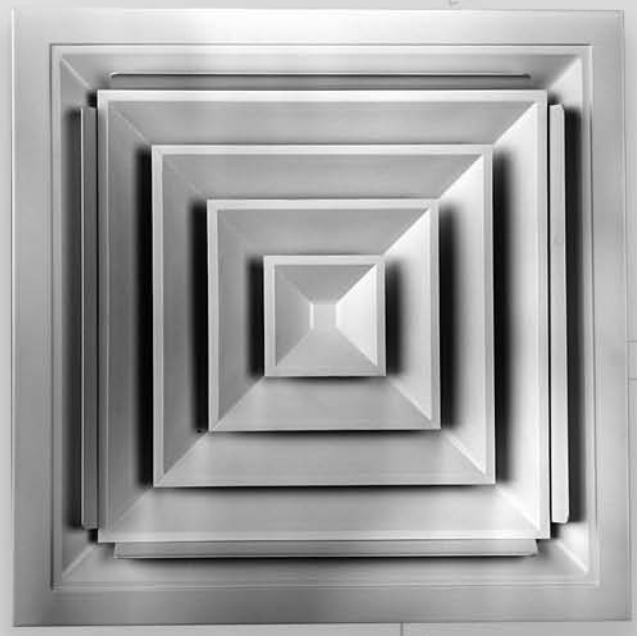
CEILING DIFFUSERS



Nailor Industries Inc.

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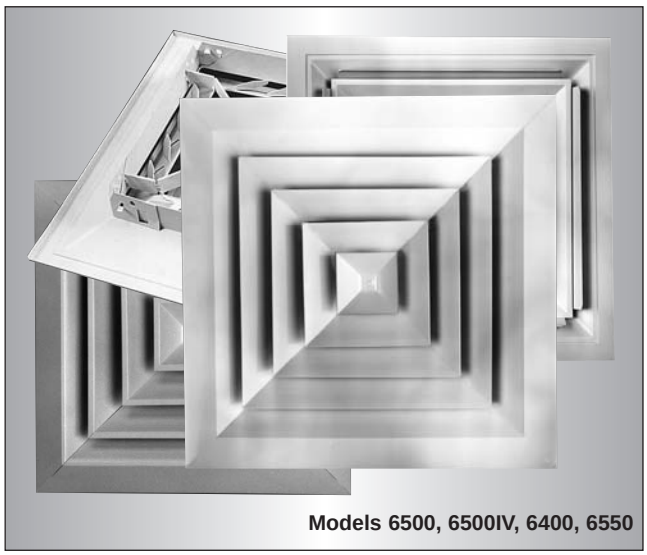
GENERAL PRODUCT OVERVIEW

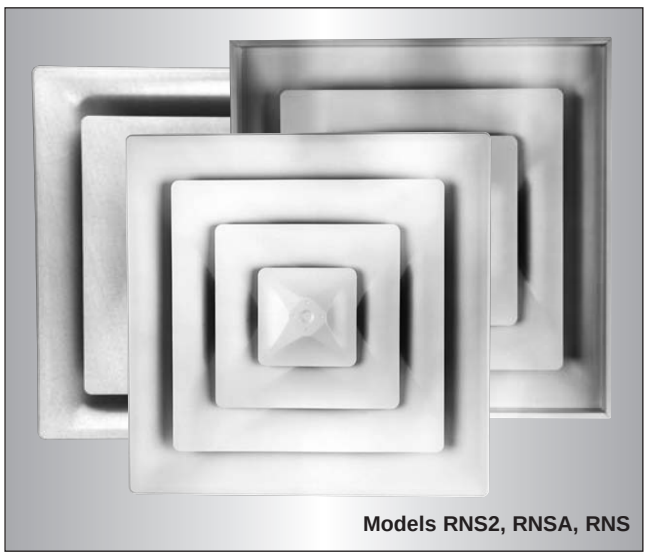
Ceiling Diffusers

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.



Models 6500, 6500IV, 6400, 6550



Models RNS2, RNSA, RNS

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 Construction –

Fixed Pattern – Model 6500	**See Page D13**
Adjustable Pattern – Model 6550	**See Page D13**
Induction Vane – Model 6500IV	**See Page D34**
Suffix '-O' adds a steel OBD	

Aluminum Construction –

Fixed Pattern – Model 6200	**See Page D13**
Adjustable Pattern – Model 6250	**See Page D13**
Induction Vane – Model 6200IV	**See Page D34**
Suffix '-O' adds a steel OBD	
Suffix '-OA' adds an aluminum OBD	

Aluminum High Capacity –

Fixed Pattern – Model 6400	**See Page D42**
Induction Vane – Model 6400IV	**See Page D62**
Suffix '-O' adds a steel OBD	
Suffix '-OA' adds an aluminum OBD	

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.

Fixed Pattern

Steel Construction – Model RNS	**See Page D79**
Aluminum Construction – Model ARNS	**See Page D79**

Adjustable Pattern

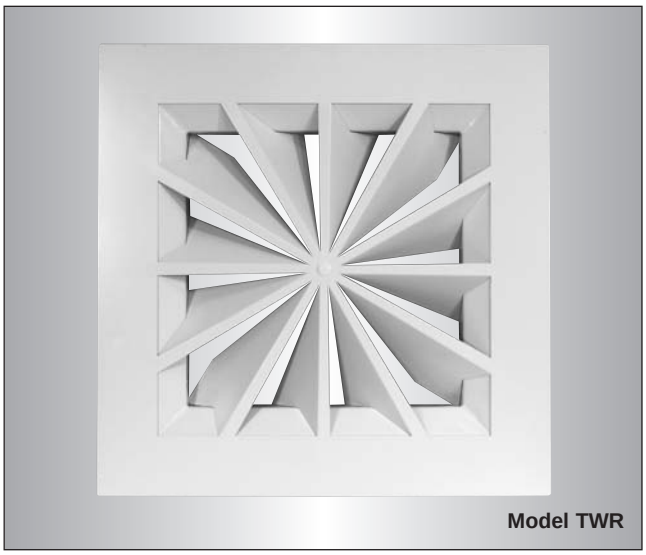
Steel Construction – Model RNSA	**See Page D84**
Aluminum Construction – Model ARNSA	**See Page D84**

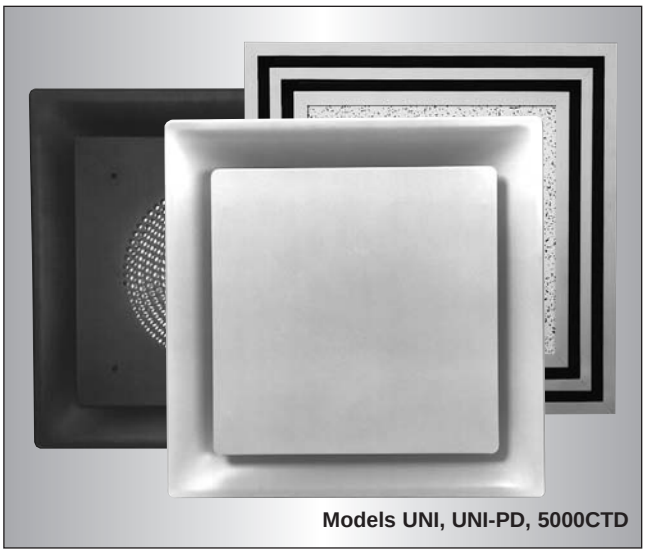
Fixed Pattern Three Cone

Steel Construction – Model RNS3	**See Page D89**

Fixed Pattern Two Cone

Steel Construction – Model RNS2	**See Page D93**


Model TWR


Models UNI, UNI-PD, 5000CTD

"Twister" High Induction Stamped Face

The "Twister" diffuser is engineered to optimize air distribution effectiveness. This next generation diffuser has a high induction, 360° swirl pattern for a superior coanda effect. It is available for a 2' x 2' (600 x 600) ceiling module with a choice of five round neck sizes.

"Twister"

Architectural Square

Designed with the architect in mind, the diffusers in this series are fashioned to blend in with most ceiling types in order to create the ultimate in aesthetic looks. Nailor has accomplished this whilst still offering a variety of diffuser designs that provide flexibility in both style, selection and engineering performance.

Flat Panel

Downblast

Ceiling Tile Slot

Plaque Face

Plaque Face with Perimeter Slots

Round

Nailor's round diffusers are available in steel or aluminum construction, with adjustable or fixed patterns. Included in this series of diffusers is a 'Plaque' style for architectural ceilings and a 'Downblast' type for high ceiling areas.

Adjustable Horizontal Pattern

Adjustable Horizontal to Vertical Pattern

Two Position Horizontal/Vertical Pattern

Fully Adjustable Horizontal/Vertical Pattern

Plaque Face Horizontal Pattern

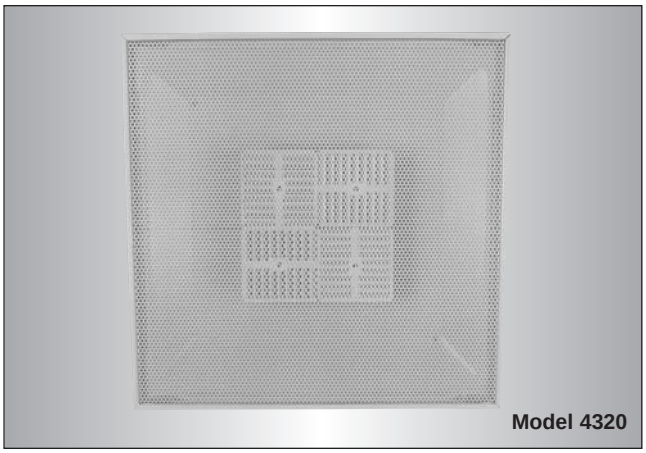
Downblast Adjustable Horizontal/Vertical Pattern


Models R-UNI, RDB, RNR

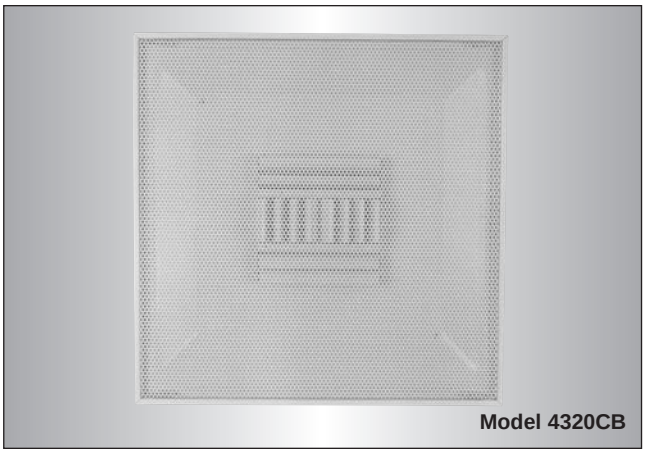
Perforated Ceiling Diffusers

Nailor manufactures a full range of supply air and matching return air Perforated Ceiling Diffusers. The perforated face is available in both corrosion-resistant steel and aluminum, with 3/16" (5) diameter holes on 1/4" (6) staggered centers, providing 51% free area. As standard, backpans are available in corrosion-resistant steel with an option of aluminum, and some premium models are available with extruded aluminum frames. The diffusers can be selected to suit most common ceiling types, and are available with both flush and drop face styles. A variety of pattern controllers and deflector core styles are offered, allowing for a selection to be made based upon style, performance, and budgetary considerations. Match the supply air with the corresponding return air and the results will be a smooth, aesthetically balanced ceiling appearance.

Supply Air



Model 4320



Model 4320CB

Adjustable Pattern Deflectors on Face

The stamped deflectors for this series of models are mounted in a 4-way discharge pattern on the rear of the perforated face and can be easily field adjusted to a 1, 2, or 3-way pattern. These diffusers are available with round or square necks. For the matching return, see Model Series 4360/4365.

Flush Face

Steel – Model 4320	**See Page D144**
Aluminum Face – Model 4320A	**See Page D144**
Aluminum – Model 4320AA	**See Page D144**

Drop Face

Steel – Model 4325	**See Page D144**
Aluminum Face – Model 4325A	**See Page D144**
Aluminum – Model 4325AA	**See Page D144**

Curved Blade Pattern Controllers

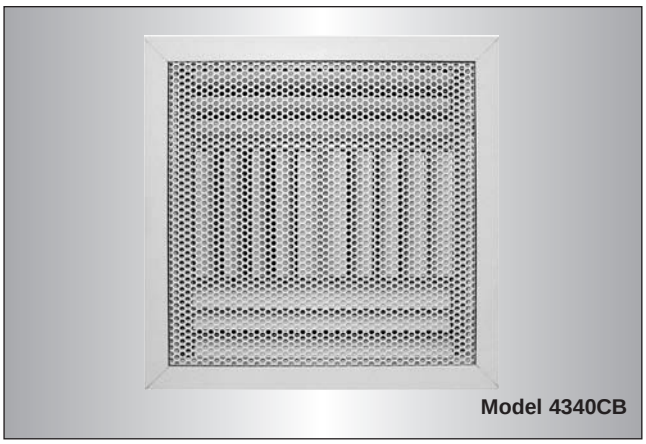
The curved blade pattern controllers are individually adjustable and available as standard in a 4-way discharge pattern. The blades are mounted directly beneath the neck of the diffuser. A 1, 2, or 3-way discharge pattern is available as an option. These diffusers are offered with round or square necks. For the matching return, see Model Series 4360/4365.

Flush Face

Steel – Model 4320CB	**See Page D154**
Aluminum Face – Model 4320CBA	**See Page D154**
Aluminum – Model 4320CBAA	**See Page D154**

Drop Face

Steel – Model 4325CB	**See Page D154**
Aluminum Face – Model 4325CBA	**See Page D154**
Aluminum – Model 4325CBAA	**See Page D154**



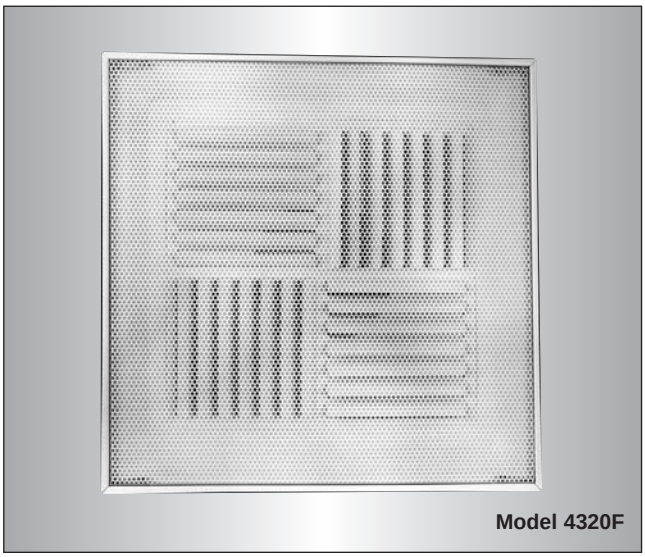
Model 4340CB

Full Face Curved Blade Pattern Controllers

This grille frame style, full face diffuser features curved blade pattern controllers with extruded aluminum frames and blades, and a perforated face that is offered in either corrosion-resistant steel or aluminum. The curved blade pattern controllers are individually adjustable and are in a 4-way discharge pattern as standard. A 1, 2, or 3-way discharge pattern is available as an option. These diffusers are available with square necks only. For the matching return, see Model Series 4340R.

Flush Face

Steel Face – Model 4340CB	**See Page D162**
Aluminum – Model 4340CBA	**See Page D162**


Model 4320F

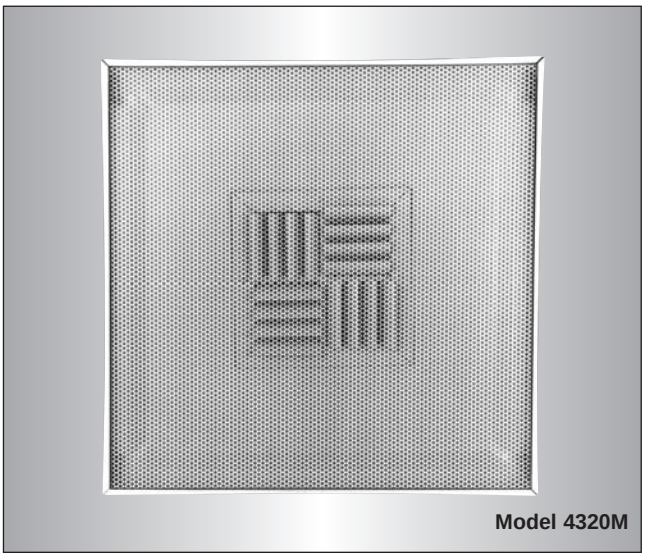
Adjustable Discharge Pattern
This diffuser has pattern controllers that are factory set in a fixed 4-way discharge pattern. The controllers can be field adjusted to a 1, 2 or 3-way pettern as required. These diffusers are available with round or square necks. For the matching return, see Model Series 4360/4365.

Flush Face

Steel – Model 4320F **See Page D165**
Aluminum Face – Model 4320FA **See Page D165**

Drop Face

Steel – Model 4325F **See Page D165**
Aluminum Face – Model 4325FA **See Page D165**


Model 4320M

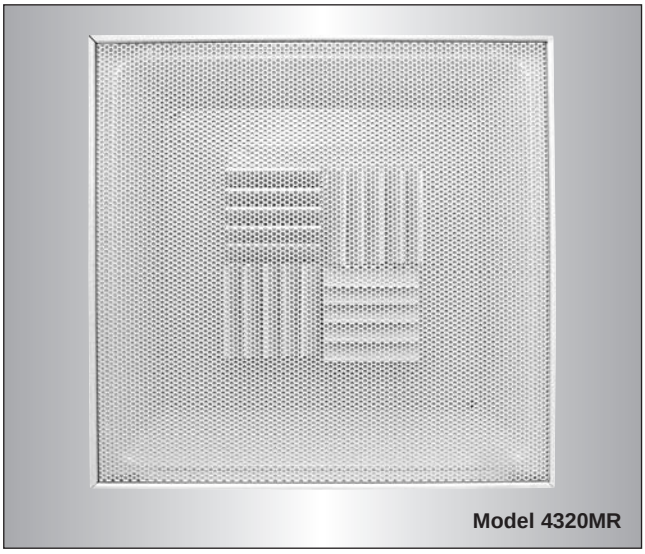
Modular Core, Square Neck
This perforated diffuser has four individual, corrosion-resistant steel, spring-loaded modular pattern controllers that are mounted in the neck of the diffuser. They are shipped in a 4-way discharge pattern and can easily be field adjusted to provide a 1, 2, or 3-way discharge pattern. These diffusers are available with square necks. For the matching return, see Model Series 4360/4365.

