

## SQUARE AND RECTANGULAR PATTERN CEILING DIFFUSERS

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

### Model:

#### 6400 Fixed Pattern

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



The **Nailor 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), Fineline®, Spline, Tegular or Metal Snap-in). These models therefore offer a great degree of design flexibility.

### FEATURES:

- Spring loaded core. 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.
- Optional extended panels to suit modular ceiling systems.
- Engineered air diffusion patterns for 1, 2, 3 or 4-way blow in a wide selection of square and rectangular neck sizes (see page D44).
- Clean lines with no unsightly visible screws.
- Square-to-round transition adaptors are available (SR option).
- Optional opposed blade damper with screwdriver slot operator.

**Material:** Aluminum.

**Finish:** AW Appliance White baked enamel 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).

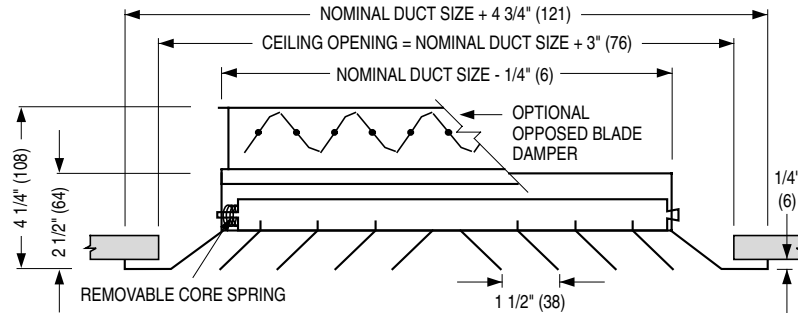
Maximum size:

Types S, B and D: 36" x 36" (914 x 914).

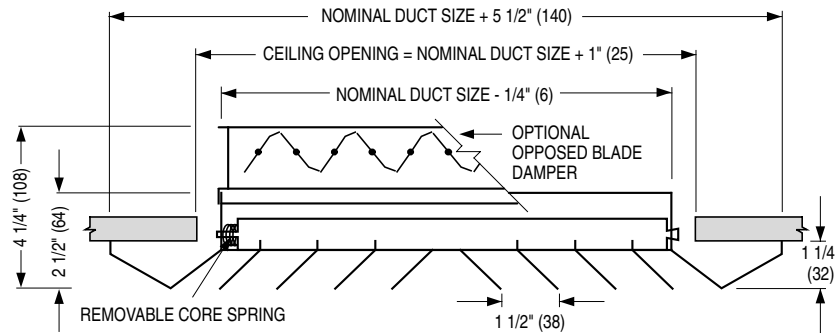
Types L, SP, TL, M and F: see page D42.

