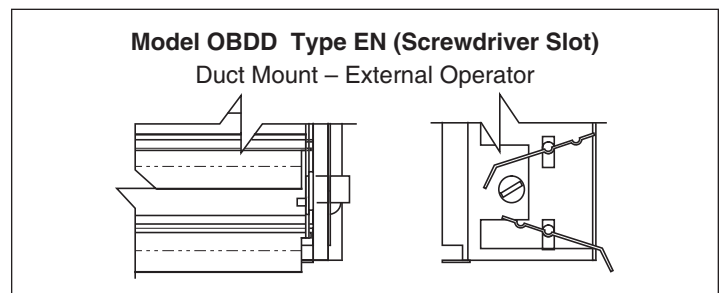
Type EH Operator

These duct mount models feature an external 3/16" (5) hex operator accessible from outside the duct; from the side of the duct when blades run vertically and from underneath the duct when blades run horizontally.



Type EN Operator

These duct mount models feature an external glass-filled nylon screwdriver slot operator accessible from outside the duct; from underneath the duct when blades run vertically, and from the side of the duct when blades run horizontally.



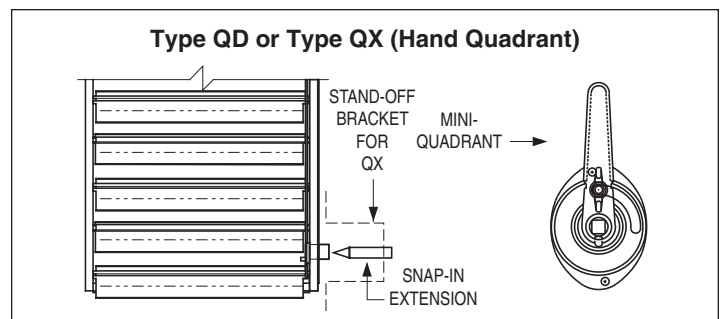
Type QD Operator *

A snap-in shaft extension with 'mini' hand locking quadrant is available as an optional accessory.

Type QX Operator *

A snap-in shaft extension with 'mini' hand locking quadrant and 2" (51) stand-off bracket for externally insulated ducts. Order damper with blades parallel to horizontal duct dimension to ensure quadrant is located on vertical side of the duct.

*Not available on Model OBDD-A

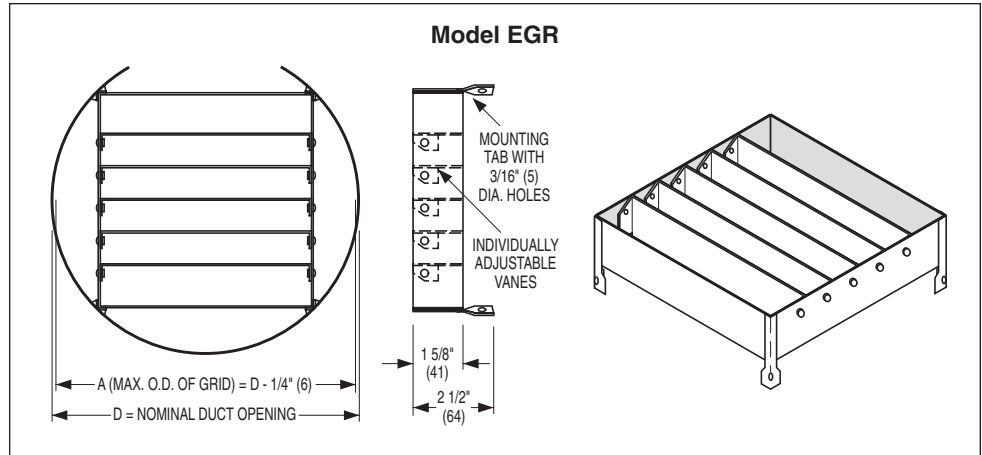


Air Balancing and Directional Control Devices

Equalizing Grid for Round Necks

The **Model EGR** is a duct mounted grid that equalizes the airflow into the branch duct or diffuser neck and provides directional control. They are shipped loose for field installation. The individually adjusted vanes are friction pivoted to hold the desired setting.