Flush Face

Steel – Model 4320M **See Page D170**
Aluminum Face – Model 4320MA **See Page D170**

Drop Face

Steel – Model 4325M **See Page D170**
Aluminum Face – Model 4325MA **See Page D170**


Model 4320MR

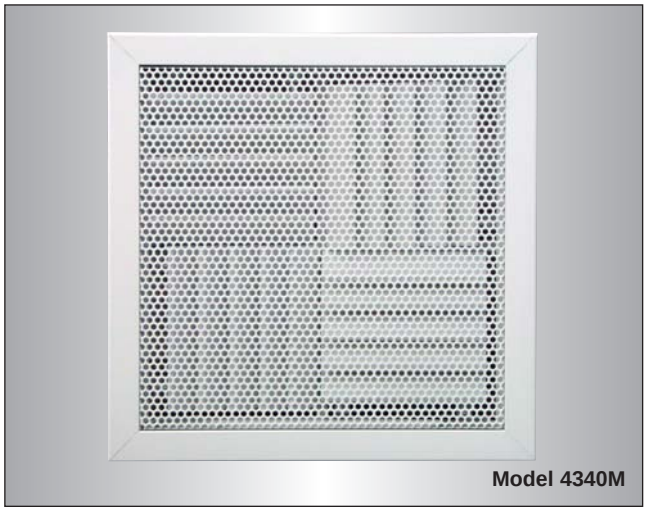
Modular Core, Round Neck, Low Profile
This model has a low profile backpan that includes an integral round neck. It incorporates four individual, corrosion-resistant steel, spring loaded modular pattern controllers that are mounted inside the backpan. The modular cores are shipped in a 4-way pattern and can easily be field adjusted to provide a 1, 2, or 3-way discharge pattern. These diffusers are available with round necks only. For the matching return, see Model Series 4360/4365.

Flush Face

Steel – Model 4320MR **See Page D175**
Aluminum Face – Model 4320MRA **See Page D175**

Drop Face

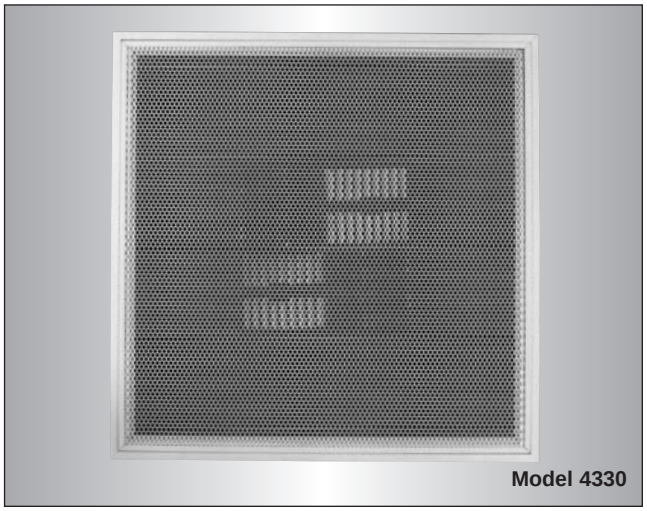
Steel – Model 4325MR **See Page D175**
Aluminum Face – Model 4325MRA **See Page D175**


Model 4340M

Full Face Modular Core
This grille frame style, full face diffuser, features an extruded aluminum frame with a corrosion-resistant steel modular core. The modular core is shipped in a 4-way pattern and can easily be field adjusted to provide a 1, 2, or 3-way pattern. These diffusers are available with square necks only. For the matching return, see Model Series 4340R.

Flush Face

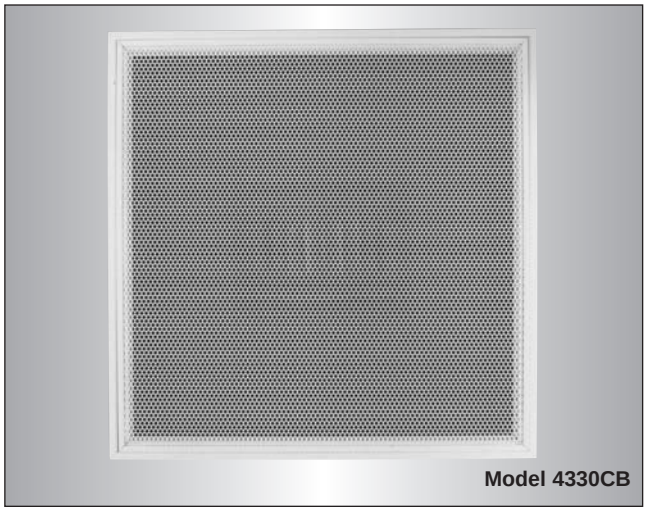
Steel Face – Model 4340M **See Page D180**
Aluminum Face – Model 4340MA **See Page D180**


Model 4330

Premium, Adjustable Deflectors on Face
The perforated diffusers in this series have an extruded aluminum frame with a narrow border that is visible within the T-Bar module. The stamped steel deflectors are mounted in a 4-way discharge pattern and can be easily field adjusted to a 1, 2 or 3-way pattern. The diffusers are available with round or square necks. For the matching return, see Model Series 4330R.

Flush Face

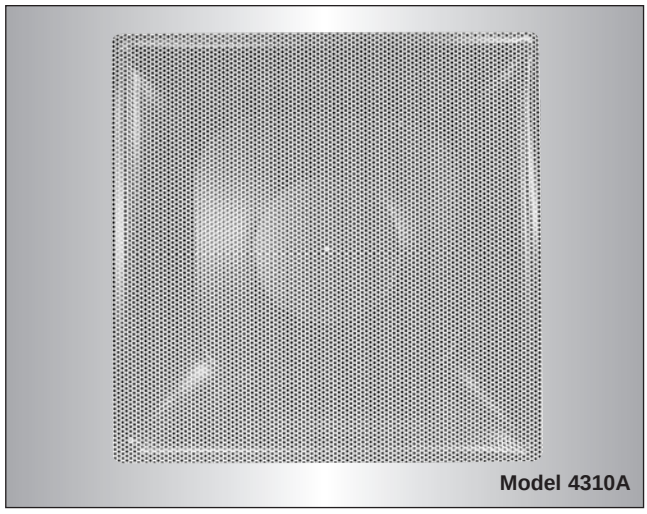
Steel Face – Model 4330 **See Page D183**
Aluminum Face – Model 4330A **See Page D183**


Model 4330CB

Premium, Curved Blade Pattern Controllers
The perforated diffusers in this series have an extruded aluminum frame with a narrow border that is visible within the T-Bar module. The extruded aluminum curved blade pattern controllers are individually adjustable and are in a 4-way discharge pattern as standard. A 1, 2, or 3-way discharge pattern is available as an option. For the matching return, see Model 4330R.

Flush Face

Steel Face – Model 4330CB **See Page D191**
Aluminum Face – Model 4330CBA **See Page D191**


Model 4310A

All Aluminum for MRI Rooms
This diffuser is 100% aluminum and can be used for MRI rooms. It features a smooth, contoured wrap-around perforated face. The supply air diffuser includes a round disc pattern deflector that provides a true 360° radial horizontal air pattern. The matching return air diffuser is suitable for ducted return applications.

Flush Face

Supply Air – Model 4310A **See Page D197**
Return Air – Model 4310AR **See Page D197**

Return Air


Model 4360

Standard Backpan Design

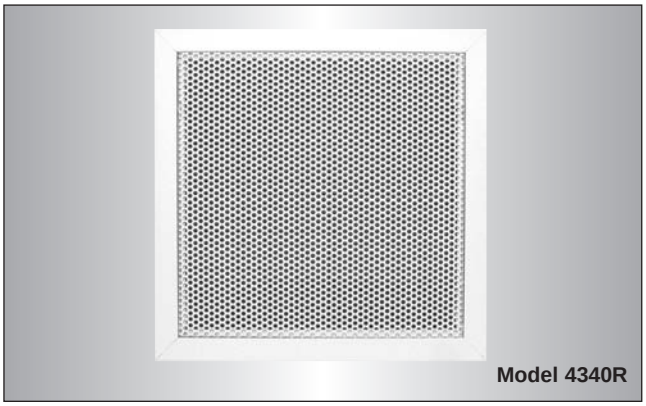
This perforated return diffuser is designed with a backpan that allows for both ducted and non-ducted applications. Available with a round or square neck for ducted applications and a full face design, square neck for either ducted or non-ducted applications. See Model Series 4320/4325, 4320CB/4325CB, 4320F/4325F and 4320M/4325M for the matching supply air diffusers.

Flush Face

Steel – Model 4360	**See Page D200**
Aluminum Face – Model 4360A	**See Page D200**
Aluminum – Model 4360AA	**See Page D200**

Drop Face

Steel – Model 4365	**See Page D200**
Aluminum Face – Model 4365A	**See Page D200**
Aluminum – Model 4365AA	**See Page D200**

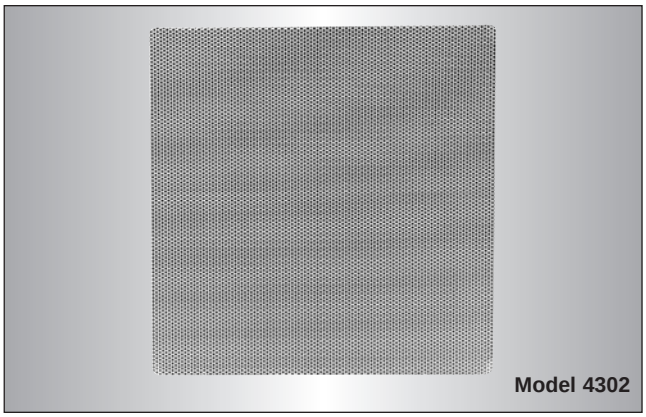

Model 4340R

Extruded Frame

This grille frame style, full face diffuser has an extruded aluminum frame and is offered with a choice of a corrosion-resistant steel or an aluminum perforated face. The diffusers are available with square necks only and can be used in both ductless and ducted applications. See Model Series 4340CB and 4340M for the matching supply diffusers.

Flush Face

Steel Face – Model 4340R	**See Page D206**
Aluminum – Model 4340RA	**See Page D206**


Model 4302

Panels

This economical perforated return panel is for use in a ductless return or as an exhaust grille in exposed grid T-Bar ceiling systems. When installed, the appearance matches that of the 4320/4325, 4320CB/4325CB, 4320F/4325F and 4320M/4325M supply diffusers.

Flush Face

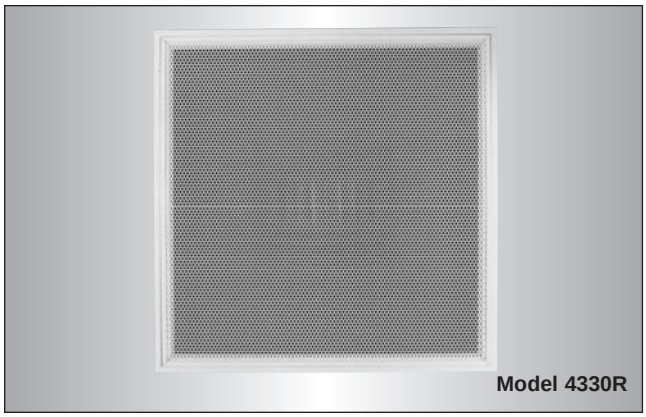
Steel – Model 4302	**See Page D209**
Aluminum – Model 4302A	**See Page D209**

Drop Face

Steel – Model 4302-DF	**See Page D209**

Fineline®

Steel – Model 4302-F	**See Page D209**

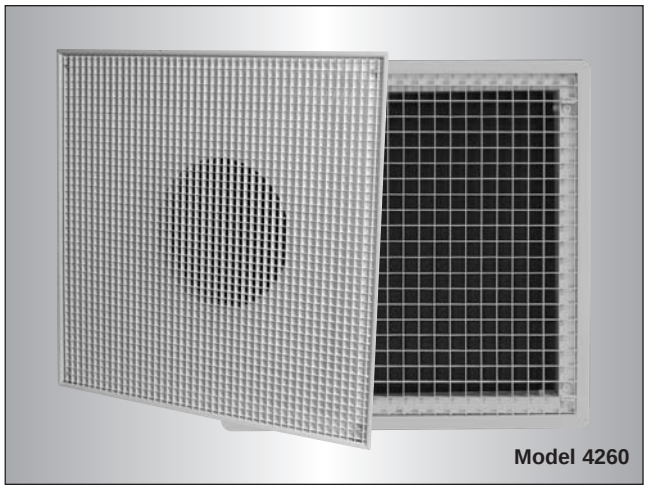

Model 4330R

Premium

This perforated return has an extruded aluminum frame with a narrow border that is visible within the T-Bar module. See Model Series 4330 and 4330CB for the matching supply air diffusers.

Flush Face

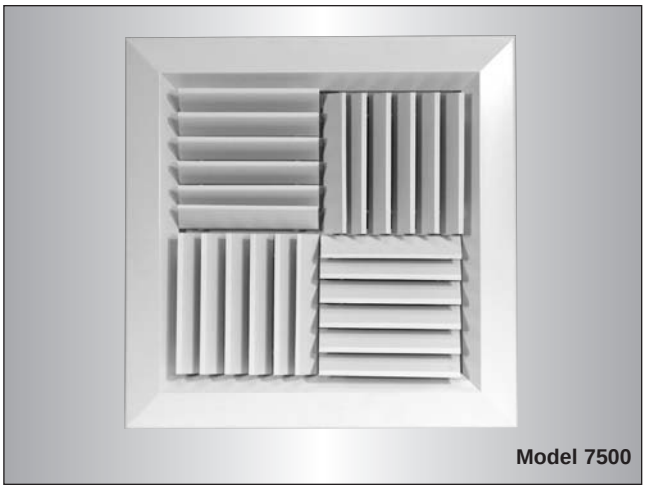
Steel Face – Model 4330R	**See Page D212**
Aluminum Face – Model 4330RA	**See Page D212**


Model 4260

Eggcrate Return

This aluminum face return diffuser features 1/2" x 1/2" x 1/2" (13 x 13 x 13) eggcrate that provides a high free area. It is offered with either a round or square neck for ducted return applications. The backpan or frame is available in both corrosion-resistant steel and aluminum construction.

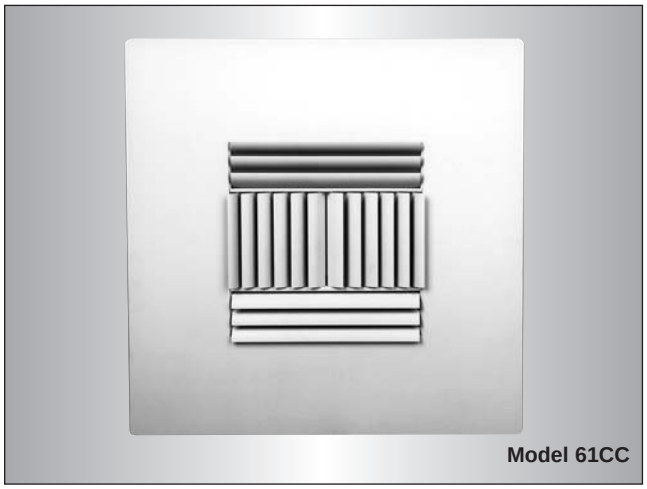
Steel Frame/Backpan – Model 4260 **See Page D216**
Aluminum – Model 4260AA **See Page D216**


Model 7500

Modular Core

This steel diffuser has four individual, corrosion-resistant steel, spring-loaded modular pattern controllers. The pattern controllers are shipped in a 4-way discharge pattern and can easily be field adjusted to provide a 1, 2, or 3-way discharge pattern. They are available with square necks and optional round transitions.

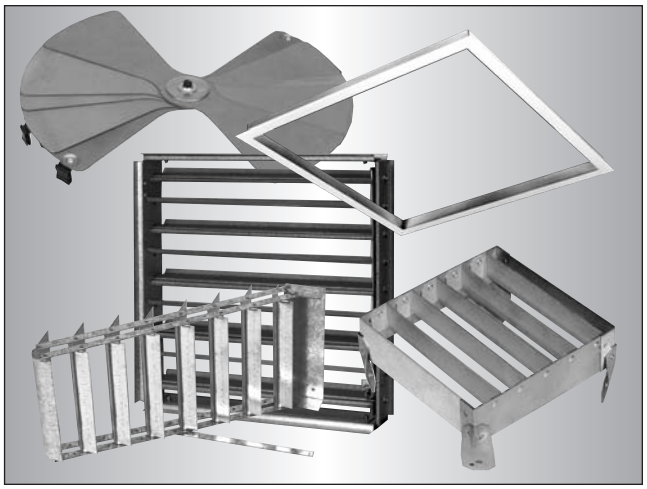
Modular Core
Steel – Model 7500 **See Page D220**
Suffix '-O' adds a steel OBD.


Model 61CC

Curved Blade

The curved blade deflectors for this diffuser are individually adjustable and integrated in a modular sized panel to suit many ceiling systems. If ordered with directional vanes a 1 or 2-way discharge pattern is available. If directional vanes are not required, the curved blade deflectors are offered in a 1, 2, 3, or 4-way discharge pattern.

Steel Construction
Directional Vanes – Model 61CCD **See Page D226**
No Directional Vanes – Model 61CC **See Page D226**
Aluminum Construction
Directional Vanes – Model 51CCD **See Page D226**
No Directional Vanes – Model 51CC **See Page D226**



Options & Accessories

Nailor offers an extensive selection of accessories for ceiling diffusers. Air balancing devices, air extractors and a selection of mounting frames are several of the accessories available.

Options
Mounting Frames **See Page D233**
Options **See Page D234**
Finishes **See Page D234**
Accessories
Air Balancing Devices **See Page D235**
Volume Extractors **See Page D240**

EXCLUSIVE WARRANTY FOR NAILOR STEEL GRILLES, REGISTERS AND DIFFUSERS

LIMITED WARRANTY – SERIES 61C, 6100, 61EC, 61F, RNS, RNS2, UNI, 4300, 6500, 7500 AND 61CC

Nailor Industries Inc. ('Nailor') warrants to the original and each subsequent owner of a new Nailor Series Grille, Register or Ceiling Air Diffuser in the model series titled above, constructed of corrosion-resistant steel that should rust become visible on the exposed portion of any individual product covered by this agreement Nailor will replace the rusted unit. Any diffuser affected by chemicals or misuse, including, without limitation, the failure to perform reasonable and necessary maintenance, will not be covered by this warranty. This warranty is for sixty (60) months from the date of the shipment by Nailor.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

The rusted unit will be shipped by the owner at its cost to Nailor for replacement. The cost of the replacement, including the cost of shipment to the owner, but excluding any costs for either the removal or preparation for shipment of the rusted unit and the re-installation of the replacement unit, will be borne by Nailor. A reasonable time should be allowed after shipment to Nailor for the replacement of the rusted unit.

This is the only warranty given with the purchase. Any warranties implied by law are limited to sixty (60) months from the date of shipment by Nailor. Nailor neither assumes nor authorizes any person to assume for it any other liability in connection with any diffuser covered by this agreement.