## Dimensional Data and Frame Types Model Series 6400

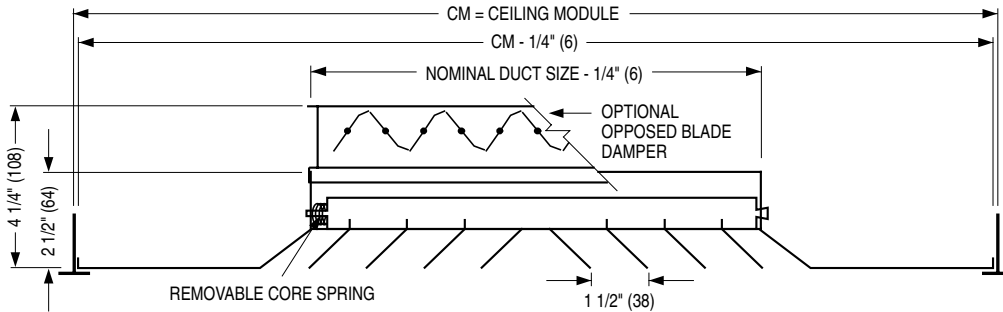
**Type S**  
Surface Mount  
Frame



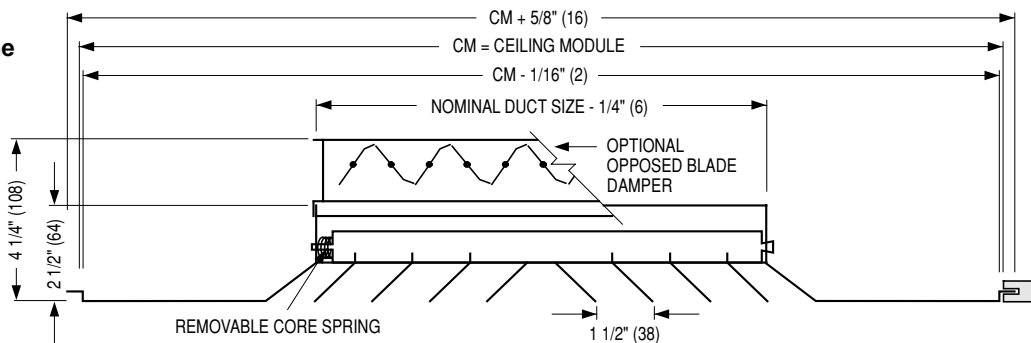
**Type B**  
Beveled Drop  
Face Frame



**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

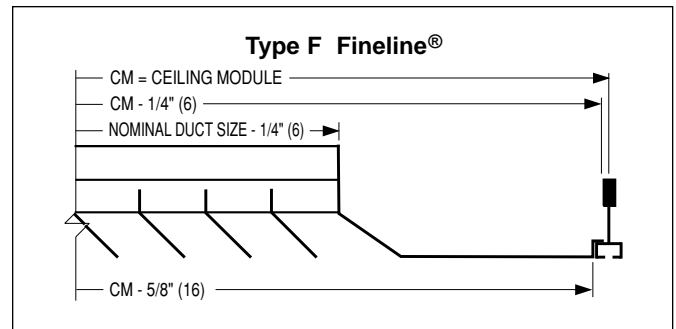
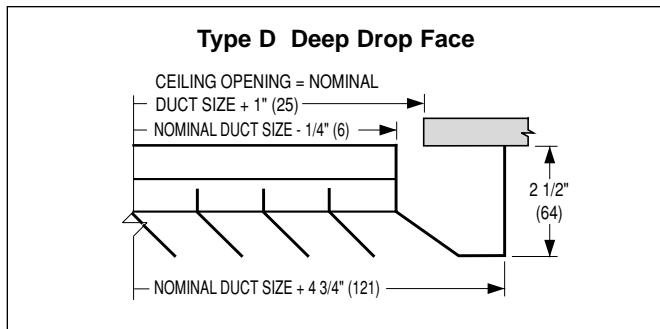
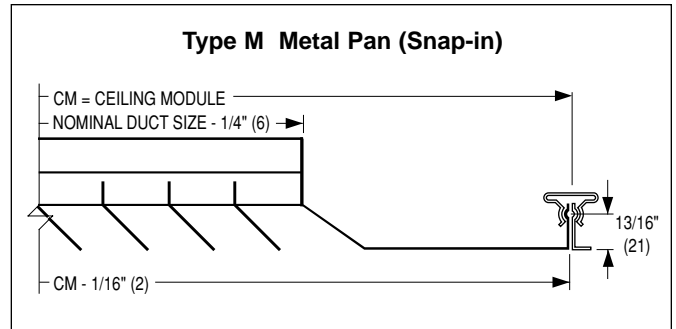
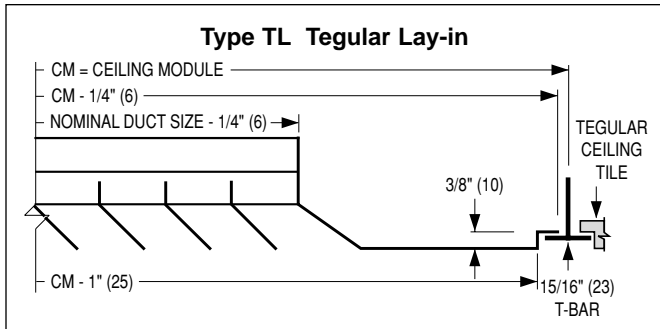
If the ceiling module is more than 3" (76) larger than the neck size of the diffuser in either or both dimensions, a module-sized extended panel will be added.

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

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)	—

Dimensions are in inches (mm).

## Dimensional Data and Frame Types Model Series 6400



**D**

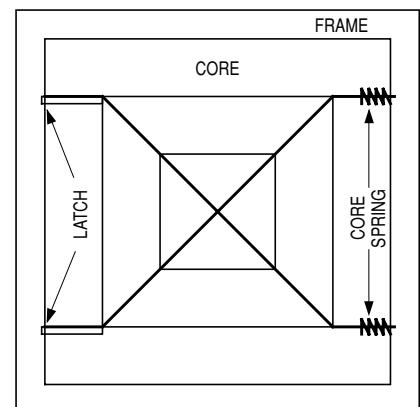
**CEILING DIFFUSERS**

### 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.



## 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 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 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				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				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				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).

## HOW TO SPECIFY OR TO ORDER

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

### High Capacity Pattern Ceiling Diffusers – Model Series 6400

**6400 - O - 9 x 9 - 24 x 24 - L - AW - 4A - SR08**

#### MODEL

- Aluminum Fixed Pattern 6400

#### DAMPER

- No Damper (default) —  
 - Opposed Blade (steel) O  
 - Opposed Blade (alum.) OA

#### NECK SIZE (W x H)

#### PANEL SIZE (TYPES L, SP, M, TL AND F ONLY)

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 20 x 20	500 x 500
- 24 x 12	600 x 300
- 24 x 24	600 x 600
- 48 x 24	1200 x 600

#### FRAME TYPE

- Surface Mount Flat S  
 - T-Bar Lay-In L  
 - Spline SP  
 - Surface Mount Beveled B  
 - Metal Pan M  
 - Tegular (Drop Face) TL  
 - Fineline® F  
 - Surface Mount (Deep Drop) D

#### ACCESSORIES

- None (default) —  
 - Square to Round Transition Collar (04 thru 20 specify) SR  
 - Earthquake Tabs EQT

#### AIR BALANCING DEVICES

**Rectangular Neck:**  
 - Equalizing Grid (long) EGL  
 - Equalizing Grid (short) EGS  
 - Damper/Equal. Grid (long) DEGL  
 - Damper/Equal. Grid (short) DEGS