Recommended method of installation is flush with the take-off collar and with the vanes perpendicular to the direction of the approaching airflow.

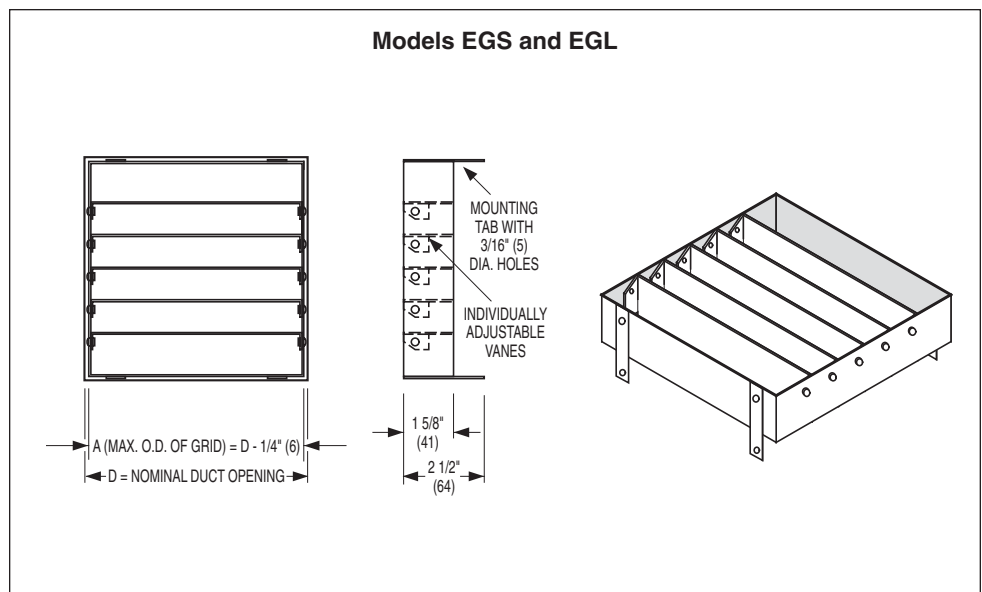


Equalizing Grid for Square and Rectangular Necks

The **Models EGS and EGL** are duct mounted grids that equalize the airflow into the branch duct or diffuser neck and provide directional control. They are shipped loose for field installation. The individually adjusted vanes are friction pivoted to hold the desired setting.

Recommended method of installation is flush with the take-off collar and with the vanes perpendicular to the direction of the approaching airflow.

The suffix 'S' or 'L' indicates blades are parallel to the short or long dimension.



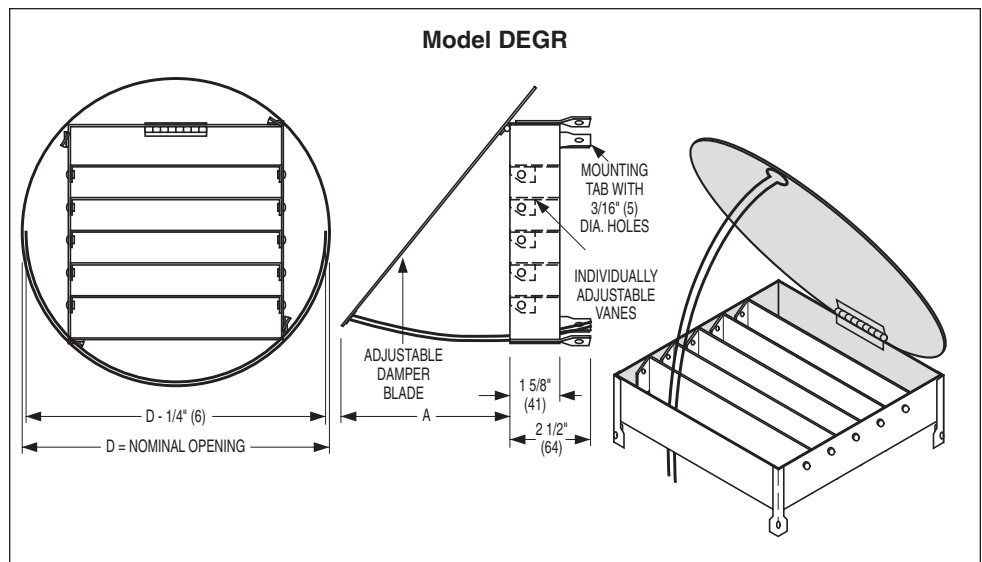
Damper with Equalizing Grid for Round Necks