No payment or other compensation will be made for indirect or consequential damage such as, damage or injury to person or property or loss of revenue or profit which might be paid, incurred or sustained by reason of the use or inability to use a Nailor product listed above, even if such loss or damage could have been foreseen by Nailor.

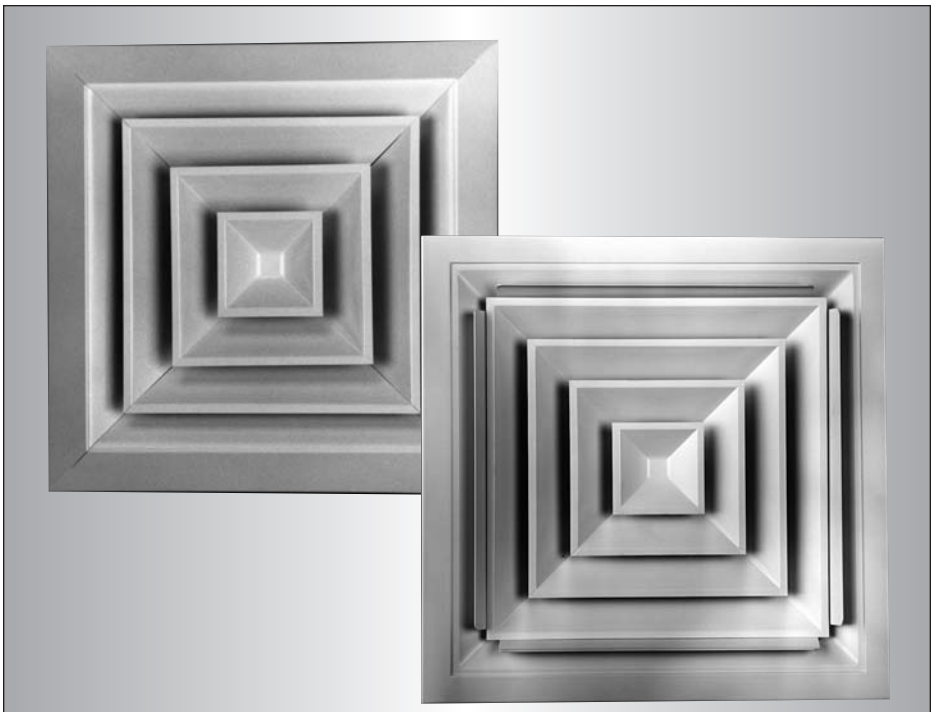
Some states do not allow the exclusion of limitation of incidental or consequential damages or limitation on how long an implied warranty lasts, so the above may not apply to you.

SQUARE AND RECTANGULAR PATTERN CEILING DIFFUSERS

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

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)



Models 6500 and 6550

The **Nailor 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 therefore offer a great degree of design flexibility.

The **Nailor 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.

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 D16).
- 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: 6500 Series – Corrosion-resistant steel. **6200 Series** – Heavy-gauge aluminum extrusions.

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).

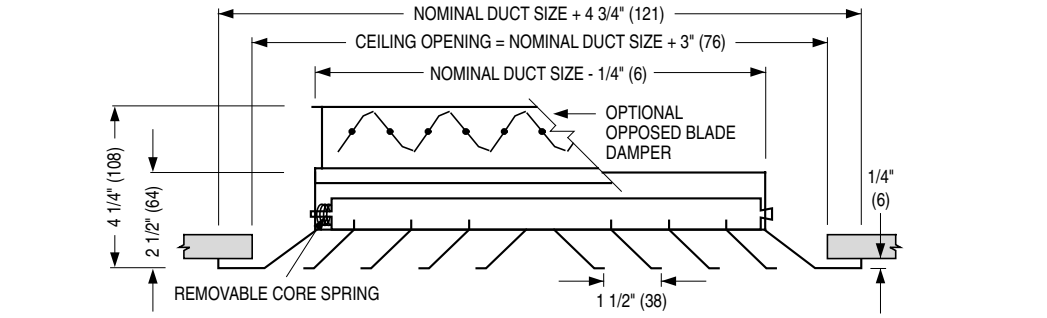
Maximum size:

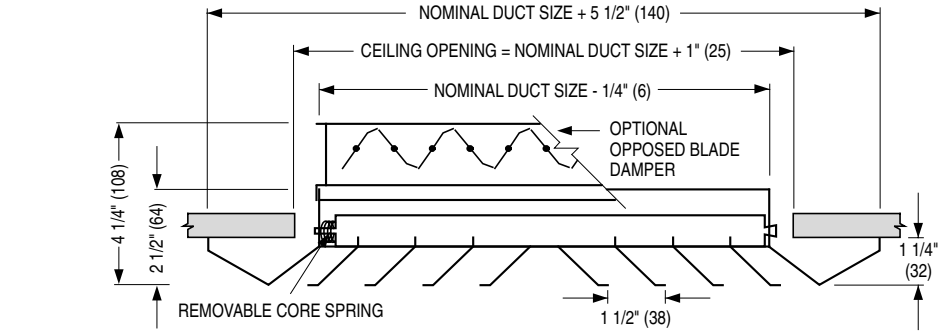
Types S, B and D: 36" x 36" (914 x 914).

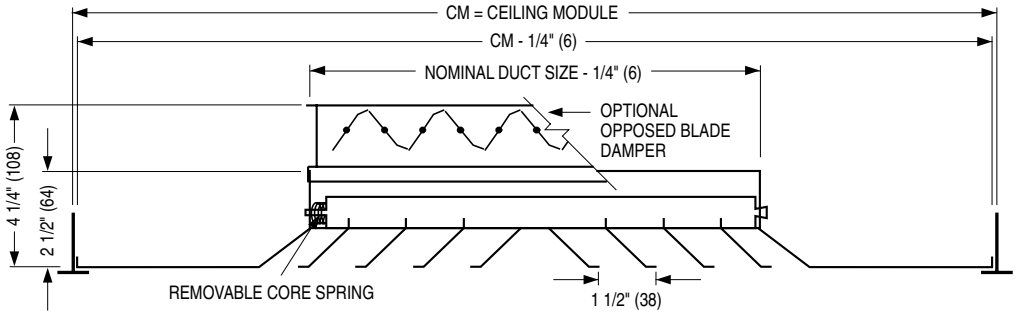
Types L, SP, TL, M and F: see page D14.

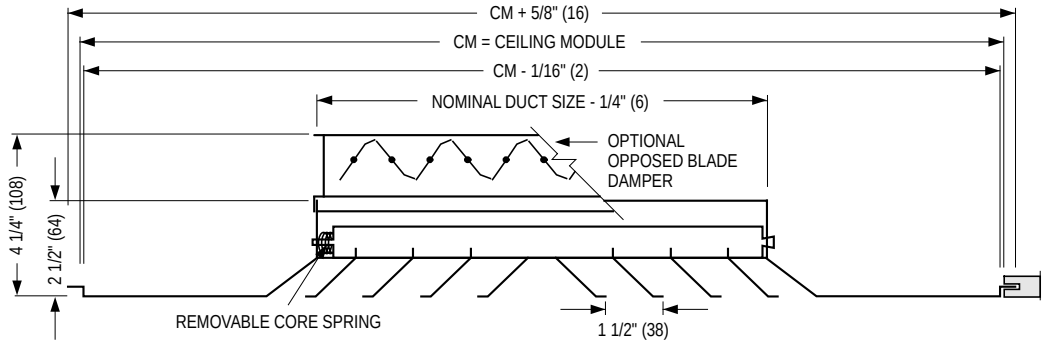
Dimensional Data and Frame Types

Model Series 6500 and 6200



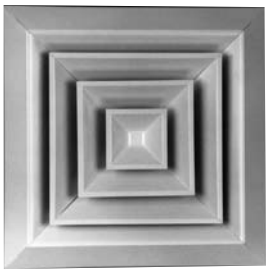






Type S - Surface Mount Frame

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.

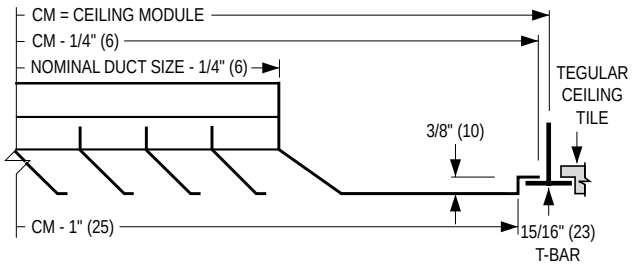
TABLE 1

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)	–

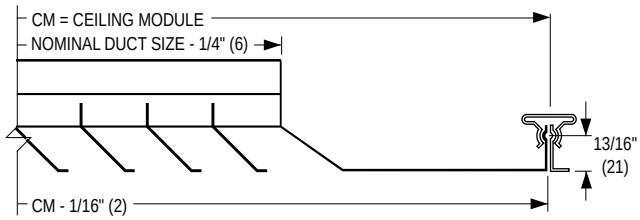
Dimensions are in inches (mm).

Dimensional Data and Frame Types
Model Series 6500 and 6200

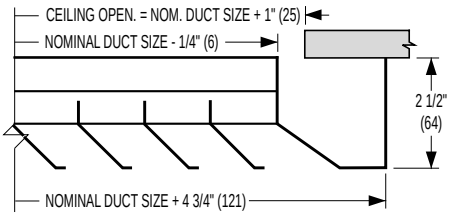
Type TL Tegular Lay-in



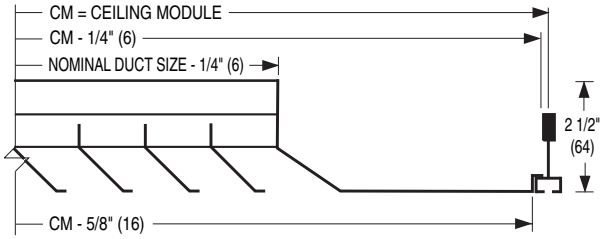
Type M Metal Pan (Snap-in)



Type D Deep Drop Face

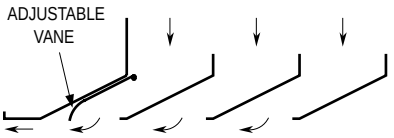


Type F Fineline®

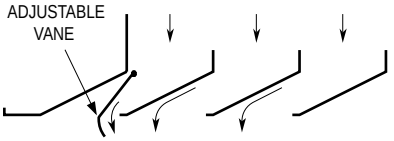


Adjustable Discharge Pattern
Models 6550 & 6250

Horizontal Pattern
Adjustable Vane
Open Position



Vertical Pattern
Adjustable Vane
Closed Position



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:

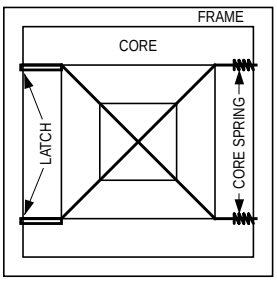
- Unit size is determined by duct dimensions. Diffuser necks are under sized to suit ductwork.
- Square or rectangular 1, 2, 3 or 4-way core style diffusers up to and including 24" x 24" (610 x 610) neck size.
- Square duct sizes are recommended.
- Discharge patterns on all sides are independently adjustable.
- 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.

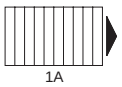
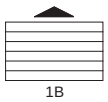
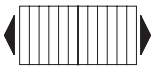
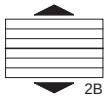
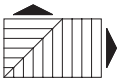
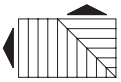
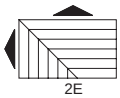
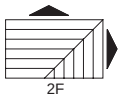
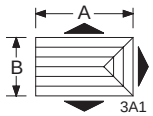
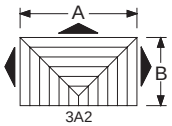
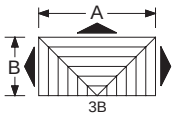
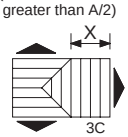
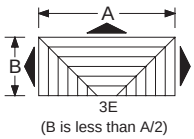
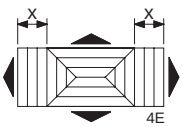
HOW TO REMOVE "REMOVABLE" CORE

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 6500 and 6200

Contact factory for special core configurations.

	SQUARE	RECTANGULAR	CORE	SIZES AVAILABLE MINIMUM	SIZES AVAILABLE 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	 2C  2D  2E  2F	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  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)  3C  3E (B is less than A/2)	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	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).

HOW TO SPECIFY OR TO ORDER

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

Pattern Ceiling Diffusers – Model Series 6500 and 6200

6500 - O - 9 x 9 - 24 x 24 - L - AW - 4A - SR08

MODEL

Steel	
- Fixed Pattern	6500
- Adjustable Pattern	6550
Aluminum	
- Fixed Pattern	6200
- Adjustable Pattern	6250

DAMPER

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

NECK SIZE (W x H)

PANEL SIZE (TYPES L, SP, M, TL, F AND DL 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
- Dropped Face Lay-in	DL

Note:

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

ACCESSORIES

- None (default)	—
- Square to Round Transition Collar (04 thru 20 specify)	SR
- Earthquake Tabs	EQT
- Alum. extended panel (6200 & 6250 models only).	PLA

AIR BALANCING DEVICES

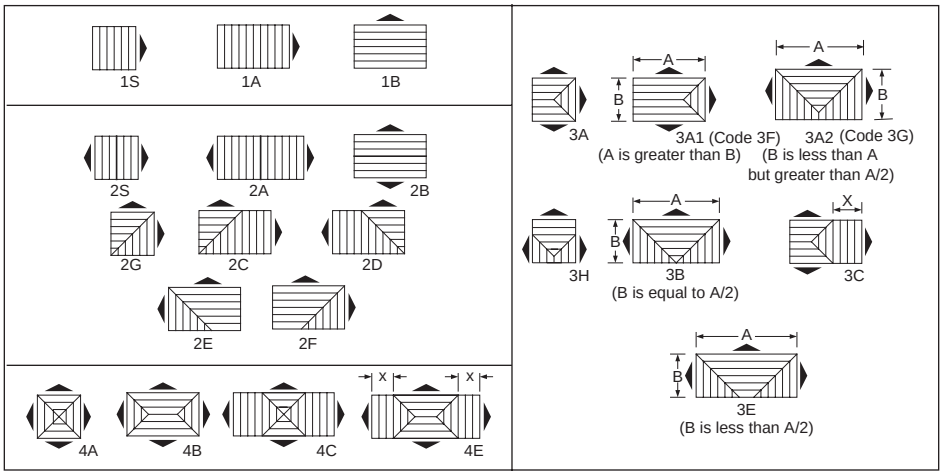
Rectangular Neck:	
- Equalizing Grid (long)	EGL
- Equalizing Grid (short)	EGS
- Damper/Equal. Grid (long)	DEGL
- Damper/Equal. Grid (short)	DEGS
Round Neck:	
- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275
- Butterfly Damper	4675
- Equalizing Grid	EGR
- Damper/Equalizing Grid	DEGR

CORE STYLE (See Below).

FINISH

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

CORE STYLE CHART



SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model** (select one) **6500/6550** (steel) or **6200/6250** (aluminum) **Pattern Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. Model 6500 or 6200 shall incorporate fixed pattern discharge louvers for a horizontal throw pattern. Model 6550 or 6250 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 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 – 2006.

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

For performance notes, see page D32.

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
	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
21 x 21 3.06 SQ. FT.	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
	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
24 x 24 4.0 SQ. FT.	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
	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
30 x 30 6.25 SQ. FT.	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
	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
36 x 36 9.0 SQ. FT.	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 D32.

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
	RETURN FACTORS —SP=0.7 TP NC + 0	CFM NC	78 —	118 11	157 19	176 21	196 25	235 30	274 35
			A B	A B	A B	A B	A B	A B	A B
18 x 18 6" ROUND	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 29 2-4-6 2-4-7	29 44 4-7-10 4-8-11	39 59 6-8-11 7-9-12	44 66 7-8-12 8-9-13	49 74 7-8-13 8-9-14	59 88 8-9-14 9-10-15	69 103 8-10-15 9-11-17
	2S 2G	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
	RETURN FACTORS —SP=0.8 TP NC + 0	CFM NC	140 —	209 13	279 21	314 23	349 27	419 32	489 37
			A B	A B	A B	A B	A B	A B	A B
18 x 18 8" ROUND	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 52 4-8-10 4-9-11	52 79 6-9-13 7-10-14	70 105 8-10-15 9-11-17	79 118 9-11-15 10-12-17	87 131 9-12-17 10-13-19	105 157 10-13-19 11-14-21	122 183 11-14-0 12-15-22
	2S 2G	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
	RETURN FACTORS —SP=0.9 TP NC + 2	CFM NC	218 —	327 16	436 24	491 26	545 30	654 35	763 40
			A B	A B	A B	A B	A B	A B	A B
18 x 18 10" ROUND	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 82 4-8-12 4-9-13	82 123 8-11-17 9-12-19	109 164 10-13-19 11-14-21	123 184 11-14-20 12-15-22	136 204 12-15-21 13-17-23	164 245 12-16-23 13-18-25	191 286 13-17-24 14-19-26
	2S 2G	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
	RETURN FACTORS —SP=1.0 TP NC + 3	CFM NC	314 —	471 18	628 26	707 28	785 32	942 37	1099 42
			A B	A B	A B	A B	A B	A B	A B
18 x 18 12" ROUND	4A	CFM/SIDE THROW, FT.	79 6-9-15	118 8-11-18	157 10-15-23	1771 13-17-24	196 14-18-25	236 15-20-28	275 17-21-30
	3A	CFM/SIDE THROW, FT.	79 118 6-9-15 7-10-17	118 177 8-11-18 9-12-20	157 236 10-15-23 11-17-25	177 265 13-17-24 14-19-26	196 294 14-18-25 15-20-28	236 353 15-20-28 17-23-31	275 412 17-21-30 19-23-33
	2S 2G	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
	RETURN FACTORS —SP=1.1 TP NC + 4	CFM NC	427 —	641 20	854 28	961 30	1068 34	1282 39	1495 44
			A B	A B	A B	A B	A B	A B	A B
18 x 18 14" ROUND	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.	107 160 7-10-19 8-11-21	160 240 10-15-23 11-17-25	214 320 14-19-26 15-21-29	240 360 15-20-29 17-22-32	267 401 17-21-30 19-23-33	320 481 19-23-32 21-25-35	374 561 21-26-38 23-29-42
	2S 2G	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 24-37-52	1068 27-39-55	1282 29-42-60	1495 33-45-65
	RETURN FACTORS —SP=1.3 TP NC + 6	CFM NC	558 —	837 22	1116 30	1256 32	1395 36	1674 41	1953 46
			A B	A B	A B	A B	A B	A B	A B
18 x 18 16" ROUND	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.	140 209 8-12-21 9-13-23	209 314 12-19-26 13-21-29	279 419 17-21-31 19-23-34	314 471 19-23-32 21-25-35	349 523 20-25-35 22-28-39	419 628 22-28-42 24-31-46	488 732 24-30-48 26-33-53
	2S 2G	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 D22