#### Round Neck:

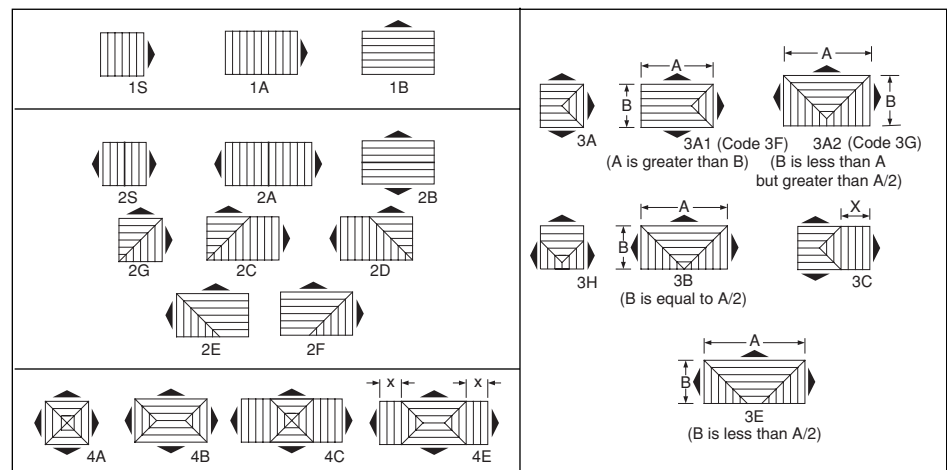
- Radial Sliding Blade Damper 4250  
 - Radial Opposed Blade Damper 4275  
 - Butterfly Damper 4675  
 - Equalizing Grid EGR  
 - Damper/Equalizing Grid DEGR

#### CORE STYLE (See Below).

#### FINISH

- Appliance White (default) AW  
 - Aluminum AL  
 - Special Custom Color SP

#### CORE STYLE CHART



#### Note:

1. Consult text as to limitations of panel, neck size and core style combinations.

#### SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model 6400 High Capacity Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. Units shall be extruded aluminum construction 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 the application shown, which includes an integral collar for connection to the square or rectangular duct size indicated. 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 tools for the purpose of installation, cleaning or damper adjustment.

The finish shall be AW Appliance White baked enamel (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 – 1991.

**D**

**CEILING DIFFUSERS**

## Performance Data

### Model 6400 • Square 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
6 x 6  .25 SQ. FT.	RETURN FACTORS	—SP=1.1 TP NC + 1	75 —		100 10		125 17		150 22		175 26		200 31		225 35	
	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	25	38	31	47	37	56	44	66	50	75	56	85
	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	170 —		225 14		280 20		340 26		395 31		450 35		505 38	
	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	56	85	70	106	84	127	98	148	112	169	126	190
	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	300 10		400 17		500 23		600 28		700 33		800 36		900 39	
	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	100	150	125	187	150	225	175	262	200	300	225	338
	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	465 10		625 19		780 25		935 30		1090 33		1250 38		1400 41	
	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	156	234	195	292	234	351	273	409	312	468	350	527
	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	675 12		900 21		1125 27		1350 31		1575 36		1800 39		2025 42	
	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	225	338	281	422	337	506	394	590	450	675	506	760
	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 D59.

## 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	
	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							
	2S  2G	CFM/SIDE THROW, FT.	458 16-19-28		612 18-22-32		765 20-25-36		917 22-28-39		1070 23-30-42		1225 25-32-44		1375 28-34-47	
	1S	CFM/SIDE THROW, FT.	917 19-24-33		1225 22-28-38		1530 25-32-43		1835 28-34-46		2140 30-36-50		2450 32-39-53		2750 34-41-57	
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 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							
	2S  2G	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	
	1S	CFM/SIDE THROW, FT.	1200 22-25-37		1600 24-30-42		2000 28-34-48		2400 30-36-51		2800 32-39-56		3200 34-42-58		3600 37-44-63	
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 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							
	2S  2G	CFM/SIDE THROW, FT.	937 19-24-33		1250 22-28-38		1562 25-32-43		1875 28-34-46		2187 30-36-50		2500 32-39-53		2812 34-41-57	
	1S	CFM/SIDE THROW, FT.	1875 24-30-41		2500 28-34-47		3125 32-39-53		3750 34-41-58		4375 36-44-62		5000 39-47-66		5625 41-50-70	
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 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							
	2S  2G	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	
	1S	CFM/SIDE THROW, FT.	2700 26-32-45		3600 31-37-52		4500 35-42-60		5400 38-45-64		6300 40-48-69		7200 43-51-75		8100 46-56-79	

For performance notes, see page D59.