The **Model DEGR** is a duct mounted combination damper with equalizing grid.

It performs as a volume extractor with dampering to near shut-off as well as equalizing the airflow into the branch duct or diffuser neck and providing directional control.

The individual adjustable vanes are friction pivoted to hold the desired setting.

Damper blade may be adjusted to any angle and locked in position with adjusting wires under screw heads.



Air Balancing and Directional Control Devices

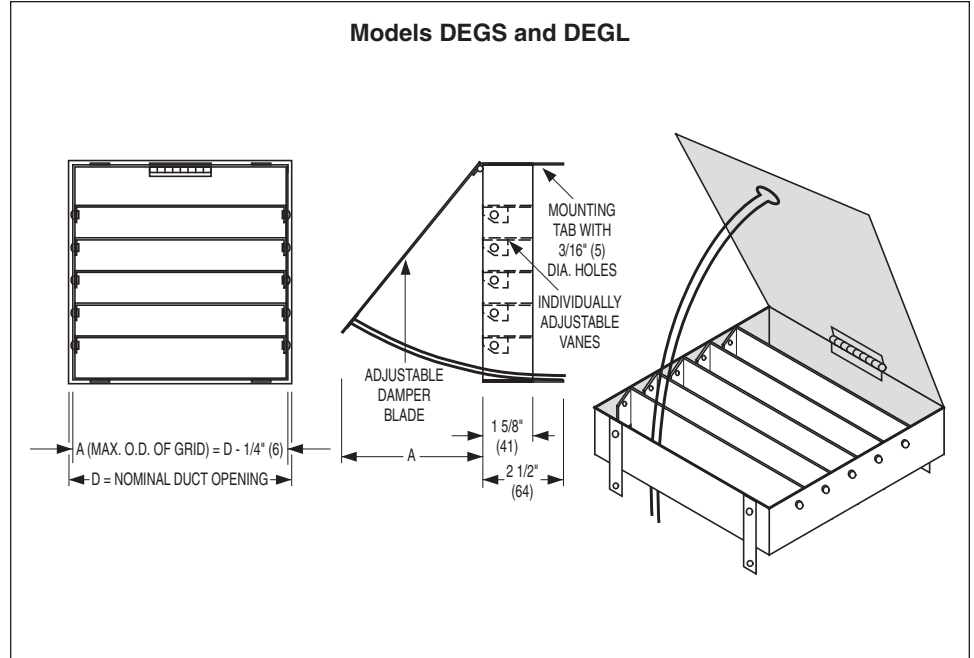
Damper with Equalizing Grid for Square and Rectangular Necks

The **Models DEGS** and **DEGL** are duct mounted combination dampers with equalizing grids. They perform as a volume extractor with dampering to near shut-off as well as equalizing the airflow into the branch duct or diffuser neck and providing directional control.

The individual adjustable vanes are friction pivoted to hold the desired setting.

Damper blade may be adjusted to any angle and locked in position with adjusting wires under screw heads.

The suffix 'S' or 'L' indicates blades are parallel to the short or long dimension.



D

CEILING DIFFUSERS

Volume Extractors

MODEL SERIES

EX Blades on 2" centers

EXD Blades on 1" centers

The **Model Series EX Volume Extractors** uniformly divert air from the main duct into the branch take-off and across the face of a grille or diffuser. Gang-operated parallel blades available on 2" (51) or 1" (25) centers pivot from full open to full closed with blades overlapping for shut-off. The curved blade design improves airflow by reducing turbulence, thereby reducing noise and pressure drop.