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	
	RETURN FACTORS —SP=1.2 TP NC + 0	CFM NC	110 —		150 14		185 20		225 25		260 29		300 33		335 37	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
9 x 6 .375 SQ. FT.	4B	CFM/SIDE	37	18	50	25	62	31	75	37	87	44	100	50	112	56
		THROW, FT.	7-11-13	5-6-10	10-12-16	6-7-11	11-13-18	7-10-12	12-14-19	7-10-13	12-16-20	10-11-14	13-17-22	10-12-15	14-18-23	11-12-16
	3A1	CFM/SIDE	47	18	62	25	78	31	94	37	109	44	125	50	140	56
		THROW, FT.	10-11-14	5-6-10	11-12-17	6-7-11	12-13-19	7-10-12	13-14-20	7-10-13	14-16-22	10-11-14	14-17-23	10-12-15	16-18-26	11-12-16
	3A2	CFM/SIDE	42	35	55	47	70	58	84	70	98	82	112	94	126	105
		THROW, FT.	8-12-14	6-8-13	10-13-17	8-10-14	12-14-19	10-12-16	13-16-21	10-13-17	13-17-22	12-13-18	14-18-23	12-14-19	16-19-25	13-16-21
	2A 2B	CFM/SIDE	56		75		93		112		131		150		168	
		THROW, FT.	11-12-16		12-14-19		13-16-22		14-18-23		16-19-24		17-20-26		18-22-29	
	2C 2E 2D 2F	CFM/SIDE	75	37	100	50	125	62	150	75	175	87	200	100	225	112
		THROW, FT.	12-14-19	8-12-14	13-16-22	10-13-17	14-18-25	12-14-19	16-19-29	13-16-21	17-21-29	13-17-25	18-22-31	14-18-23	20-23-33	16-20-25
	1A 1B	CFM/SIDE	112		150		187		225		262		300		337	
		THROW, FT.	14-17-23		17-19-29		19-22-31		21-23-34		22-25-36		23-29-39		25-29-42	
	RETURN FACTORS —SP=1.6 TP NC + 1	CFM NC	150 —		200 14		250 20		300 26		350 31		400 35		450 39	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
12 x 6 .50 SQ. FT.	4B 4C	CFM/SIDE	56	18	75	25	94	31	113	37	131	44	150	50	169	56
		THROW, FT.	11-13-17	5-6-10	12-14-19	6-7-11	13-17-22	7-10-12	14-18-23	7-10-13	16-19-26	10-11-14	17-20-26	10-11-14	18-22-29	11-12-16
	3A1	CFM/SIDE	66	18	87	25	109	31	131	37	153	44	175	50	197	56
		THROW, FT.	11-13-18	5-6-10	12-14-20	6-7-11	13-17-23	7-10-12	14-18-26	7-10-13	16-19-26	10-11-14	17-20-29	10-11-14	18-22-30	11-12-16
	3B	CFM/SIDE	75	37	100	50	126	62	150	75	176	87	200	100	226	112
		THROW, FT.	11-16-20	8-12-14	14-18-23	10-13-17	16-20-27	12-14-19	18-22-29	13-16-21	18-23-31	13-17-25	20-25-32	14-18-23	22-27-34	16-20-25
	2A 2B	CFM/SIDE	75		100		125		150		175		200		225	
		THROW, FT.	11-13-18		12-14-20		13-17-23		14-18-26		16-19-26		17-20-29		18-22-30	
	2C 2E 2D 2F	CFM/SIDE	112	37	150	50	188	62	225	75	263	87	300	100	338	112
		THROW, FT.	14-17-23	8-12-14	17-19-29	10-13-17	19-22-31	12-14-19	21-23-34	13-16-21	22-25-36	13-17-25	23-29-39	14-18-23	25-29-42	16-20-25
	1A 1B	CFM/SIDE	150		200		250		300		350		400		450	
		THROW, FT.	14-17-23		17-19-29		19-22-31		21-23-34		22-25-36		23-29-39		25-29-42	
	RETURN FACTORS —SP=1.9 TP NC + 1	CFM NC	190 —		250 15		310 21		375 27		440 32		500 36		565 40	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
15 x 6 .625 SQ. FT.	4B 4C	CFM/SIDE	75	18	100	25	125	31	150	37	175	44	200	50	225	56
		THROW, FT.	11-13-18	5-6-10	12-14-20	6-7-11	13-17-23	7-10-12	14-18-26	7-10-13	16-19-26	10-11-14	17-20-29	10-11-14	18-22-30	11-12-16
	4E	CFM/SIDE	56	37	75	50	94	62	113	75	131	87	150	100	169	112
		THROW, FT.	11-12-16	10-11-14	12-14-19	11-12-17	12-17-22	12-13-19	14-18-23	13-14-20	16-19-26	14-16-22	16-20-26	14-17-23	18-22-29	16-18-26
	3A1	CFM/SIDE	84	18	112	25	140	31	169	37	197	44	225	50	253	56
		THROW, FT.	12-13-19	5-6-10	13-16-22	6-7-11	14-18-24	7-10-12	16-19-26	7-10-13	17-20-28	10-11-14	18-22-30	10-11-14	19-23-34	11-12-16
	2A 2B	CFM/SIDE	94		125		156		187		219		250		281	
		THROW, FT.	12-14-20		13-16-23		14-19-26		16-20-28		17-22-30		18-23-31		19-26-35	
	2C 2E 2D 2F	CFM/SIDE	150	37	200	50	250	62	300	75	350	87	400	100	450	112
		THROW, FT.	14-17-23	8-12-14	17-19-29	10-13-17	19-22-31	12-14-19	21-23-34	13-16-21	22-25-36	13-17-22	23-29-39	14-18-23	25-29-42	16-20-25
	1A 1B	CFM/SIDE	188		250		312		375		438		500		563	
		THROW, FT.	16-19-26		18-22-30		21-25-34		22-29-38		23-29-40		25-31-43		29-32-45	

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 D32.

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	
	RETURN FACTORS —SP=2.6 TP NC + 2	CFM NC	225 —		300 16		375 22		450 28		525 33		600 37		675 41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 6 .75 SQ. FT.	4B 4C	CFM/SIDE	94	18	125	25	156	31	188	37	218	44	250	50	281	56
		THROW, FT.	12-14-20	5-6-10	13-17-23	6-7-11	14-19-25	7-10-12	16-20-28	7-10-13	17-22-30	10-11-14	18-23-31	10-11-14	19-26-35	11-12-16
	4E	CFM/SIDE	56	56	75	75	94	94	113	113	131	131	150	150	169	169
		THROW, FT.	11-13-17	11-13-17	12-14-19	12-14-19	13-17-22	13-17-22	14-18-23	14-18-23	16-19-26	16-19-26	17-20-26	17-20-26	18-22-29	18-22-29
	3A1	CFM/SIDE	103	18	137	25	172	31	206	37	240	44	275	50	309	56
		THROW, FT.	12-14-20	5-6-10	13-17-23	6-7-11	14-19-25	7-10-12	16-20-28	7-10-13	17-22-30	10-11-14	18-23-31	10-11-14	19-26-35	11-12-16
	2A 2B	CFM/SIDE	112		150		187		225		262		300		337	
		THROW, FT.	13-16-22		16-18-26		18-20-29		19-22-31		20-23-34		22-26-36		23-26-38	
	2C 2D 2E 2F	CFM/SIDE	187	37	250	50	313	62	375	75	438	87	500	100	563	112
		THROW, FT.	16-19-26	8-12-14	18-22-30	10-13-17	21-25-34	12-14-19	22-29-38	13-16-21	23-29-40	13-17-22	25-31-43	14-18-23	29-32-45	16-19-25
	1A 1B	CFM/SIDE	225		300		375		450		525		600		675	
		THROW, FT.	17-21-29		19-23-32		22-26-38		23-29-42		25-30-44		29-32-47		29-36-52	
	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	260 —		350 16		435 22		525 29		610 33		700 38		785 41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 6 .875 SQ. FT.	4B 4C	CFM/SIDE	112	18	150	25	187	31	225	37	262	44	300	50	337	56
		THROW, FT.	13-16-22	5-6-10	16-18-26	6-7-11	18-20-29	7-10-12	19-22-31	7-10-13	20-23-34	10-11-14	22-26-36	10-11-14	23-26-38	11-12-16
	4E	CFM/SIDE	75	56	100	75	125	94	150	113	175	131	200	150	225	169
		THROW, FT.	11-13-18	11-13-17	12-14-20	12-14-19	13-17-23	13-17-22	14-18-26	14-18-23	16-19-26	16-19-26	17-20-29	17-20-26	18-22-30	18-22-29
	3A1	CFM/SIDE	122	18	162	25	203	31	244	37	284	44	325	50	365	56
		THROW, FT.	13-16-22	5-6-10	16-18-26	6-7-11	18-20-29	7-10-12	19-22-31	7-10-13	20-23-34	10-11-14	22-26-36	10-11-14	23-26-38	11-12-16
	2A 2B	CFM/SIDE	131		175		218		262		306		350		393	
		THROW, FT.	13-16-22		16-18-26		18-20-29		19-22-31		20-23-34		22-26-36		23-26-38	
	2C 2D 2E 2F	CFM/SIDE	225	37	300	50	375	62	450	75	525	87	600	100	675	112
		THROW, FT.	17-21-29	8-12-14	19-23-32	10-13-17	22-26-38	12-14-19	23-29-42	13-16-21	25-30-44	13-17-22	29-32-47	14-18-23	29-36-49	16-19-25
	1A 1B	CFM/SIDE	262		350		437		525		612		700		787	
		THROW, FT.	17-21-29		19-23-32		22-26-38		23-29-42		25-30-44		29-32-47		29-36-49	
	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	300 —		400 16		500 23		600 30		700 34		800 39		900 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 6 1.0 SQ. FT.	4B 4C	CFM/SIDE	131	18	175	25	219	31	263	37	306	44	350	50	394	56
		THROW, FT.	13-16-22	5-6-10	16-18-26	6-7-11	18-20-29	7-10-12	19-22-31	7-10-13	20-23-34	10-11-14	22-26-36	10-11-14	23-26-38	11-12-16
	4E	CFM/SIDE	75	75	100	100	125	125	150	150	175	175	200	200	225	225
		THROW, FT.	11-13-18	11-13-18	12-14-20	12-14-20	13-17-23	13-17-23	14-18-26	14-18-26	16-19-26	16-19-26	17-20-29	17-20-29	18-22-30	18-22-30
	3A1	CFM/SIDE	141	18	187	25	234	31	281	37	328	44	375	50	422	56
		THROW, FT.	13-16-22	5-6-10	16-18-26	6-7-11	18-20-29	7-10-12	19-22-31	7-10-13	20-23-34	10-11-14	22-26-36	10-11-14	23-26-38	11-12-16
	2A 2B	CFM/SIDE	150		200		250		300		350		400		450	
		THROW, FT.	13-16-22		16-18-26		18-20-29		19-22-31		20-23-34		22-26-36		23-26-38	
	2C 2D 2E 2F	CFM/SIDE	260	37	350	50	438	62	525	75	613	87	700	100	788	112
		THROW, FT.	17-21-29	8-12-14	19-23-32	10-13-17	22-26-38	12-14-19	23-29-42	13-16-21	25-30-44	13-17-22	29-32-47	14-18-23	29-36-49	16-19-25
	1A 1B	CFM/SIDE	300		400		500		600		700		800		900	
		THROW, FT.	18-22-31		21-25-36		23-29-42		25-30-44		29-32-47		29-34-51		31-38-53	

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 D32.

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	
	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	375 —		500 17		625 24		750 30		875 35		1000 40		1125 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 6 1.25 SQ. FT.	4B 4C	CFM/SIDE	169	18	225	25	281	31	338	37	393	44	450	50	506	56
		THROW, FT.	16-19-26	5-6-10	18-22-30	6-8-12	21-25-34	8-10-13	22-29-38	8-10-14	23-29-40	10-12-16	25-31-43	10-12-16	27-32-45	12-13-17
	4E	CFM/SIDE	94	94	125	125	156	156	188	188	219	219	250	250	282	282
		THROW, FT.	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	178	18	237	25	297	31	356	37	415	44	475	50	534	56
		THROW, FT.	16-19-26	5-6-10	18-22-30	6-8-12	21-25-34	8-10-13	22-29-38	8-10-14	23-29-40	10-12-16	25-31-43	10-12-16	27-32-45	12-13-17
	2A 2B	CFM/SIDE	187		250		312		375		437		500		562	
		THROW, FT.	16-19-26		18-22-30		21-25-34		22-29-38		23-29-40		25-31-43		27-32-45	
	2C 2D 2E 2F	CFM/SIDE	337	37	450	50	563	62	675	75	788	87	900	100	1013	112
		THROW, FT.	18-22-31	8-12-14	21-25-36	10-13-17	23-29-42	12-14-19	25-30-44	13-16-21	27-32-47	13-17-22	29-34-51	14-18-23	31-38-53	16-19-25
	1A 1B	CFM/SIDE	375		500		625		750		875		1000		1125	
		THROW, FT.	19-23-32		22-29-39		25-31-44		27-34-47		29-36-51		31-39-55		32-42-57	
	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	225 —		300 17		375 23		450 28		525 33		600 36		675 40	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
12 x 9 .75 SQ. FT.	4B 4C	CFM/SIDE	70	42	94	56	117	70	141	84	164	98	188	112	211	126
		THROW, FT.	10-13-17	6-8-13	12-14-19	8-10-14	13-16-22	10-12-16	14-17-23	10-13-17	16-18-25	12-13-18	16-19-27	12-14-19	17-21-29	13-16-21
	3A1	CFM/SIDE	91	42	121	56	152	70	183	84	213	98	244	112	274	126
		THROW, FT.	13-16-22	6-8-13	14-18-25	8-10-14	16-21-29	10-12-16	17-22-30	10-13-17	18-23-32	12-13-18	19-25-34	12-14-19	21-29-38	13-16-21
	3A2	CFM/SIDE	75	75	100	100	125	125	150	150	175	175	200	200	225	225
		THROW, FT.	13-15-20	13-15-20	14-17-22	14-17-22	15-20-25	15-20-25	17-21-27	17-21-27	18-22-31	18-22-31	20-24-31	20-24-31	21-25-34	21-25-34
	2A 2B	CFM/SIDE	112		150		187		225		262		300		337	
		THROW, FT.	14-17-23		17-19-29		19-22-31		21-23-34		22-25-36		23-27-39		25-29-42	
	2C 2D 2E 2F	CFM/SIDE	141	84	188	112	234	141	281	169	328	197	375	225	422	253
		THROW, FT.	15-18-25	13-15-20	18-21-31	14-17-22	21-24-34	15-20-25	22-25-36	17-21-27	24-27-39	18-22-31	25-29-42	20-24-31	27-31-45	21-25-34
	1A 1B	CFM/SIDE	225		300		375		450		525		600		675	
		THROW, FT.	18-22-31		21-25-35		24-28-41		25-31-45		27-32-48		31-35-50		31-39-53	
	RETURN FACTORS —SP=1.7 TP NC + 3	CFM NC	280 —		375 18		470 24		565 29		655 34		750 37		845 41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
15 x 9 .93 SQ. FT.	4B 4C	CFM/SIDE	98	42	131	56	165	70	198	84	230	98	263	112	296	126
		THROW, FT.	13-16-22	6-8-13	14-18-25	8-10-14	16-21-29	10-12-16	17-22-30	10-13-17	18-23-32	12-13-18	19-25-34	12-14-19	21-29-38	13-16-21
	4E	CFM/SIDE	70	70	94	94	117	117	141	141	164	164	188	188	211	211
		THROW, FT.	12-14-19	12-14-19	13-16-22	13-16-22	14-18-25	14-18-25	16-19-29	16-19-29	17-21-29	17-21-29	18-22-31	18-22-31	19-23-32	19-23-32
	3A1	CFM/SIDE	120	42	159	56	200	70	240	84	279	98	319	112	359	126
		THROW, FT.	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
	3A2	CFM/SIDE	117	82	155	110	196	137	233	165	272	192	312	219	351	247
		THROW, FT.	14-15-22	11-14-18	15-18-25	13-15-21	17-21-28	14-17-24	18-22-31	15-18-25	20-24-32	17-20-27	21-25-35	17-21-31	22-27-39	18-22-31
	2A 2B	CFM/SIDE	140		187		235		281		328		375		422	
		THROW, FT.	14-17-23		17-19-29		19-22-31		21-23-34		22-25-36		23-29-39		25-29-42	
	2C 2D 2E 2F	CFM/SIDE	197	84	263	112	329	141	394	169	459	197	525	225	592	253
		THROW, FT.	17-21-28	13-15-20	20-24-32	14-17-22	22-27-36	15-20-25	24-31-41	17-21-27	25-31-43	18-22-30	27-34-46	20-24-32	31-35-49	21-25-34
	1A 1B	CFM/SIDE	281		375		470		563		656		750		845	
		THROW, FT.	20-24-34		22-27-39		25-31-45		27-32-48		29-35-50		31-36-55		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 x .82 = B.

For performance notes, see page D32.

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	
	RETURN FACTORS —SP=2.1 TP NC + 3	CFM NC	335 —		450 19		560 25		675 30		790 35		900 38		1010 42	
			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	126	42	169	56	211	70	254	84	296	98	338	112	380	126
		THROW, FT.	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	99	70	132	94	164	117	197	141	230	164	263	188	296	211
		THROW, FT.	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	147	42	197	56	246	70	295	84	345	98	394	112	443	126
		THROW, FT.	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	168	84	225	112	281	141	337	169	394	197	450	225	506	253
		THROW, FT.	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	163		225		281		337		394		450		506	
		THROW, FT.	16-19-26		18-22-30		21-25-34		22-29-38		23-29-40		25-31-43		29-32-45	
	2C 2D 2E 2F	CFM/SIDE	253	84	338	112	421	141	506	169	591	197	675	225	759	253
		THROW, FT.	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	337		450		562		675		788		900		1012	
		THROW, FT.	20-24-34		22-27-39		25-31-45		27-32-48		29-35-50		31-36-55		34-41-57	
	RETURN FACTORS —SP=2.5 TP NC + 4	CFM NC	395 —		525 19		655 25		785 31		915 36		1050 38		1180 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 9 1.125 SQ. FT.	4B 4C	CFM/SIDE	154	42	206	56	258	70	309	84	360	98	413	112	464	126
		THROW, FT.	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	98	98	131	131	163	163	196	196	229	229	261	261	294	294
		THROW, FT.	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	175	42	234	56	292	70	351	84	410	98	468	112	527	126
		THROW, FT.	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	196		262		327		393		458		525		590	
		THROW, FT.	16-19-26		18-22-30		21-25-34		22-27-38		23-29-40		25-31-43		29-32-45	
	2C 2D 2E 2F	CFM/SIDE	308	84	412	112	514	141	617	169	720	197	825	225	927	253
		THROW, FT.	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	393		524		655		786		917		1050		1180	
		THROW, FT.	21-25-35		24-31-42		27-34-48		29-36-50		31-39-55		34-42-59		35-45-62	
	RETURN FACTORS —SP=2.9 TP NC + 4	CFM NC	450 —		600 19		750 25		900 31		1050 36		1200 38		1350 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 9 1.5 SQ. FT.	4B 4C	CFM/SIDE	183	42	244	56	305	70	366	84	427	98	488	112	549	126
		THROW, FT.	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	126	99	169	132	211	164	253	197	295	230	337	263	379	296
		THROW, FT.	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	204	42	272	56	340	70	408	84	476	98	544	112	612	126
		THROW, FT.	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	225		300		375		450		525		600		675	
		THROW, FT.	18-22-31		21-25-35		24-28-41		25-31-45		27-32-48		29-35-50		31-39-53	
	2C 2D 2E 2F	CFM/SIDE	365	84	488	112	609	141	731	169	853	197	975	225	1097	253
		THROW, FT.	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	450		600		750		900		1050		1200		1350	
		THROW, FT.	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 x .82 = B.