D  
CEILING DIFFUSERS

## Performance Data

### Model 6400 • Rectangular Neck

**D**  
**CEILING DIFFUSERS**

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VEL. VP TP	300		400		500		600		700		800		900		
			.006 .029	110 —	.010 .051	150 14	.016 .080	185 20	.022 .116	225 25	.031 .157	260 29	.040 .205	300 33	.050 .260	335 37	
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 6-9-11	18 4-5-8	50 8-10-13	25 5-6-9	62 9-11-15	31 6-8-10	75 10-12-16	37 6-8-11	87 10-13-17	44 8-9-12	100 11-14-18	50 8-9-12	112 12-15-19	56 9-10-13	
	3A1	CFM/SIDE THROW, FT.	47 8-9-12	18 4-5-8	62 9-10-14	25 5-6-9	78 10-11-16	31 6-8-10	94 11-12-17	37 6-8-11	109 12-13-18	44 8-9-12	125 12-14-19	50 8-9-12	140 13-15-22	56 9-10-13	
	3A2	CFM/SIDE THROW, FT.	42 6-9-11	35 5-6-10	55 8-10-13	47 6-8-11	70 9-11-15	58 8-9-12	84 10-12-16	70 8-10-13	98 10-13-17	82 9-10-14	112 11-14-18	94 9-11-15	126 12-15-19	105 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	2D 2F	CFM/SIDE THROW, FT.	75 9-11-15	37 6-9-11	100 10-12-17	50 8-10-13	125 11-14-19	62 9-11-15	150 12-15-22	75 10-12-16	175 13-16-22	87 10-13-17	200 14-17-24	100 11-14-18	225 15-18-25	112 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	4C	CFM/SIDE THROW, FT.	56 9-11-14	18 4-5-8	75 10-12-16	25 5-6-9	94 11-14-18	31 6-8-10	113 12-15-19	37 6-8-11	131 13-16-22	44 8-9-12	150 14-17-22	50 8-9-12	169 15-18-24	56 9-10-13
	3A1	CFM/SIDE THROW, FT.	66 9-11-15	18 4-5-8	87 10-12-17	25 5-6-9	109 11-14-19	31 6-8-10	131 12-15-22	37 6-8-11	153 13-16-22	44 8-9-12	175 14-17-24	50 8-9-12	197 15-18-25	56 9-10-13	
	3B	CFM/SIDE THROW, FT.	75 6-9-11	37 6-9-11	100 8-10-13	50 8-10-13	126 9-11-15	62 9-11-15	150 10-12-16	75 10-12-16	176 10-13-17	87 10-13-17	200 11-14-18	100 11-14-18	226 12-15-19	112 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	2D 2F	CFM/SIDE THROW, FT.	112 11-13-18	37 6-9-11	150 13-15-22	50 8-10-13	188 15-17-24	62 9-11-15	225 16-18-26	75 10-12-16	263 17-19-28	87 10-13-17	300 18-22-30	100 11-14-18	338 19-22-32	112 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	4C	CFM/SIDE THROW, FT.	75 9-11-15	18 4-5-8	100 10-12-17	25 5-6-9	125 11-14-19	31 6-8-10	150 12-15-22	37 6-8-11	175 13-16-22	44 8-9-12	200 14-17-24	50 8-9-12	225 15-18-25	56 9-10-13
	4E	CFM/SIDE THROW, FT.	56 9-11-14	37 8-9-12	75 10-12-16	50 9-10-14	94 11-14-18	62 10-11-16	113 12-15-19	75 11-12-17	131 13-16-22	87 12-13-18	150 14-17-22	100 12-14-19	169 15-18-24	112 13-15-22	
	3A1	CFM/SIDE THROW, FT.	84 10-11-16	18 4-5-8	112 11-13-18	25 5-6-9	140 12-15-20	31 6-8-10	169 13-16-22	37 6-8-11	197 14-17-23	44 8-9-12	225 15-18-25	50 8-9-12	253 16-19-28	56 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	2D 2F	CFM/SIDE THROW, FT.	150 11-13-18	37 6-9-11	200 13-15-22	50 8-10-13	250 15-17-24	62 9-11-15	300 16-18-26	75 10-12-16	350 17-19-28	87 10-13-17	400 18-22-30	100 11-14-18	450 19-22-32	112 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 D59.

## 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
18 x 6  .75 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 2	CFM NC	225		300		375		450		525		600		675	
	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	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		435		525		610		700		785	
	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	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		500		600		700		800		900	
	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	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 D59.

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

For performance notes, see page D59.

## 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				
18 x 9  1.125 SQ. FT.	RETURN FACTORS	—SP=2.1 TP NC + 3	335		450		560		675		790		900		1010				
			CFM NC	A	B	A	B	A	B	A	B	A	B	A	B	A	B		
18 x 9  1.125 SQ. FT.	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	2D	2F	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		
					14-17-24		16-19-28		18-22-32		19-23-34		22-25-36		22-26-39		24-29-41		
21 x 9  1.125 SQ. FT.	RETURN FACTORS	—SP=2.5 TP NC + 4	CFM NC	395		525		655		785		915		1050		1180			
				A	B	A	B	A	B	A	B	A	B	A	B	A	B		
	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	2D	2F	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		
				15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44			
24 x 9  1.5 SQ. FT.	RETURN FACTORS	—SP=2.9 TP NC + 4	CFM NC	450		600		750		900		1050		1200		1350			
				A	B	A	B	A	B	A	B	A	B	A	B	A	B		
	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	2D	2F	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		
				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 x .82 = B.

For performance notes, see page D59.