Specify or order: Length x Width. (Length is first dimension. Blades are parallel to width, second dimension).

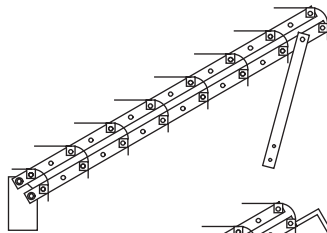
FEATURES:

- Material: Galvanized steel.
- Minimum size: 6" x 4" (152 x 102).
- Maximum size: 36" x 36" (914 x 914).

Operator Types

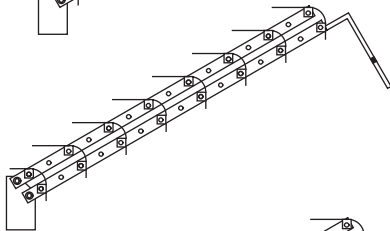
EX/EXD-1

Standard unit with adjusting strap.



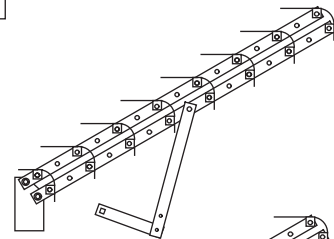
EX/EXD-1-R

Rod operator for external operation.



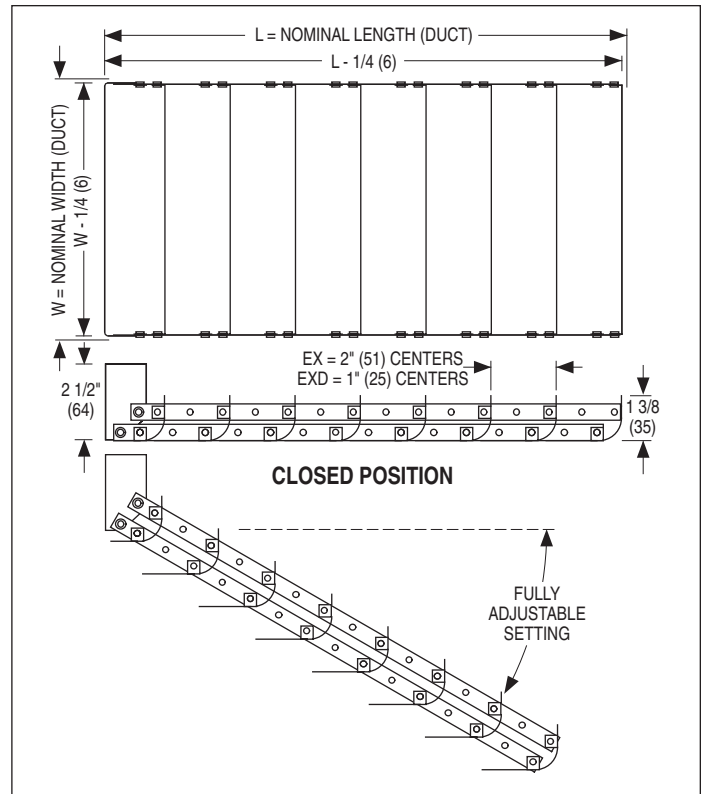
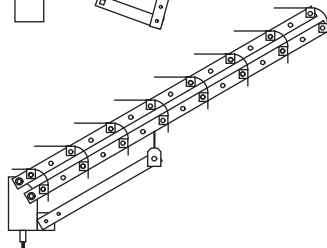
EX/EXD-2

Linkage with 7/16" (11) square hole (2 per unit). Remote operator (eg. Young Regulator #1) by others.



EX/EXD-3

Screw gear operator. Adjusts with 3/16" (5) wrench (by others).



Optional Accessories

RLD

Locking device for Models **EX/EXD-1-R**.