For performance notes, see page D32.

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	
	RETURN FACTORS —SP=3.9 TP NC + 5	CFM NC	560 —		750 20		935 26		1125 32		1310 37		1500 39		1685 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 9 1.875 SQ. FT.	4B 4C	CFM/SIDE	238	42	319	56	398	70	478	84	557	98	638	112	716	126
		THROW, FT.	18-22-31	7-8-14	21-25-35	8-11-15	24-28-41	11-13-17	25-31-45	11-14-18	27-32-48	13-14-20	29-35-50	13-15-21	31-39-53	14-17-22
	4E	CFM/SIDE	155	126	206	169	258	211	310	253	361	295	413	337	465	379
		THROW, FT.	17-21-28	15-18-25	20-24-32	18-21-31	22-27-36	21-24-34	24-31-41	22-25-36	25-31-42	24-27-39	27-34-46	25-29-42	31-35-49	27-31-45
	3A1	CFM/SIDE	259	42	347	56	433	70	520	84	606	98	694	112	779	126
		THROW, FT.	18-22-31	7-8-14	21-25-35	8-11-15	24-28-41	11-13-17	25-31-45	11-14-18	27-32-48	13-14-20	29-35-50	13-15-21	31-39-53	14-17-22
	2A 2B	CFM/SIDE	281		375		468		562		655		750		842	
		THROW, FT.	20-24-34		22-27-39		25-31-45		27-32-48		29-35-50		31-36-55		34-41-57	
	2C 2D 2E 2F	CFM/SIDE	476	84	638	112	796	141	956	169	1113	197	1275	225	1432	253
		THROW, FT.	22-27-39	13-15-20	25-31-45	14-17-22	28-35-50	15-20-25	31-39-55	17-21-27	32-42-59	18-22-31	35-45-62	20-24-31	39-48-66	21-25-34
	1A 1B	CFM/SIDE	562		750		937		1125		1310		1500		1685	
		THROW, FT.	22-27-39		25-31-45		28-35-50		31-39-55		32-42-59		35-45-62		39-48-66	
	RETURN FACTORS —SP=5.0 TP NC + 6	CFM NC	675 —		900 21		1125 27		1350 33		1575 38		1800 40		2025 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 9 2.25 SQ. FT.	4B 4C	CFM/SIDE	295	42	394	56	492	70	591	84	689	98	788	112	886	126
		THROW, FT.	20-24-34	7-8-14	22-27-39	8-11-15	25-31-45	11-13-17	27-32-48	11-14-18	29-35-50	13-14-20	31-36-55	13-15-21	34-41-57	14-17-22
	4E	CFM/SIDE	183	155	244	206	305	258	366	310	427	361	488	413	549	465
		THROW, FT.	17-21-28	17-21-28	20-24-32	20-24-32	22-27-36	22-27-36	24-31-41	24-31-41	25-31-42	25-31-42	27-34-46	27-34-46	31-35-49	31-35-49
	3A1	CFM/SIDE	316	42	422	56	527	70	633	84	738	98	844	112	949	126
		THROW, FT.	20-24-34	7-8-14	22-27-39	8-11-15	25-31-45	11-13-17	27-32-48	11-14-18	29-35-50	13-14-20	31-36-55	13-15-21	34-41-57	14-17-22
	2A 2B	CFM/SIDE	337		450		562		675		787		900		1012	
		THROW, FT.	20-24-34		22-27-39		25-31-45		27-32-48		29-35-50		31-36-55		34-41-57	
	2C 2D 2E 2F	CFM/SIDE	590	84	788	112	984	141	1181	169	1378	197	1575	225	1772	253
		THROW, FT.	24-31-42	13-15-20	28-34-48	14-17-22	32-39-55	15-20-25	34-42-57	17-21-27	36-45-62	18-22-29	41-49-66	20-24-31	43-52-70	21-25-34
	1A 1B	CFM/SIDE	675		900		1125		1350		1575		1800		2025	
		THROW, FT.	24-31-42		28-34-48		32-39-55		34-42-57		36-45-62		41-49-66		43-52-70	
	RETURN FACTORS —SP=1.6 TP NC + 2	CFM NC	375 —		500 19		625 25		750 30		875 34		1000 38		1125 41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
15 x 12 1.25 SQ. FT.	4B 4C	CFM/SIDE	112	75	150	100	187	125	225	150	262	175	300	200	337	225
		THROW, FT.	13-15-21	8-13-15	14-17-24	11-14-18	15-20-27	13-15-21	17-21-29	14-17-22	18-22-31	14-18-24	20-24-34	15-20-25	21-25-35	17-21-27
	3A1	CFM/SIDE	150	75	200	100	250	125	300	150	350	175	400	200	450	225
		THROW, FT.	15-18-25	8-13-15	18-21-31	11-14-18	21-24-34	13-15-21	22-25-36	14-17-22	24-27-39	14-18-24	25-29-42	15-20-25	27-31-45	17-21-27
	3A2	CFM/SIDE	117	129	156	172	195	215	234	258	273	301	312	344	351	387
		THROW, FT.	11-14-18	14-15-22	13-15-21	15-18-25	14-17-24	17-21-28	15-18-25	18-22-31	17-20-27	20-24-32	17-21-29	21-25-35	18-22-31	22-27-39
	2A 2B	CFM/SIDE	187		250		312		375		437		500		567	
		THROW, FT.	17-21-28		20-24-32		22-27-36		24-29-41		25-31-43		27-34-46		31-35-49	
	2C 2D 2E 2F	CFM/SIDE	225	150	300	200	375	250	450	300	525	350	600	400	675	450
		THROW, FT.	18-22-31	14-17-24	21-25-35	15-20-27	24-28-41	17-22-31	25-31-45	18-24-32	27-32-48	20-25-35	31-35-50	21-27-36	31-39-53	22-31-41
	1A 1B	CFM/SIDE	375		500		625		750		875		1000		1125	
		THROW, FT.	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 x .82 = B.

For performance notes, see page D32.

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	
	RETURN FACTORS —SP=1.9 TP NC + 3	CFM NC	450 —		600 20		750 26		900 31		1050 35		1200 39		1350 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 12 1.5 SQ. FT.	4B 4C	CFM/SIDE	150	75	200	100	250	125	300	150	350	175	400	200	450	225
		THROW, FT.	15-18-25	8-13-15	18-21-31	11-14-18	21-24-34	13-15-21	22-25-36	14-17-22	24-27-39	14-18-24	25-31-42	15-20-25	27-31-45	17-21-27
	3A1	CFM/SIDE	187	75	250	100	312	125	375	150	437	175	500	200	562	225
		THROW, FT.	17-21-28	8-13-15	20-24-32	11-14-18	22-27-36	13-15-21	24-31-41	14-17-22	25-31-43	14-18-24	27-34-46	15-20-25	31-35-49	17-21-27
	3A2	CFM/SIDE	168	141	225	187	281	234	337	281	394	328	450	375	506	422
		THROW, FT.	14-17-24	13-15-21	15-20-27	14-17-24	17-22-31	15-20-27	18-24-32	17-21-31	20-25-35	18-22-31	21-27-36	20-24-34	22-31-41	21-25-35
	2A 2B	CFM/SIDE	225		300		375		450		525		600		675	
		THROW, FT.	18-22-31		21-25-35		24-28-41		25-31-45		27-32-48		29-35-50		31-39-53	
	2C 2D 2E 2F	CFM/SIDE	300	150	400	200	500	250	600	300	700	350	800	400	900	450
		THROW, FT.	20-24-34	14-17-24	22-27-39	15-20-27	25-31-45	17-22-31	27-32-48	18-24-32	29-35-50	20-25-35	31-36-55	21-27-36	34-41-57	22-31-41
	1A 1B	CFM/SIDE	450		600		750		900		1050		1200		1350	
		THROW, FT.	21-25-35		24-31-42		27-34-48		29-36-50		31-39-55		34-42-59		35-45-62	
	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	525 —		700 20		875 26		1050 31		1225 35		1400 39		1575 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 12 1.75 SQ. FT.	4B 4C	CFM/SIDE	187	75	250	100	312	125	375	150	437	175	500	200	562	225
		THROW, FT.	17-21-28	8-13-15	20-24-32	11-14-18	22-27-36	13-15-21	24-31-41	14-17-22	25-32-43	14-18-24	27-34-46	15-20-25	31-35-49	17-21-27
	4E	CFM/SIDE	150	112	200	150	250	187	300	225	350	262	400	300	450	337
		THROW, FT.	15-18-25		18-21-31	15-18-25	21-24-34		22-25-36		24-27-39		25-31-42	22-25-36	27-31-45	
	3A1	CFM/SIDE	225	75	300	100	375	125	450	150	525	175	600	200	675	225
		THROW, FT.	18-22-31	8-13-15	21-25-35	11-14-18	24-28-41	13-15-21	25-31-45	14-17-22	27-32-48	14-18-24	29-35-50	15-20-25	31-39-53	17-21-27
	3A2	CFM/SIDE	230	148	306	197	382	246	460	295	535	345	612	394	688	443
		THROW, FT.	14-17-24	13-15-21	15-20-27	14-17-24	17-22-31	15-20-27	18-24-32	17-21-31	20-25-35	18-22-31	21-27-36	20-24-34	22-31-41	21-25-35
	2A 2B	CFM/SIDE	262		350		437		525		612		700		787	
		THROW, FT.	18-22-31		21-25-35		24-28-41		25-31-45		27-32-48		29-35-50		31-39-53	
	2C 2D 2E 2F	CFM/SIDE	375	150	500	200	625	250	750	300	875	350	1000	400	1125	450
		THROW, FT.	21-25-35	14-17-24	24-31-42	15-20-27	27-34-48	17-22-31	29-36-50	18-24-32	31-39-55	20-25-35	34-42-59	21-27-36	35-45-62	22-31-41
	1A 1B	CFM/SIDE	525		700		875		1050		1225		1400		1575	
		THROW, FT.	22-27-39		25-31-45		28-35-50		31-39-55		32-42-59		35-45-62		39-48-66	
	RETURN FACTORS —SP=2.6 TP NC + 5	CFM NC	600 12		800 21		1000 27		1200 32		1400 36		1600 40		1800 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 12 2.0 SQ. FT.	4B 4C	CFM/SIDE	225	75	300	100	375	125	450	150	525	175	600	200	675	225
		THROW, FT.	18-22-31	8-13-15	21-25-35	11-14-18	24-28-41	13-15-21	25-31-45	14-17-22	27-32-48	14-18-24	31-35-50	15-20-25	31-39-53	17-21-27
	4E	CFM/SIDE	150	150	200	200	250	250	300	300	350	350	400	400	450	450
		THROW, FT.	15-18-25	15-18-25	18-21-31	18-21-31	21-24-34	21-24-34	22-25-36	22-25-36	24-27-39	24-27-39	25-31-42	25-31-42	27-31-45	27-31-45
	3A1	CFM/SIDE	262	75	350	100	437	175	525	150	612	175	700	200	787	225
		THROW, FT.	18-22-31	8-13-15	21-25-35	11-14-18	24-28-41	13-15-21	25-31-45	14-17-22	27-32-48	14-18-24	29-35-50	15-20-25	31-39-53	17-21-27
	3B	CFM/SIDE	300	150	400	200	500	250	600	300	700	350	800	400	900	450
		THROW, FT.	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
	2A 2B	CFM/SIDE	300		400		500		600		700		800		900	
		THROW, FT.	20-24-34		22-27-39		25-31-45		27-32-48		29-35-50		31-36-55		34-41-57	
	2C 2D 2E 2F	CFM/SIDE	450	150	600	200	750	250	900	300	1050	350	1200	400	1350	450
		THROW, FT.	21-25-35	14-17-24	24-31-42	15-20-27	27-34-48	17-22-31	29-36-50	18-24-32	31-39-55	20-25-35	34-42-59	21-27-36	35-45-62	22-31-41
	1A 1B	CFM/SIDE	600		800		1000		1200		1400		1600		1800	
		THROW, FT.	24-31-42		28-34-48		32-39-55		34-42-57		36-45-62		41-49-66		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 D32.

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	
	RETURN FACTORS —SP=3.3 TP NC + 6	CFM NC	750 15		1000 23		1250 29		1500 33		1750 37		2000 41		2250 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 12 2.5 SQ. FT.	4B 4C	CFM/SIDE	300	75	400	100	500	125	600	150	700	175	800	200	900	225
		THROW, FT.	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	183	183	250	250	313	313	375	375	437	437	500	500	562	562
		THROW, FT.	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	337	75	450	100	562	125	675	150	787	175	900	200	1012	225
		THROW, FT.	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	375		500		625		750		875		1000		1125	
		THROW, FT.	21-25-35		24-31-42		27-34-48		29-36-50		31-39-55		34-42-59		35-45-62	
	2C 2D 2E 2F	CFM/SIDE	600	150	800	200	1000	250	1200	300	1400	350	1600	400	1800	450
		THROW, FT.	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	750		1000		1250		1500		1750		2000		2250	
		THROW, FT.	25-31-45		31-35-50		34-41-57		36-45-62		39-48-66		42-50-70		45-53-74	
	RETURN FACTORS —SP=4.0 TP NC + 7	CFM NC	900 16		1200 25		1500 30		1800 34		2100 38		2400 42		2700 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 12 3.0 SQ. FT.	4B 4C	CFM/SIDE	375	75	500	100	625	125	750	150	875	175	1000	200	1125	225
		THROW, FT.	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	225	225	300	300	375	375	450	450	525	525	600	600	675	675
		THROW, FT.	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	412	75	550	100	687	125	825	150	962	175	1100	200	1237	225
		THROW, FT.	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	450		600		750		900		1050		1200		1350	
		THROW, FT.	21-25-35		24-31-42		27-34-48		29-36-50		31-39-55		34-42-59		35-45-62	
	2C 2D 2E 2F	CFM/SIDE	750	150	1000	200	1250	250	1500	300	1750	350	2000	400	2250	450
		THROW, FT.	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	900		1200		1500		1800		2100		2400		2700	
		THROW, FT.	27-34-46		31-39-53		35-45-60		39-48-64		42-50-70		45-55-74		48-57-80	
	RETURN FACTORS —SP=2.0 TP NC + 4	CFM NC	560 14		750 21		935 28		1125 32		1310 36		1500 39		1685 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 15 1.875 SQ. FT.	4B 4C	CFM/SIDE	164	117	219	156	273	195	328	234	383	273	438	312	492	351
		THROW, FT.	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	222	117	297	156	371	195	445	234	519	273	594	312	668	351
		THROW, FT.	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	168	197	225	262	281	328	337	394	394	459	450	525	506	590
		THROW, FT.	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	281		375		468		562		656		750		843	
		THROW, FT.	20-24-34		22-27-39		25-31-45		27-32-48		29-35-50		31-36-55		34-41-57	
	2C 2D 2E 2F	CFM/SIDE	329	234	438	312	547	390	657	468	766	546	876	624	985	702
		THROW, FT.	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	562		750		937		1125		1312		1500		1687	
		THROW, FT.	24-28-42		27-33-48		30-37-54		33-42-58		34-45-63		37-48-66		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 D32.

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

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 D32.