**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	—
30 x 9  1.875 SQ. FT.	RETURN FACTORS —SP=3.9 TP NC + 5	CFM NC	560		750		935		1125		1310		1500		1685	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
	4B  4C	CFM/SIDE THROW, FT.	238 13-16-22	42 5-6-10	319 15-18-25	56 6-8-11	398 17-20-29	70 8-9-12	478 18-22-32	84 8-10-13	557 19-23-34	98 9-10-14	638 22-25-36	112 9-11-15	716 22-28-38	126 10-12-16
	4E	CFM/SIDE THROW, FT.	155 12-15-20	126 11-13-18	206 14-17-23	169 13-15-22	258 16-19-26	211 15-17-24	310 17-22-29	253 16-18-26	361 18-22-30	295 17-19-28	413 19-24-33	337 18-22-30	465 22-25-35	379 19-22-32
	3A1	CFM/SIDE THROW, FT.	259 13-16-22	42 5-6-10	347 15-18-25	56 6-8-11	433 17-20-29	70 8-9-12	520 18-22-32	84 8-10-13	606 19-23-34	98 9-10-14	694 22-25-36	112 9-11-15	779 22-28-38	126 10-12-16
	2A 2B	CFM/SIDE THROW, FT.	281 14-17-24		375 16-19-28		468 18-22-32		562 19-23-34		655 22-25-36		750 22-26-39		842 24-29-41	
36 x 9  2.25 SQ. FT.	RETURN FACTORS —SP=5.0 TP NC + 6	CFM NC	675		900		1125		1350		1575		1800		2025	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
	4B  4C	CFM/SIDE THROW, FT.	295 14-17-24	42 5-6-10	394 16-19-28	56 6-8-11	492 18-22-32	70 8-9-12	591 19-23-34	84 8-10-13	689 22-25-36	98 9-10-14	788 22-26-39	112 9-11-15	886 24-29-41	126 10-12-16
	4E	CFM/SIDE THROW, FT.	183 12-15-20	155 12-15-20	244 14-17-23	206 14-17-23	305 16-19-26	258 16-19-26	366 17-22-29	310 17-22-29	427 18-22-31	361 18-22-31	488 19-24-33	413 19-24-33	549 22-25-35	465 22-25-35
	3A1	CFM/SIDE THROW, FT.	316 14-17-24	42 5-6-10	422 16-19-28	56 6-8-11	527 18-22-32	70 8-9-12	633 19-23-34	84 8-10-13	738 22-25-36	98 9-10-14	844 22-26-39	112 9-11-15	949 24-29-41	126 10-12-16
	2A 2B	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	
15 x 12  1.25 SQ. FT.	RETURN FACTORS —SP=1.6 TP NC + 2	CFM NC	375		500		625		750		875		1000		1125	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
	4B  4C	CFM/SIDE THROW, FT.	112 9-11-15	75 6-9-11	150 10-12-17	100 8-10-13	187 11-14-19	125 9-11-15	225 12-15-22	150 10-12-16	262 13-16-22	175 10-13-17	300 14-17-24	200 11-14-18	337 15-18-25	225 12-15-19
	3A1	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
	3A2	CFM/SIDE THROW, FT.	117 8-10-13	129 10-11-16	156 9-11-15	172 11-13-18	195 10-12-17	215 12-15-20	234 11-13-18	258 13-16-22	273 12-14-19	301 14-17-23	312 12-15-22	344 15-18-25	351 13-16-22	387 16-19-28
	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		567 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 D59.

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	CFM NC	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		750		900		1050		1200		1350	
	4B  4C	CFM/SIDE THROW, FT.	150	75	200	100	250	125	300	150	350	175	400	200	450	225
	3A1	CFM/SIDE THROW, FT.	187	75	250	100	312	125	375	150	437	175	500	200	562	225
	3A2	CFM/SIDE THROW, FT.	168	141	225	187	281	234	337	281	394	328	450	375	506	422
	2A 2B	CFM/SIDE THROW, FT.	225		300		375		450		525		600		675	
	2C 2E  2D 2F	CFM/SIDE THROW, FT.	300	150	400	200	500	250	600	300	700	350	800	400	900	450
1A 1B	CFM/SIDE THROW, FT.	450		600		750		900		1050		1200		1350		
21 x 12  1.75 SQ. FT.	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	525		700		875		1050		1225		1400		1575	
	4B  4C	CFM/SIDE THROW, FT.	187	75	250	100	312	125	375	150	437	175	500	200	562	225
	4E	CFM/SIDE THROW, FT.	150	112	200	150	250	187	300	225	350	262	400	300	450	337
	3A1	CFM/SIDE THROW, FT.	225	75	300	100	375	125	450	150	525	175	600	200	675	225
	3A2	CFM/SIDE THROW, FT.	148	230	197	306	246	382	295	460	345	535	394	612	443	688
	2A 2B	CFM/SIDE THROW, FT.	262		350		437		525		612		700		787	
2C 2E  2D 2F	CFM/SIDE THROW, FT.	375	150	500	200	625	250	750	300	875	350	1000	400	1125	450	
1A 1B	CFM/SIDE THROW, FT.	525		700		875		1050		1225		1400		1575		
24 x 12  2.0 SQ. FT.	RETURN FACTORS —SP=2.6 TP NC + 5	CFM NC	600		800		1000		1200		1400		1600		1800	
	4B  4C	CFM/SIDE THROW, FT.	225	75	300	100	375	125	450	150	525	175	600	200	675	225
	4E	CFM/SIDE THROW, FT.	150	150	200	200	250	250	300	300	350	350	400	400	450	450
	3A1	CFM/SIDE THROW, FT.	262	75	350	100	437	175	525	150	612	175	700	200	787	225
	3B	CFM/SIDE THROW, FT.	300	150	400	200	500	250	600	300	700	350	800	400	900	450
	2A 2B	CFM/SIDE THROW, FT.	300		400		500		600		700		800		900	
2C 2E  2D 2F	CFM/SIDE THROW, FT.	450	150	600	200	750	250	900	300	1050	350	1200	400	1350	450	
1A 1B	CFM/SIDE THROW, FT.	600		800		1000		1200		1400		1600		1800		