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	
	RETURN FACTORS —SP=3.8 TP NC + 7	CFM NC	1125 13		1500 23		1875 31		2250 37		2625 40		3000 41		3375 46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 15 3.75 SQ. FT.	4B 4C	CFM/SIDE	446	117	594	156	742	195	891	234	1039	273	1188	312	1336	351
		THROW, FT.	22-27-37	12-15-19	25-33-45	13-16-22	28-36-51	15-18-25	33-39-54	16-19-27	33-45-58	18-21-28	36-45-63	18-22-30	37-48-66	19-24-33
	4E	CFM/SIDE	306	258	408	344	510	430	612	516	714	602	816	688	918	775
		THROW, FT.	21-25-36	19-24-33	24-28-42	22-27-37	27-33-48	25-30-43	28-34-51	27-33-48	33-37-54	28-34-51	33-39-58	33-37-54	36-43-61	33-42-57
	3A1	CFM/SIDE	504	117	672	156	840	195	1008	234	1176	273	1344	312	1512	351
		THROW, FT.	24-28-42	12-15-19	27-33-48	13-16-22	30-37-54	15-18-25	33-45-58	16-19-27	34-45-63	18-21-28	37-48-66	18-22-30	42-51-70	19-24-33
	2A 2B	CFM/SIDE	562		750		937		1125		1312		1500		1682	
		THROW, FT.	24-28-42		27-33-48		30-37-54		33-42-58		34-45-63		37-48-66		42-51-70	
	2C 2D 2E 2F	CFM/SIDE	890	234	1188	312	1485	390	1782	468	2079	546	2376	624	2873	702
		THROW, FT.	28-36-49	18-22-30	33-42-49	21-25-34	37-48-64	24-28-39	42-51-69	25-33-43	45-54-75	27-33-46	48-58-79	28-36-49	51-61-85	33-37-52
	1A 1B	CFM/SIDE	1125		1500		1875		2250		2625		3000		3375	
		THROW, FT.	30-37-52		34-43-60		39-48-67		42-52-73		46-57-78		49-60-85		52-64-90	
	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	785 14		1050 21		1310 27		1575 32		1840 36		2100 40		2360 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 18 2.625 SQ. FT.	4B 4C	CFM/SIDE	225	169	300	225	375	280	450	337	526	394	600	450	674	506
		THROW, FT.	16-19-27	13-16-22	19-22-33	15-18-25	22-25-36	16-21-28	24-27-40	18-22-30	25-28-42	19-24-33	27-33-45	21-25-36	28-33-48	22-27-37
	3A1	CFM/SIDE	309	169	412	225	514	281	619	337	723	394	825	450	927	506
		THROW, FT.	21-25-36	13-16-22	24-28-42	15-18-25	27-33-48	16-21-28	28-34-51	18-22-30	33-37-54	19-24-33	33-39-58	21-25-36	36-43-61	22-27-37
	3A2	CFM/SIDE	279	230	372	306	464	382	557	460	652	535	744	612	836	688
		THROW, FT.	21-25-36	15-18-25	24-28-42	16-21-28	27-33-48	18-24-33	28-34-51	19-25-34	33-37-54	21-27-37	33-39-58	22-28-39	36-43-61	24-33-43
	2A 2B	CFM/SIDE	393		525		655		787		920		1050		1180	
		THROW, FT.	22-27-37		25-33-42		28-36-46		30-39-54		33-42-58		36-45-63		37-48-66	
	2C 2D 2E 2F	CFM/SIDE	450	338	600	450	750	560	900	675	1060	790	1200	900	1350	1010
		THROW, FT.	22-27-37	19-24-33	25-33-42	22-27-37	28-36-46	25-30-43	30-39-54	27-33-48	33-42-58	28-34-51	36-45-63	33-37-54	37-48-66	33-42-57
	1A 1B	CFM/SIDE	787		1050		1310		1575		1840		2100		2360	
		THROW, FT.	29-35-51		35-40-58		38-46-66		42-51-70		45-54-75		48-58-80		51-61-85	
	RETURN FACTORS —SP=2.5 TP NC + 6	CFM NC	900 15		1200 22		1500 28		1800 33		2100 37		2400 40		2700 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 18 3.0 SQ. FT.	4B 4C	CFM/SIDE	281	169	375	225	469	281	563	337	656	394	750	450	844	506
		THROW, FT.	22-27-38	14-18-24	26-30-45	16-19-27	29-35-51	18-22-30	30-37-54	19-24-33	33-40-58	21-26-35	35-42-62	22-27-38	38-46-66	24-29-40
	4E	CFM/SIDE	225	225	300	300	375	375	450	450	525	525	600	600	675	675
		THROW, FT.	21-26-35	21-26-35	24-29-40	24-29-40	27-32-46	27-32-46	29-35-51	29-35-51	30-37-54	30-37-54	33-40-58	33-40-58	35-45-61	35-45-61
	3A1	CFM/SIDE	366	169	487	225	609	281	731	337	853	394	975	450	1098	506
		THROW, FT.	24-29-40	14-18-24	27-35-48	16-19-27	30-38-54	18-22-30	35-42-58	19-24-33	35-45-62	21-26-35	38-48-67	22-27-38	40-51-70	24-29-40
	3A2	CFM/SIDE	300	300	400	400	500	500	600	600	700	700	800	800	900	900
		THROW, FT.	25-31-43	20-23-32	29-34-50	23-27-40	32-40-58	27-31-43	34-41-61	29-32-47	40-45-65	31-34-50	40-47-70	32-40-54	43-52-74	34-40-58
	2A 2B	CFM/SIDE	450		600		750		900		1050		1200		1350	
		THROW, FT.	24-29-40		27-35-48		30-38-54		35-42-58		35-45-62		38-48-67		40-51-70	
	2C 2D 2E 2F	CFM/SIDE	562	338	750	450	938	562	1125	675	1313	787	1500	900	1688	1012
		THROW, FT.	26-30-45	21-26-35	29-35-51	24-29-40	32-40-58	27-32-46	35-45-62	29-35-51	37-48-67	30-37-54	40-51-70	33-40-58	45-54-75	35-45-61
	1A 1B	CFM/SIDE	900		1200		1500		1800		2100		2400		2700	
		THROW, FT.	30-38-53		35-45-61		40-51-69		45-54-74		48-58-80		51-62-85		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 x .82 = B.

For performance notes, see page D32.

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	
	RETURN FACTORS —SP=3.1 TP NC + 7	CFM NC	1125 15		1500 23		1875 29		2250 34		2625 38		3000 42		3375 45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 18 3.75 SQ. FT.	4B 4C	CFM/SIDE	394	169	525	225	657	281	788	337	918	394	1050	450	1181	506
		THROW, FT.	24-29-40	14-18-24	27-35-48	16-19-27	30-38-54	18-22-30	35-42-58	19-24-35	35-45-62	21-26-35	38-48-67	22-27-38	40-51-70	24-29-40
	4E	CFM/SIDE	281	281	375	375	469	469	563	563	657	657	750	750	845	845
		THROW, FT.	22-27-38	22-27-38	26-30-45	26-30-45	29-35-51	29-35-51	30-37-54	30-37-54	32-40-58	32-40-58	35-42-62	35-42-62	38-46-66	38-46-66
	3A1	CFM/SIDE	478	169	637	225	797	281	956	337	1115	394	1275	450	1434	506
		THROW, FT.	26-30-45	14-18-24	29-35-51	16-19-27	32-40-58	18-22-30	35-45-62	19-24-35	37-48-67	21-26-35	40-51-70	22-27-38	45-54-75	24-29-40
	3A2	CFM/SIDE	469	327	625	437	782	546	937	656	1093	766	1250	875	1406	984
		THROW, FT.	22-27-38	19-24-32	26-30-45	22-27-37	29-35-51	26-30-42	30-37-54	27-35-46	32-40-58	29-35-50	35-42-62	30-38-53	38-46-66	35-40-56
	2A 2B	CFM/SIDE	562		750		937		1125		1312		1500		1687	
		THROW, FT.	26-30-45		29-35-51		32-40-58		35-45-62		37-48-67		40-51-70		45-54-75	
	2C 2D 2E 2F	CFM/SIDE	787	337	1050	450	1313	562	1575	675	1838	787	2100	900	2363	1012
		THROW, FT.	29-35-51	21-26-35	35-40-58	24-29-40	38-46-66	27-32-46	42-51-70	29-35-51	45-54-75	30-37-54	48-58-80	33-40-58	51-61-85	35-45-61
	1A 1B	CFM/SIDE	1125		1500		1875		2250		2625		3000		3375	
		THROW, FT.	32-40-56		37-46-62		42-53-72		46-56-78		50-61-83		53-64-91		56-69-96	
	RETURN FACTORS —SP=3.6 TP NC + 8	CFM NC	1350 16		1800 24		2250 30		2700 35		3150 39		3600 42		4050 45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 18 4.5 SQ. FT.	4B 4C	CFM/SIDE	506	169	675	225	844	281	1013	337	1181	394	1350	450	1519	506
		THROW, FT.	26-30-45	14-18-24	29-35-51	16-19-27	33-40-58	18-22-30	35-45-62	19-24-35	37-48-67	21-26-35	40-51-70	22-27-38	45-54-75	24-29-40
	4E	CFM/SIDE	339	339	452	452	565	565	678	678	791	791	904	904	1020	1020
		THROW, FT.	22-27-38	22-27-38	26-30-45	26-30-45	29-35-51	29-35-51	30-37-54	30-37-54	33-40-58	33-40-58	35-42-62	35-42-62	38-46-66	38-46-66
	3A1	CFM/SIDE	591	169	787	225	984	281	1181	337	1378	394	1575	450	1772	506
		THROW, FT.	27-35-48	14-18-24	32-38-54	16-19-27	37-45-62	18-22-30	38-48-66	19-24-35	42-51-70	21-26-35	46-56-75	22-27-38	50-59-80	24-29-40
	3B	CFM/SIDE	675	337	900	450	1125	562	1350	675	1575	787	1800	900	2025	1012
		THROW, FT.	27-35-48	21-26-35	32-38-54	24-29-40	37-45-62	27-32-46	38-48-66	29-35-51	42-51-70	30-37-54	46-56-75	33-40-58	50-59-80	35-45-61
	2A 2B	CFM/SIDE	675		900		1125		1350		1575		1800		2025	
		THROW, FT.	27-35-48		32-38-54		37-45-62		38-48-66		42-51-70		46-56-75		50-59-80	
	2C 2D 2E 2F	CFM/SIDE	1010	337	1350	450	1688	562	2025	675	2363	787	2700	900	3038	1012
		THROW, FT.	32-40-56	21-26-35	37-46-64	24-29-40	42-53-72	27-32-46	46-56-78	29-35-51	50-61-83	30-37-54	53-64-91	33-40-58	56-69-96	35-45-61
	1A 1B	CFM/SIDE	1350		1800		2250		2700		3150		3600		4050	
		THROW, FT.	35-40-59		38-48-67		45-54-77		48-58-82		51-62-90		54-67-93		59-70-101	
	RETURN FACTORS —SP=2.1 TP NC + 7	CFM NC	1050 15		1400 22		1750 28		2100 33		2450 37		2800 41		3150 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 21 3.5 SQ. FT.	4B 4C	CFM/SIDE	295	230	394	306	493	382	590	460	690	535	788	612	887	688
		THROW, FT.	20-25-34	17-20-29	24-29-39	19-24-32	27-32-44	20-27-37	29-37-49	22-29-39	31-37-53	24-31-42	32-41-56	25-32-44	37-42-59	27-37-49
	3A1	CFM/SIDE	410	230	547	306	684	382	820	460	957	535	1094	612	1231	688
		THROW, FT.	25-31-42	17-20-29	29-37-51	19-24-32	32-41-58	20-27-37	37-44-61	22-29-39	37-48-66	24-31-42	41-51-71	25-32-44	42-54-75	27-37-49
	3A2	CFM/SIDE	375	300	500	400	625	500	750	600	875	700	1000	800	1125	900
		THROW, FT.	25-31-42	19-22-31	29-37-51	22-25-37	32-41-58	25-29-41	37-44-61	27-31-44	37-48-66	29-32-48	41-51-71	31-37-51	42-54-75	32-37-54
	2A 2B	CFM/SIDE	525		700		875		1050		1225		1400		1575	
		THROW, FT.	27-32-48		31-37-54		34-42-61		37-48-66		39-51-71		42-54-75		48-58-80	
	2C 2D 2E 2F	CFM/SIDE	591	459	788	612	986	764	1180	920	1380	1070	1576	1224	1774	1376
		THROW, FT.	29-37-51	24-29-41	34-41-58	27-32-48	39-48-66	31-37-54	41-51-70	32-39-58	44-54-75	37-42-61	49-59-80	37-44-66	53-63-85	41-49-70
	1A 1B	CFM/SIDE	1050		1400		1750		2100		2450		2800		3150	
		THROW, FT.	34-42-59		39-49-68		44-56-76		49-59-83		53-65-88		56-68-87		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 D32.

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

For performance notes, see page D32.

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	
	RETURN FACTORS —SP=3.3 TP NC + 8	CFM NC	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
36 x 24 6.0 SQ. FT.	4B 4C	CFM/SIDE THROW, FT.	600 29-37-51	300 19-22-31	800 34-41-58	400 22-25-37	1000 39-48-66	500 25-29-41	1200 41-51-70	600 27-31-44	1400 44-54-75	700 29-32-48	1600 49-59-80	800 31-37-51	1800 53-63-85	900 32-37-54
	4E	CFM/SIDE THROW, FT.	450 25-31-42	450 24-31-42	600 29-37-51	600 29-37-51	750 32-41-58	750 32-41-58	900 35-44-61	900 35-44-61	1050 37-48-66	1050 37-48-66	1200 41-51-71	1200 41-51-71	1350 42-54-75	1350 42-54-75
	3A1	CFM/SIDE THROW, FT.	750 31-37-54	300 19-22-31	1000 37-42-61	400 22-25-37	1250 41-49-70	500 25-29-41	1500 44-54-75	600 27-31-44	1750 48-58-80	700 29-32-48	2000 51-61-85	800 31-37-51	2250 54-65-90	900 32-37-54
	3A2	CFM/SIDE THROW, FT.	676 27-32-48	562 24-29-41	900 34-37-54	750 27-32-48	1125 34-42-61	937 31-37-54	1350 37-48-66	1125 32-39-58	1575 39-51-71	1312 35-42-61	1800 42-54-75	1500 37-44-66	2025 48-58-80	1687 41-49-70
	2A 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 2E 2D 2F	CFM/SIDE THROW, FT.	1200 37-42-63	600 25-31-42	1600 41-51-71	800 29-37-51	2000 48-58-82	1000 32-41-58	2400 51-61-87	1200 35-44-61	2800 54-66-95	1400 37-48-66	3200 58-71-99	1600 41-51-71	3600 63-75-107	1800 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	
	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	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
36 x 30 7.5 SQ. FT.	4B 4C	CFM/SIDE THROW, FT.	657 29-37-51	468 20-25-34	875 34-41-58	625 24-29-39	1093 39-48-66	782 27-32-44	1313 41-51-70	937 29-37-49	1532 44-54-75	1093 31-37-53	1750 49-59-80	1250 32-41-56	1969 53-63-85	1406 37-42-59
	3A1	CFM/SIDE THROW, FT.	890 32-41-56	468 20-25-34	1187 37-48-65	625 24-29-39	1484 42-54-73	782 27-32-44	1781 48-58-78	937 29-37-49	2078 51-61-85	1093 31-37-53	2375 54-66-90	1250 32-41-56	2672 58-70-97	1406 37-42-59
	3A2	CFM/SIDE THROW, FT.	787 31-37-54	675 22-27-37	1050 37-42-61	900 25-31-42	1312 41-49-70	1125 29-34-49	1575 44-54-75	1350 31-37-54	1837 48-58-80	1575 32-39-58	2100 51-61-85	1800 37-42-61	2362 54-65-90	2025 37-48-65
	2A 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 2E 2D 2F	CFM/SIDE THROW, FT.	1312 37-42-63	938 29-37-51	1750 41-51-71	1250 34-41-58	2188 48-58-82	1562 39-48-66	2625 51-61-87	1875 41-51-70	3063 54-66-95	2187 44-54-75	3500 58-71-99	2500 49-59-80	3938 63-75-107	2812 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 x .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

Model Series 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 D18).

- 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 D18).

- 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 D18).

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

TABLE 2 Correction Factors 6550/6250 Adjustable

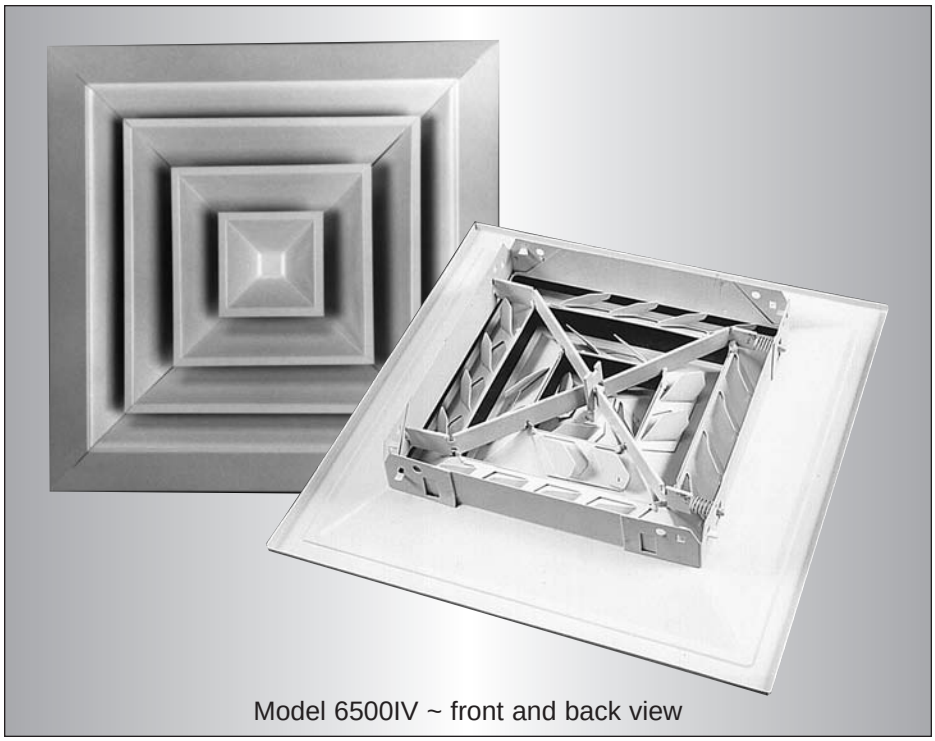
NECK SIZE	NC (add)		TOTAL PRESSURE (multiply)		VERTICAL THROW (multiply)			
					COOLING, ΔT	HEATING, ΔT		
	H	V	H	V	20°F	0°F	20°F	40°F
6 x 6	2	6	1.2	1.5	1.3	1.1	0.8	0.6
9 x 9	2	6	1.4	2.1	1.5	1.2	0.9	0.6
12 x 12	2	6	1.4	2.1	1.6	1.3	1.0	0.6
15 x 15	2	6	1.4	2.1	1.7	1.3	1.0	0.6
18 x 18	2	6	1.4	2.1	1.7	1.3	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 AND RECTANGULAR PATTERN CEILING DIFFUSERS

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



Model 6500IV ~ front and back view

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)

The **Nailor 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.

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 D37).
- 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: 6500IV Series – Corrosion-resistant steel. **6200IV Series** – Heavy-gauge aluminum extrusions.

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).

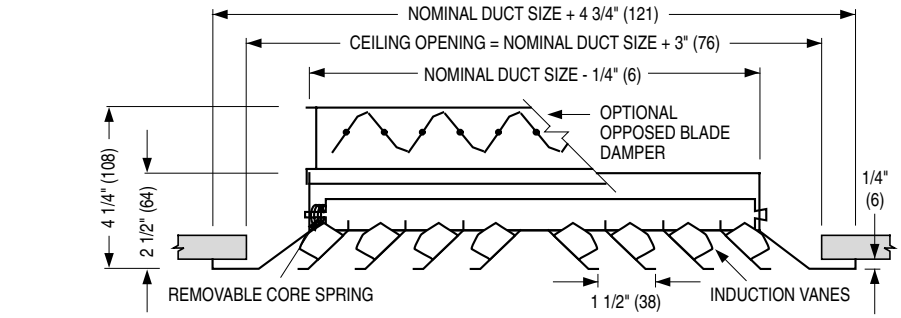
Maximum size:

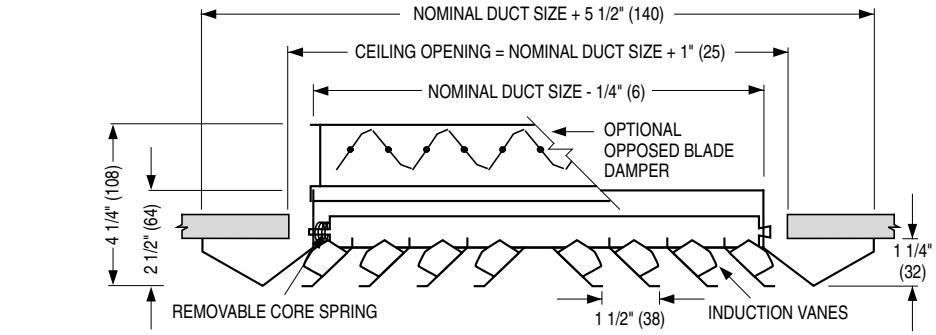
Types S, B and D: 36" x 36" (914 x 914).