**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 D59.

## Performance Data

### Model 6400 • Rectangular Neck

**D**  
**CEILING DIFFUSERS**

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							
30 x 12 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	14-17-24	6-9-11	16-19-28	8-10-13	18-22-32	9-11-15	19-23-34	10-12-16	21-25-36	10-13-17	22-26-39	11-14-18	24-29-41	12-15-19
	4E	CFM/SIDE THROW, FT.	183 183	250 250	313 313	375 375	437 437	500 500	562 562	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.	337 75	450 100	562 125	675 150	787 175	900 200	1012 225	14-17-24	6-9-11	16-19-28	8-10-13	18-22-32	9-11-15	19-23-34	10-12-16	21-25-36	10-13-17	22-26-39	11-14-18	24-29-41	12-15-19
	2A  2B	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	
	2C  2E  2D  2F	CFM/SIDE THROW, FT.	600 150	800 200	1000 250	1200 300	1400 350	1600 400	1800 450	17-22-30	10-12-17	20-24-34	11-14-19	23-28-39	12-16-22	24-30-41	13-17-23	26-32-44	14-18-25	29-35-47	15-19-26	31-37-50	16-22-29
	1A  1B	CFM/SIDE THROW, FT.	750	1000	1250	1500	1750	2000	2250	18-22-32		22-25-36		24-29-41		26-32-44		28-34-47		30-36-50		32-38-53	
36 x 12 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	15-18-25	6-9-11	17-22-30	8-10-13	19-24-34	9-11-15	22-26-36	10-12-16	22-28-39	10-13-17	24-30-42	11-14-18	25-32-44	12-15-19
	4E	CFM/SIDE THROW, FT.	225 225	300 300	375 375	450 450	525 525	600 600	675 675	13-16-22	13-16-22	15-18-25	15-18-25	17-20-29	17-20-29	18-22-32	18-22-32	19-23-34	19-23-34	22-25-36	22-25-36	22-28-38	22-28-38
	3A1	CFM/SIDE THROW, FT.	412 75	550 100	687 125	825 150	962 175	1100 200	1237 225	15-18-25	6-9-11	17-22-30	8-10-13	19-24-34	9-11-15	22-26-36	10-12-16	22-28-39	10-13-17	24-30-42	11-14-18	25-32-44	12-15-19
	2A  2B	CFM/SIDE THROW, FT.	450	600	750	900	1050	1200	1350	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44	
	2C  2E  2D  2F	CFM/SIDE THROW, FT.	750 150	1000 200	1250 250	1500 300	1750 350	2000 400	2250 450	18-22-32	10-12-17	22-25-36	11-14-19	24-29-41	12-16-22	26-32-44	13-17-23	28-34-47	14-18-25	30-36-50	15-19-26	32-38-53	16-22-29
	1A  1B	CFM/SIDE THROW, FT.	900	1200	1500	1800	2100	2400	2700	19-24-33		22-28-38		25-32-43		28-34-46		30-36-50		32-39-53		34-41-57	
18 x 15 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	10-12-17	8-10-13	11-14-19	9-11-15	12-16-22	10-12-17	13-17-23	11-13-18	14-18-25	12-14-19	15-19-26	12-15-22	16-22-29	13-16-22
	3A1	CFM/SIDE THROW, FT.	222 117	297 156	371 195	445 234	519 273	594 312	668 351	13-16-22	8-10-13	15-18-25	9-11-15	17-20-29	10-12-17	18-22-32	11-13-18	19-23-34	12-14-19	22-25-36	12-15-22	22-28-38	13-16-22
	3A2	CFM/SIDE THROW, FT.	168 197	225 262	281 328	337 394	394 459	450 525	506 590	9-11-15	12-15-20	10-12-17	14-17-23	11-14-19	16-19-26	12-15-22	17-22-29	13-16-22	18-22-31	14-17-24	19-24-33	15-18-25	22-25-35
	2A  2B	CFM/SIDE THROW, FT.	281	375	468	562	656	750	843	14-17-24		16-19-28		18-22-32		19-23-34		22-25-36		22-26-39		24-29-41	
	2C  2E  2D  2F	CFM/SIDE THROW, FT.	329 234	438 312	547 390	657 468	766 546	876 624	985 702	17-22-30	12-15-20	20-24-34	14-17-23	23-28-39	16-19-26	24-30-41	17-22-29	26-32-44	18-22-31	29-35-47	19-24-33	31-37-50	22-25-35
	1A  1B	CFM/SIDE THROW, FT.	562	750	937	1125	1312	1500	1687	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47	

**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 D59.

## 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
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	117	281	156	361	195	422	234	493	273	563	312	634	351
	4E	CFM/SIDE THROW, FT.	164	164	218	218	273	273	327	327	382	382	437	437	491	491
	3A1	CFM/SIDE THROW, FT.	269	117	359	156	448	195	539	234	629	273	719	312	809	351
	3A2	CFM/SIDE THROW, FT.	230	213	306	284	382	355	460	426	535	498	612	569	688	641
	2A 2B	CFM/SIDE THROW, FT.	327		437		596		656		766		875		985	
	2C  2D 2E  2F	CFM/SIDE THROW, FT.	422	234	563	312	702	390	844	468	966	546	1126	624	1268	702
	1A 1B	CFM/SIDE THROW, FT.	655		875		1092		1312		1532		1750		1970	
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
	4E	CFM/SIDE THROW, FT.	211	164	281	218	352	273	422	327	492	382	563	437	633	491
	3A1	CFM/SIDE THROW, FT.	316	117	422	156	527	195	633	234	738	273	844	312	949	351
	3A2	CFM/SIDE THROW, FT.	300	225	400	300	500	375	600	450	700	525	800	600	900	675
	2A 2B	CFM/SIDE THROW, FT.	375		500		625		750		875		1000		1125	
	2C  2D 2E  2F	CFM/SIDE THROW, FT.	516	234	688	312	860	390	1032	468	1204	546	1376	624	1548	702
	1A 1B	CFM/SIDE THROW, FT.	750		1000		1250		1500		1750		2000		2250	
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
	4E	CFM/SIDE THROW, FT.	258	211	344	281	430	352	516	422	602	492	688	583	775	633
	3A1	CFM/SIDE THROW, FT.	410	117	547	156	685	195	820	234	958	273	1094	312	1224	351
	3B	CFM/SIDE THROW, FT.	468	234	625	312	782	391	937	469	1095	547	1250	625	1406	702
	2A 2B	CFM/SIDE THROW, FT.	468		625		782		937		1095		1250		1405	
	2C  2D 2E  2F	CFM/SIDE THROW, FT.	702	234	938	312	1175	390	1407	468	1644	546	1876	624	2108	702
	1A 1B	CFM/SIDE THROW, FT.	937		1250		1565		1875		2190		2500		2810	