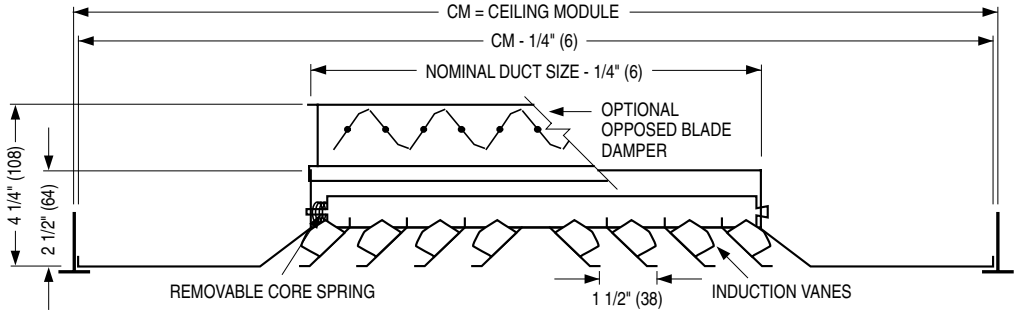
Types L, SP, TL, M and F: see page D35.

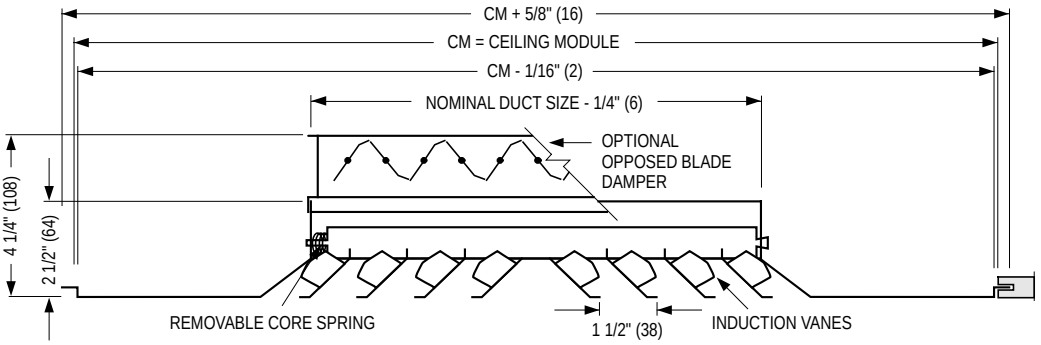
Dimensional Data and Frame Types

Model Series 6500IV and 6200IV









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

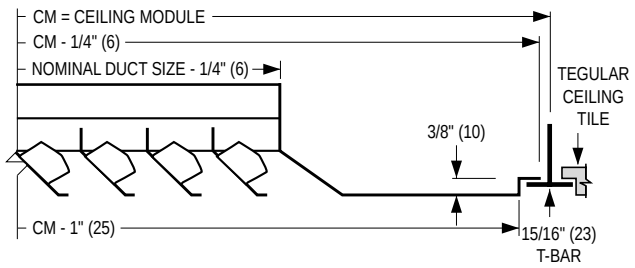
Ceiling Module Size	Maximum Duct Size Frames L, SP and M	Maximum Duct Size Frames TL and F
12 x 12 (305 x 305)	9 x 9 (229 x 229)	6 x 6 (152 x 152)
20 x 20 (508 x 508)	15 x 15 (381 x 381)	–
24 x 12 (610 x 305)	21 x 9 (533 x 229)	18 x 6 (457 x 152)
24 x 24 (610 x 610)	21 x 21 (533 x 533)	18 x 18 (457 x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

Dimensions are in inches (mm).

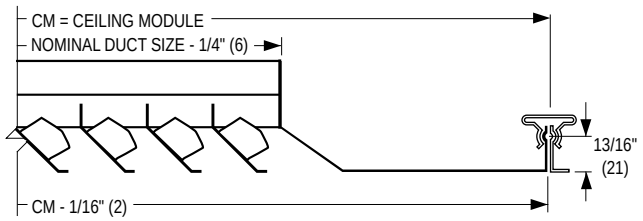
Dimensional Data and Frame Types

Model Series 6500IV and 6200IV

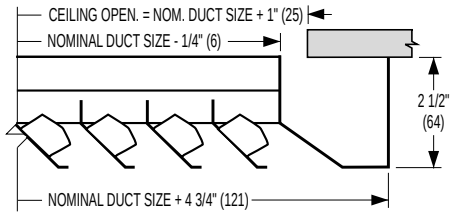
Type TL Tegular Lay-in



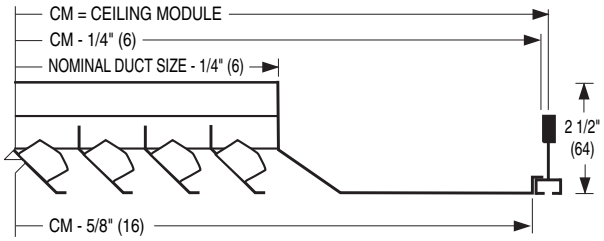
Type M Metal Pan (Snap-in)



Type D Deep Drop Face



Type F Fineline®

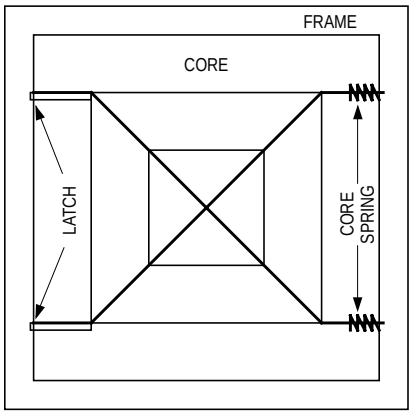


REMOVABLE CORE

- 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

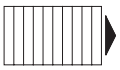
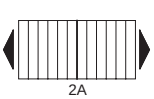
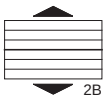
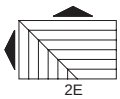
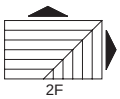
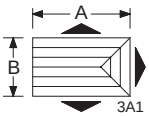
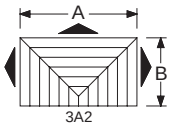
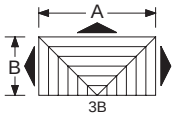
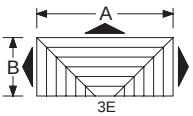
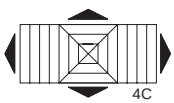
To remove diffuser core, lift the complete core assembly to disengage the latch, push the core against the core spring, pull down the core slightly and remove. Reverse procedure to re-install.



Standard Core Styles

Model Series 6500IV and 6200IV

Contact factory for special core configurations.

	SQUARE	RECTANGULAR	CORE	SIZES AVAILABLE MINIMUM	SIZES AVAILABLE 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).

HOW TO SPECIFY OR TO ORDER

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

Induction Vane Pattern Ceiling Diffusers – Model Series 6500IV and 6200IV

6500IV - O - 9 x 9 - 24 x 24 - L - AW - 4A - SR08

MODEL
- Steel Fixed Pattern 6500IV
- Aluminum Fixed Pattern 6200IV

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
- Alum. extended panel (6200IV model only). PLA

AIR BALANCING DEVICES

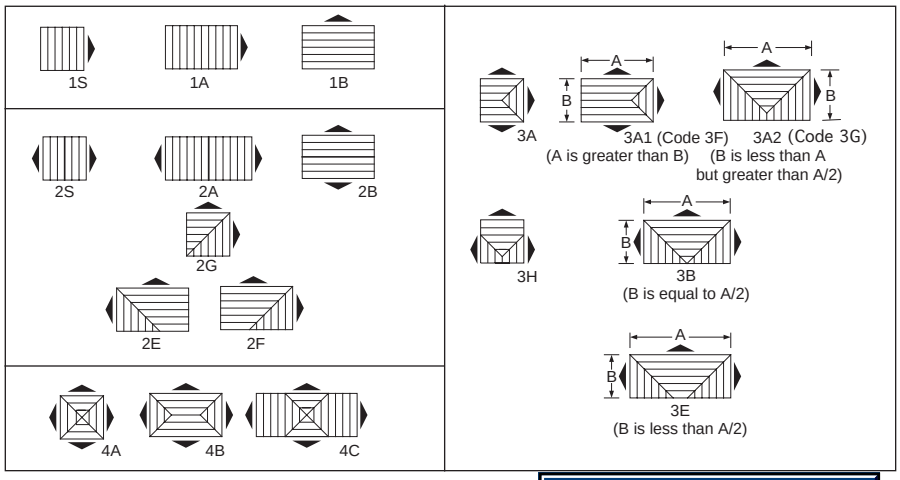
Rectangular Neck:
- Equalizing Grid (long) EGL
- Equalizing Grid (short) EGS
- Damper/Equal. Grid (long) DEGL
- Damper/Equal. Grid (short) DEGS

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.

Specification Text File

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one) **6500IV** (steel) or **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. 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 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 – 2006.

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	
	RETURN FACTORS —SP=1.1 TP NC + 1	CFM NC	75 —		100 14		125 21		150 26		175 30		200 35		225 39	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
6 x 6 .25 SQ. FT.	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 3-4-6	28 4-6-9	25 3-5-8	38 5-7-10	31 5-6-8	47 6-8-11	37 5-6-9	56 6-9-12	44 6-7-10	66 7-10-13	50 6-7-10	75 7-10-14	56 7-8-10	85 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	
	RETURN FACTORS —SP=1.2 TP NC + 2	CFM NC	170 —		225 18		280 24		340 30		395 35		450 39		505 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
9 x 9 .56 SQ. FT.	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 5-6-10	63 7-9-11	56 6-8-11	85 8-10-14	70 8-9-12	106 9-10-15	84 8-10-13	127 10-11-16	98 9-10-14	148 10-12-17	112 9-11-15	169 10-13-18	126 10-12-16	190 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	
	RETURN FACTORS —SP=1.3 TP NC + 4	CFM NC	300 14		400 21		500 27		600 32		700 37		800 40		900 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
12 x 12 1.0 SQ. FT.	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 6-10-12	112 9-11-15	100 9-11-14	150 11-13-17	125 10-12-17	187 11-14-19	150 11-14-18	225 12-15-21	175 11-14-19	262 13-16-22	200 12-16-20	300 14-17-24	225 14-17-22	338 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	
	RETURN FACTORS —SP=1.8 TP NC + 4	CFM NC	465 14		625 23		780 29		935 34		1090 37		1250 43		1400 45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
15 x 15 1.56 SQ. FT.	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 10-13-17	175 11-14-18	156 11-14-19	234 14-18-23	195 13-15-22	292 15-18-25	234 14-17-23	351 17-18-27	273 15-18-24	409 18-20-29	312 16-19-26	468 18-23-31	350 17-21-28	527 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	
	RETURN FACTORS —SP=2.1 TP NC + 6	CFM NC	675 16		900 25		1125 31		1350 35		1575 40		1800 43		2025 46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 18 2.25 SQ. FT.	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 12-15-20	253 14-18-23	225 14-16-23	338 16-20-26	281 15-19-26	422 18-22-30	337 16-20-29	506 20-26-34	394 18-22-30	590 21-26-36	450 19-23-33	675 22-28-38	506 20-25-34	760 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 next page.

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	
	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
21 x 21 3.06 SQ. FT.	4A	CFM/SIDE	230		306		382		460		535		612		688	
		THROW, FT.	14-17-24		15-20-27		17-22-31		18-24-33		20-27-35		21-27-37		22-31-41	
	3A	CFM/SIDE	230	345	306	460	382	573	460	688	535	802	612	918	688	1030
		THROW, FT.	12-15-21	16-20-27	14-18-23	18-22-31	15-20-27	21-25-36	16-21-29	22-27-40	18-22-31	23-29-42	18-23-32	27-31-45	20-27-36	27-34-47
	2S 2G	CFM/SIDE	458		612		765		917		1070		1225		1375	
		THROW, FT.	18-22-31		20-25-36		22-28-40		25-31-44		27-34-47		27-36-50		31-38-48	
	1S	CFM/SIDE	917		1225		1530		1835		2140		2450		2750	
		THROW, FT.	23-30-41		27-34-47		31-40-54		34-42-57		37-45-62		40-48-66		42-51-70	
	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
24 x 24 4.0 SQ. FT.	4A	CFM/SIDE	300		400		500		600		700		800		900	
		THROW, FT.	16-19-26		19-22-32		22-25-35		23-26-38		25-28-41		26-32-44		28-32-46	
	3A	CFM/SIDE	300	450	400	600	500	750	600	900	700	1050	800	1200	900	1350
		THROW, FT.	16-19-26	18-22-31	19-22-32	19-25-37	22-25-35	23-29-42	23-26-38	25-30-45	25-28-41	29-33-47	26-32-44	29-34-51	28-32-46	31-38-54
	2S 2G	CFM/SIDE	600		800		1000		1200		1400		1600		1800	
		THROW, FT.	20-26-36		24-29-41		27-34-46		29-36-49		31-38-53		34-42-56		37-44-60	
	1S	CFM/SIDE	1200		1600		2000		2400		2800		3200		3600	
		THROW, FT.	28-32-47		30-38-54		36-43-62		38-46-66		41-50-72		43-54-74		47-56-81	
	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
30 x 30 6.25 SQ. FT.	4A	CFM/SIDE	469		625		782		937		1093		1250		1406	
		THROW, FT.	20-25-34		23-29-38		27-32-44		29-35-49		30-37-52		32-40-55		37-42-58	
	3A	CFM/SIDE	469	703	625	938	782	1172	937	1405	1093	1640	1250	1875	1406	2110
		THROW, FT.	20-25-34	22-27-39	23-29-38	26-31-46	27-32-44	28-35-51	29-35-49	31-39-55	30-37-52	33-39-59	32-40-55	35-46-62	37-42-58	39-48-66
	2S 2G	CFM/SIDE	937		1250		1562		1875		2187		2500		2812	
		THROW, FT.	26-32-44		30-38-50		34-42-58		38-46-62		40-48-66		42-52-70		46-54-76	
	1S	CFM/SIDE	1875		2500		3125		3750		4375		5000		5625	
		THROW, FT.	34-42-58		39-48-66		45-55-74		48-58-82		50-62-87		55-66-117		58-70-98	
	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
36 x 36 9.0 SQ. FT.	4A	CFM/SIDE	675		900		1125		1350		1575		1800		2025	
		THROW, FT.	24-30-41		27-33-46		31-37-54		33-41-59		35-42-62		41-46-66		41-51-70	
	3A	CFM/SIDE	675	1010	900	1350	1125	1687	1350	2025	1575	2362	1800	2700	2025	3038
		THROW, FT.	24-30-41	27-35-46	27-33-46	32-38-54	31-37-54	37-45-62	33-41-59	38-48-66	35-42-62	42-51-70	41-46-66	46-56-75	41-51-70	50-59-80
	2S 2G	CFM/SIDE	1350		1800		2250		2700		3150		3600		4050	
		THROW, FT.	32-36-54		34-43-61		40-49-69		43-52-74		46-56-81		49-61-83		54-63-90	
	1S	CFM/SIDE	2700		3600		4500		5400		6300		7200		8100	
		THROW, FT.	39-49-68		47-56-79		53-64-91		58-68-98		61-73-105		66-78-114		70-85-120	

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 D39).

- 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 D39).

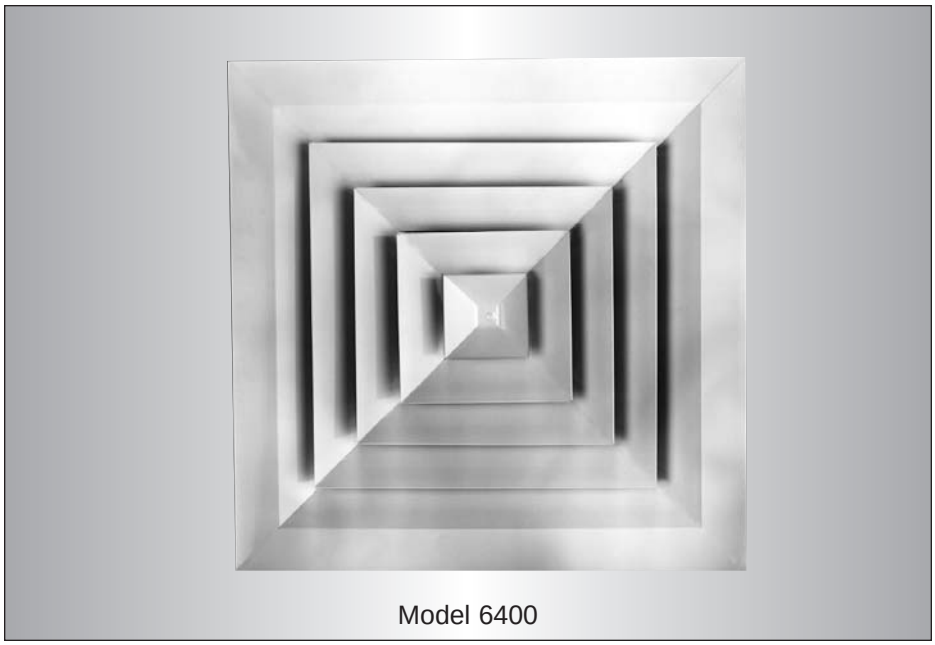
- NC = 27 + 7 = 34
- Total Pressure = .097 x 1.65 = 0.160
- Throw = 17 x 1.15 = 19.55 feet @ 50 fpm terminal velocity.

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



Model 6400

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 D45).
- 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:

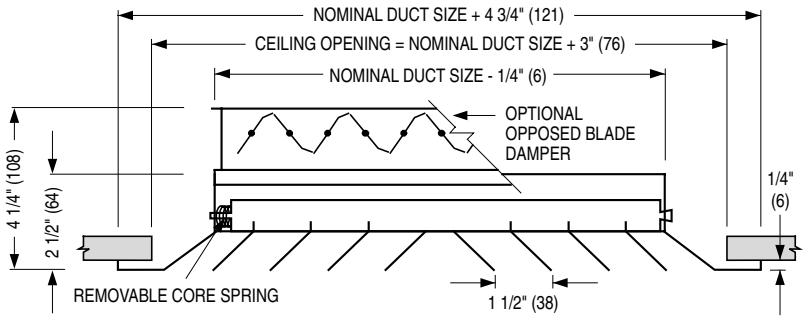
Types S, B and D: 36" x 36" (914 x 914).

Types L, SP, TL, M and F: see page D43.