**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 D59.

## 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
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	594	156	742	195	891	234	1039	273	1188	312	1336	351
	4E	CFM/SIDE THROW, FT.	306	258	408	344	510	430	612	516	714	602	816	688	918	775
	3A1	CFM/SIDE THROW, FT.	504	117	672	156	840	195	1008	234	1176	273	1344	312	1512	351
	2A  2B	CFM/SIDE THROW, FT.	562		750		937		1125		1312		1500		1682	
	2C  2E  2D  2F	CFM/SIDE THROW, FT.	890	234	1188	312	1485	390	1782	468	2079	546	2376	624	2873	702
1A  1B	CFM/SIDE THROW, FT.	1125		1500		1875		2250		2625		3000		3375		
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	300	225	375	280	450	337	526	394	600	450	674	506
	3A1	CFM/SIDE THROW, FT.	309	169	412	225	514	281	619	337	723	394	825	450	927	506
	3A2	CFM/SIDE THROW, FT.	279	230	372	306	464	382	557	460	652	535	744	612	836	688
	2A  2B	CFM/SIDE THROW, FT.	393		525		655		787		920		1050		1180	
	2C  2E  2D  2F	CFM/SIDE THROW, FT.	450	338	600	450	750	560	900	675	1060	790	1200	900	1350	1010
1A  1B	CFM/SIDE THROW, FT.	787		1050		1310		1575		1840		2100		2360		
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	375	225	469	281	563	337	656	394	750	450	844	506
	4E	CFM/SIDE THROW, FT.	225	225	300	300	375	375	450	450	525	525	600	600	675	675
	3A1	CFM/SIDE THROW, FT.	366	169	487	225	609	281	731	337	853	394	975	450	1098	506
	3A2	CFM/SIDE THROW, FT.	300	300	400	400	500	500	600	600	700	700	800	800	900	900
	2A  2B	CFM/SIDE THROW, FT.	450		600		750		900		1050		1200		1350	
2C  2E  2D  2F	CFM/SIDE THROW, FT.	562	338	750	450	938	562	1125	675	1313	787	1500	900	1688	1012	
1A  1B	CFM/SIDE THROW, FT.	900		1200		1500		1800		2100		2400		2700		

**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 x .82 = B.

For performance notes, see page D59.

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
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	525	225	657	281	788	337	918	394	1050	450	1181	506
	4E	CFM/SIDE THROW, FT.	281	281	375	375	469	469	563	563	657	657	750	750	845	845
	3A1	CFM/SIDE THROW, FT.	478	169	637	225	797	281	956	337	1115	394	1275	450	1434	506
	3A2	CFM/SIDE THROW, FT.	469	327	625	437	782	546	937	656	1093	766	1250	875	1406	984
	2A	CFM/SIDE THROW, FT.	562		750		937		1125		1312		1500		1687	
	2B	CFM/SIDE THROW, FT.	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47	
	2C  2E	CFM/SIDE THROW, FT.	787	337	1050	450	1313	562	1575	675	1838	787	2100	900	2363	1012
1A  1B	CFM/SIDE THROW, FT.	1125		1500		1875		2250		2625		3000		3375		
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	675	225	844	281	1013	337	1181	394	1350	450	1519	506
	4E	CFM/SIDE THROW, FT.	339	339	452	452	565	565	678	678	791	791	904	904	1020	1020
	3A1	CFM/SIDE THROW, FT.	591	169	787	225	984	281	1181	337	1378	394	1575	450	1772	506
	3B	CFM/SIDE THROW, FT.	675	337	900	450	1125	562	1350	675	1575	787	1800	900	2025	1012
	2A	CFM/SIDE THROW, FT.	675		900		1125		1350		1575		1800		2025	
	2B	CFM/SIDE THROW, FT.	17-22-30		20-24-34		23-28-39		24-30-41		26-32-44		29-35-47		31-37-50	
	2C  2E	CFM/SIDE THROW, FT.	1010	337	1350	450	1688	562	2025	675	2363	787	2700	900	3038	1012
1A  1B	CFM/SIDE THROW, FT.	1350		1800		2250		2700		3150		3600		4050		
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	394	306	493	382	590	460	690	535	788	612	887	688
	3A1	CFM/SIDE THROW, FT.	410	230	547	306	684	382	820	460	957	535	1094	612	1231	688
	3A2	CFM/SIDE THROW, FT.	375	300	500	400	625	500	750	600	875	700	1000	800	1125	900
	2A	CFM/SIDE THROW, FT.	525		700		875		1050		1225		1400		1575	
	2B	CFM/SIDE THROW, FT.	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47	
	2C  2E	CFM/SIDE THROW, FT.	591	459	788	612	986	764	1180	920	1380	1070	1576	1224	1774	1376
	1A  1B	CFM/SIDE THROW, FT.	1050		1400		1750		2100		2450		2800		3150	

**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 D59.

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

**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 D59.

## 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=3.3 TP NC + 8	1800 18		2400 25		3000 31		3600 36		4200 40		4800 43		5400 46		
	A B		A B	A B	A B	A B	A B	A B	A B	A B	A B	A B	A B	A B	A B		
36 x 24  6.0 SQ. FT.			CFM/SIDE THROW, FT.	600 300	800 400	1000 500	1200 600	1400 700	1600 800	1800 900	17-22-30 11-13-18	20-24-34 13-15-22	23-28-39 15-17-24	24-30-41 16-18-26	26-32-44 17-19-28	29-35-47 18-22-30	31-37-50 19-22-32
			CFM/SIDE THROW, FT.	450 450	600 600	750 750	900 900	1050 1050	1200 1200	1350 1350	15-18-25 15-18-25	17-22-30 17-22-30	19-24-34 19-24-34	22-26-36 22-26-36	22-28-39 22-28-39	24-30-42 24-30-42	25-32-41 25-32-44
			CFM/SIDE THROW, FT.	750 300	1000 400	1250 500	1500 600	1750 700	2000 800	2250 900	18-22-32 11-13-18	22-25-36 13-15-22	24-29-41 15-17-24	26-32-44 16-18-26	28-34-47 17-19-28	30-36-50 18-22-30	32-38-53 19-22-32
			CFM/SIDE THROW, FT.	676 562	900 750	1125 937	1350 1125	1575 1312	1800 1500	2025 1687	16-19-28 14-17-24	18-22-32 16-19-28	20-25-36 18-22-32	22-28-39 19-23-34	23-30-42 22-25-36	25-32-44 22-26-39	28-34-47 24-29-41
			CFM/SIDE THROW, FT.	900	1200	1500	1800	2100	2400	2700	19-24-33	22-28-38	25-32-43	28-34-46	30-36-50	32-39-53	34-41-57
			CFM/SIDE THROW, FT.	1200 600	1600 800	2000 1000	2400 1200	2800 1400	3200 1600	3600 1800	22-25-37 15-18-25	24-30-42 17-22-30	28-34-48 19-24-34	30-36-51 22-26-36	32-39-56 22-28-39	34-42-58 24-30-42	37-44-63 25-32-44
			CFM/SIDE THROW, FT.	1800	2400	3000	3600	4200	4800	5400	24-30-41	28-34-47	32-39-53	34-41-58	36-44-62	39-47-67	41-50-72
	36 x 30  7.5 SQ. FT.	RETURN FACTORS	—SP=3.4 TP NC + 8	2250 19		3000 26		3750 32		4500 37		5250 41		6000 44		6750 47	
A B			A B	A B	A B	A B	A B	A B	A B	A B	A B	A B	A B	A B	A B		
			CFM/SIDE THROW, FT.	657 468	875 625	1093 782	1313 937	1532 1093	1750 1250	1969 1406	17-22-30 12-15-20	20-24-34 14-17-23	23-28-39 16-19-26	24-30-41 17-22-29	26-32-44 18-22-31	29-35-47 19-24-33	31-37-50 22-25-35
			CFM/SIDE THROW, FT.	890 468	1187 625	1484 782	1781 937	2078 1093	2375 1250	2672 1406	19-24-33 12-15-20	22-28-38 14-17-23	25-32-43 16-19-26	28-34-46 17-22-29	30-36-50 18-22-31	32-39-53 19-24-33	34-41-57 22-25-35
			CFM/SIDE THROW, FT.	787 675	1050 900	1312 1125	1575 1350	1837 1575	2100 1800	2362 2025	18-22-32 13-16-22	22-25-36 15-18-25	24-29-41 17-20-29	26-32-44 18-22-32	28-34-47 19-23-34	30-36-50 22-25-36	32-38-53 22-28-38
			CFM/SIDE THROW, FT.	1125	1500	1875	2250	2625	3000	3375	20-25-35	23-29-40	26-33-45	29-35-49	31-38-52	33-40-57	35-43-60
			CFM/SIDE THROW, FT.	1312 938	1750 1250	2188 1562	2625 1875	3063 2187	3500 2500	3938 2812	22-25-37 17-22-30	24-30-42 20-24-34	28-34-48 23-28-39	30-36-51 24-30-41	32-39-56 26-32-44	34-42-58 29-35-47	37-44-63 31-37-50
			CFM/SIDE THROW, FT.	2250	3000	3750	4500	5250	6000	6750	24-30-41	28-34-47	32-39-53	34-41-58	36-44-62	39-47-67	41-50-72

**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 - 1991.

**D**  
CEILING DIFFUSERS

## 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 D46).

- $NC = 23 + 7 = 30$
- 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 D46).

- 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 ( $\Delta T$ ) 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.)	MAXIMUM AIRFLOW PER DIFFUSER (CFM)				MAX. REC. COOLING TEMP. DIFFERENTIAL $\Delta T$
	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