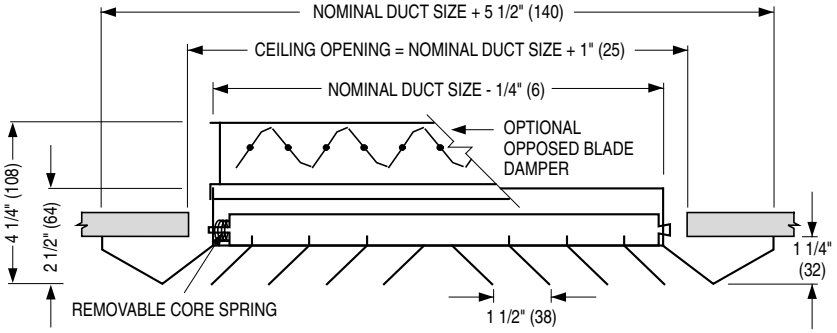
Dimensional Data and Frame Types

Model Series 6400

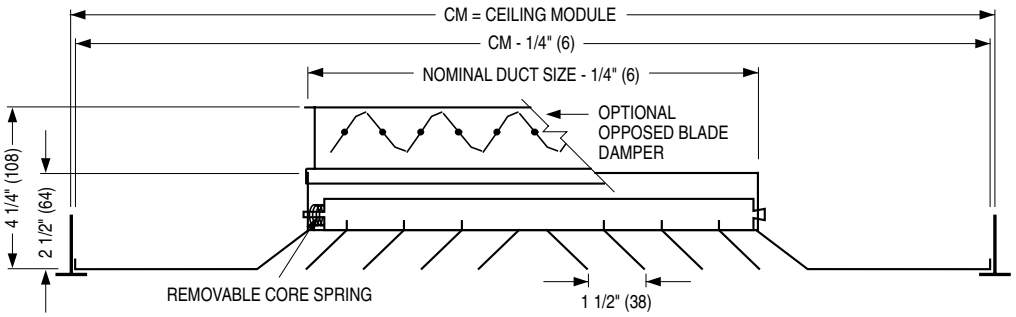
Type S
Surface Mount
Frame



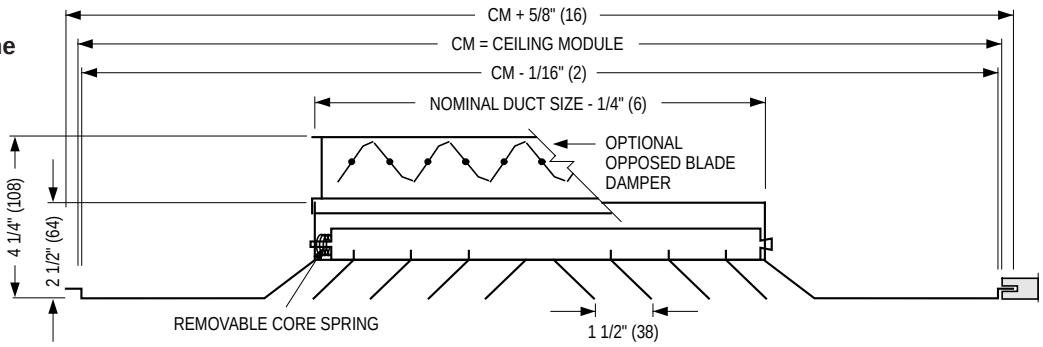
Type B
Beveled Drop
Face Frame



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

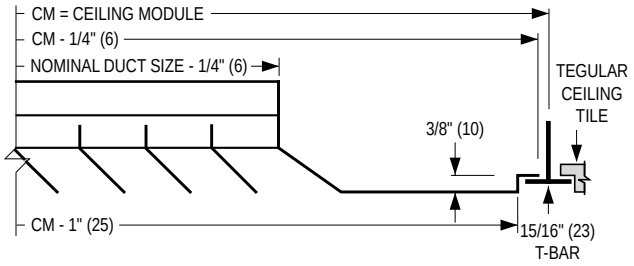
Ceiling Module Size	Maximum Duct Size Frames L, SP, and M	Maximum Duct Size Frames TL and F
12 x 12 (305 x 305)	9 x 9 (229 x 229)	6 x 6 (152 x 152)
20 x 20 (508 x 508)	15 x 15 (381 x 381)	–
24 x 12 (610 x 305)	21 x 9 (533 x 229)	18 x 6 (457 x 152)
24 x 24 (610 x 610)	21 x 21 (533 x 533)	18 x 18 (457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

Dimensions are in inches (mm).

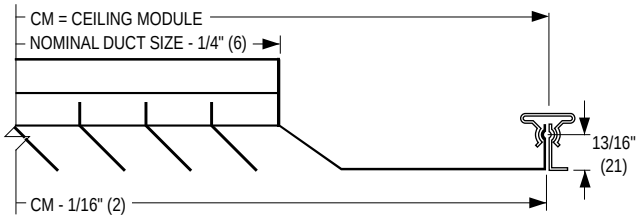
Dimensional Data and Frame Types

Model Series 6400

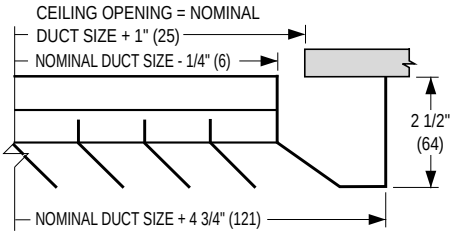
Type TL Tegular Lay-in



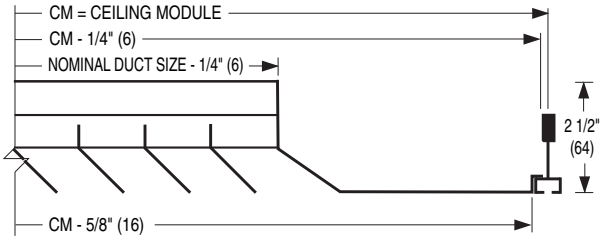
Type M Metal Pan (Snap-in)



Type D Deep Drop Face



Type F Fineline®

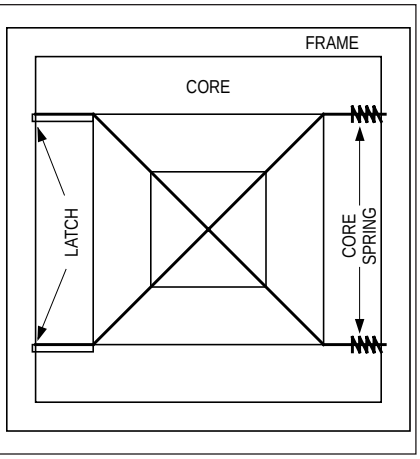


REMOVABLE CORE

- 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

Type 1S

Type 2S

Type 2G

Type 3A

Type 4A

Contact factory for special core configurations.

	SQUARE	RECTANGULAR	CORE	SIZES AVAILABLE MINIMUM	SIZES AVAILABLE 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	2C, 2D, 2E, 2F	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, 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), 3C, 3E (B is less than A/2)	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	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).

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

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

ACCESSORIES

- None (default)	—
- Square to Round Transition Collar (04 thru 20 specify)	SR
- Earthquake Tabs	EQT
- Alum. Extended Panel	PLA

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:

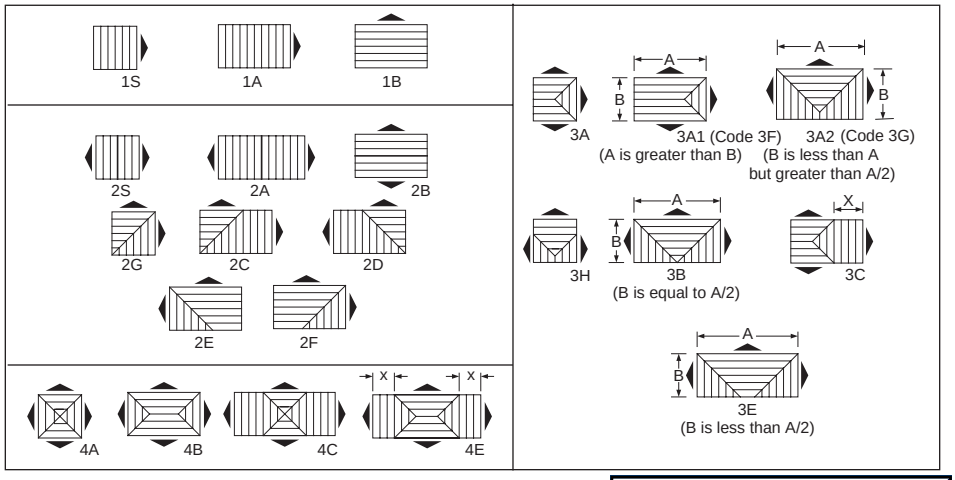
- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275
- Butterfly Damper	4675
- Equalizing Grid	EGR
- Damper/Equalizing Grid	DEGR

CORE STYLE (See Below).

FINISH

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

CORE STYLE CHART



SUGGESTED SPECIFICATION:

Specification Text File

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 – 2006.

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	
	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	A	B	A	B	A	B	A	B
6 x 6 .25 SQ. FT.	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 4-5-8	28 5-8-11	25 5-6-9	38 6-9-12	31 6-8-10	47 8-10-14	37 6-8-11	56 8-11-15	44 8-9-12	66 9-12-16	50 8-9-12	75 9-12-17	56 9-10-13	85 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	
	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	A	B	A	B	A	B	A	B
9 x 9 .56 SQ. FT.	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 5-6-10	63 8-10-13	56 6-8-11	85 9-11-15	70 8-9-12	106 10-12-17	84 8-10-13	127 11-13-18	98 9-10-14	148 12-14-19	112 9-11-15	169 12-15-22	126 10-12-16	190 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	
	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	A	B	A	B	A	B	A	B
12 x 12 1.0 SQ. FT.	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 6-9-11	112 9-11-15	100 8-10-13	150 10-12-17	125 9-11-15	187 11-14-19	150 10-12-16	225 12-15-22	175 10-13-17	262 13-16-22	200 11-14-18	300 14-17-24	225 12-15-19	338 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	
	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	A	B	A	B	A	B	A	B
15 x 15 1.56 SQ. FT.	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 8-10-13	175 11-13-18	156 9-11-15	234 13-15-22	195 10-12-17	292 15-17-24	234 11-13-18	351 16-18-26	273 12-14-19	409 17-19-28	312 12-15-22	468 18-22-30	350 13-16-24	527 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	
	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	A	B	A	B	A	B	A	B
18 x 18 2.25 SQ. FT.	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 9-11-15	253 12-15-20	225 10-12-17	338 14-17-23	281 11-14-19	422 16-19-26	337 12-15-21	506 17-22-29	394 13-16-22	590 18-22-31	450 14-17-24	675 19-24-33	506 15-18-25	760 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 D60.

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	
	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
21 x 21 3.06 SQ. FT.	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 10-12-17	345 13-16-22	306 11-14-19	460 15-18-25	382 12-16-22	573 17-20-29	460 13-17-23	688 18-22-32	535 14-18-25	802 19-23-34	612 15-19-26	918 22-25-36	688 16-22-29	1030 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	
	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
24 x 24 4.0 SQ. FT.	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 11-13-18	450 14-17-24	400 13-15-22	600 16-19-28	500 15-17-24	750 18-22-32	600 16-18-26	900 19-23-34	700 17-19-28	1050 22-25-36	800 18-22-30	1200 22-26-39	900 19-22-32	1350 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	
	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
30 x 30 6.25 SQ. FT.	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 12-15-20	703 16-19-28	625 14-17-23	938 18-22-32	782 16-19-26	1172 20-25-36	937 17-21-29	1405 22-28-39	1093 18-22-31	1640 23-28-42	1250 19-24-33	1875 25-32-44	1406 22-25-35	2110 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	
	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
36 x 36 9.0 SQ. FT.	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 13-16-22	1010 17-22-30	900 15-18-25	1350 20-24-34	1125 17-20-29	1687 23-28-39	1350 18-22-32	2025 24-30-41	1575 19-23-34	2362 26-32-44	1800 22-25-36	2700 29-35-47	2025 22-28-38	3038 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 D60.

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	
	RETURN FACTORS —SP=1.2 TP NC + 0	CFM NC	110 —		150 14		185 20		225 25		260 29		300 33		335 37	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
9 x 6 .375 SQ. FT.	4B	CFM/SIDE	37	18	50	25	62	31	75	37	87	44	100	50	112	56
		THROW, FT.	6-9-11	4-5-8	8-10-13	5-6-9	9-11-15	6-8-10	10-12-16	6-8-11	10-13-17	8-9-12	11-14-18	8-9-12	12-15-19	9-10-13
	3A1	CFM/SIDE	47	18	62	25	78	31	94	37	109	44	125	50	140	56
		THROW, FT.	8-9-12	4-5-8	9-10-14	5-6-9	10-11-16	6-8-10	11-12-17	6-8-11	12-13-18	8-9-12	12-14-19	8-9-12	13-15-22	9-10-13
	3A2	CFM/SIDE	42	35	55	47	70	58	84	70	98	82	112	94	126	105
		THROW, FT.	6-9-11	5-6-10	8-10-13	6-8-11	9-11-15	8-9-12	10-12-16	8-10-13	10-13-17	9-10-14	11-14-18	9-11-15	12-15-19	10-12-16
	2A 2B	CFM/SIDE	56		75		93		112		131		150		168	
		THROW, FT.	9-11-14		10-12-16		11-14-18		12-15-19		13-16-22		14-17-22		15-18-24	
	2C 2E / 2D 2F	CFM/SIDE	75	37	100	50	125	62	150	75	175	87	200	100	225	112
		THROW, FT.	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	10-13-19	14-17-24	11-14-18	15-18-25	12-15-19
	1A 1B	CFM/SIDE	112		150		187		225		262		300		337	
		THROW, FT.	11-13-18		13-15-22		15-17-24		16-18-26		17-19-28		18-22-30		19-22-32	
	RETURN FACTORS —SP=1.6 TP NC + 1	CFM NC	150 —		200 14		250 20		300 26		350 31		400 35		450 39	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
12 x 6 .50 SQ. FT.	4B / 4C	CFM/SIDE	56	18	75	25	94	31	113	37	131	44	150	50	169	56
		THROW, FT.	9-11-14	4-5-8	10-12-16	5-6-9	11-14-18	6-8-10	12-15-19	6-8-11	13-16-22	8-9-12	14-17-22	8-9-12	15-18-24	9-10-13
	3A1	CFM/SIDE	66	18	87	25	109	31	131	37	153	44	175	50	197	56
		THROW, FT.	9-11-15	4-5-8	10-12-17	5-6-9	11-14-19	6-8-10	12-15-22	6-8-11	13-16-22	8-9-12	14-17-24	8-9-12	15-18-25	9-10-13
	3B	CFM/SIDE	75	37	100	50	126	62	150	75	176	87	200	100	226	112
		THROW, FT.	6-9-11	6-9-11	8-10-13	8-10-13	9-11-15	9-11-15	10-12-16	10-12-16	10-13-17	10-13-17	11-14-18	11-14-18	12-15-19	12-15-19
	2A 2B	CFM/SIDE	75		100		125		150		175		200		225	
		THROW, FT.	9-11-15		10-12-17		11-14-19		12-15-22		13-16-22		14-17-24		15-18-25	
	2C 2E / 2D 2F	CFM/SIDE	112	37	150	50	188	62	225	75	263	87	300	100	338	112
		THROW, FT.	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
	1A 1B	CFM/SIDE	150		200		250		300		350		400		450	
		THROW, FT.	11-13-18		13-15-22		15-17-24		16-18-26		17-19-28		18-22-30		19-22-32	
	RETURN FACTORS —SP=1.9 TP NC + 1	CFM NC	190 —		250 15		310 21		375 27		440 32		500 36		565 40	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
15 x 6 .625 SQ. FT.	4B / 4C	CFM/SIDE	75	18	100	25	125	31	150	37	175	44	200	50	225	56
		THROW, FT.	9-11-15	4-5-8	10-12-17	5-6-9	11-14-19	6-8-10	12-15-22	6-8-11	13-16-22	8-9-12	14-17-24	8-9-12	15-18-25	9-10-13
	4E	CFM/SIDE	56	37	75	50	94	62	113	75	131	87	150	100	169	112
		THROW, FT.	9-11-14	8-9-12	10-12-16	9-10-14	11-14-18	10-11-16	12-15-19	11-12-17	13-16-22	12-13-18	14-17-22	12-14-19	15-18-24	13-15-22
	3A1	CFM/SIDE	84	18	112	25	140	31	169	37	197	44	225	50	253	56
		THROW, FT.	10-11-16	4-5-8	11-13-18	5-6-9	12-15-20	6-8-10	13-16-22	6-8-11	14-17-23	8-9-12	15-18-25	8-9-12	16-19-28	9-10-13
	2A 2B	CFM/SIDE	94		125		156		187		219		250		281	
		THROW, FT.	10-12-17		11-14-19		12-16-22		13-17-23		14-18-25		15-19-26		16-22-29	
	2C 2E / 2D 2F	CFM/SIDE	150	37	200	50	250	62	300	75	350	87	400	100	450	112
		THROW, FT.	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
	1A 1B	CFM/SIDE	188		250		312		375		438		500		563	
		THROW, FT.	12-15-20		14-17-23		16-19-26		17-22-29		18-22-31		19-24-33		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 D60.

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	
	RETURN FACTORS —SP=2.6 TP NC + 2	CFM NC	225 —		300 16		375 22		450 28		525 33		600 37		675 41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 6 .75 SQ. FT.	4B 4C	CFM/SIDE	94	18	125	25	156	31	188	37	218	44	250	50	281	56
		THROW, FT.	10-12-17	4-5-8	11-14-19	5-6-9	12-16-21	6-8-10	13-17-23	6-8-11	14-18-25	8-9-12	15-19-26	8-9-12	16-22-29	9-10-13
	4E	CFM/SIDE	56	56	75	75	94	94	113	113	131	131	150	150	169	169
		THROW, FT.	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
	3A1	CFM/SIDE	103	18	137	25	172	31	206	37	240	44	275	50	309	56
		THROW, FT.	10-12-17	4-5-8	11-14-19	5-6-9	12-16-21	6-8-10	13-17-23	6-8-11	14-18-25	8-9-12	15-19-26	8-9-12	16-22-29	9-10-1
	2A 2B	CFM/SIDE	112		150		187		225		262		300		337	
		THROW, FT.	11-13-18		13-15-22		15-17-24		16-18-26		17-19-28		18-22-30		19-22-32	
	2C 2D 2E 2F	CFM/SIDE	187	37	250	50	313	62	375	75	438	87	500	100	563	112
		THROW, FT.	12-15-20	6-9-11	14-17-23	8-10-13	16-19-26	9-11-15	17-22-29	10-12-16	18-22-31	10-13-17	19-24-33	11-14-18	22-25-35	12-15-19
	1A 1B	CFM/SIDE	225		300		375		450		525		600		675	
		THROW, FT.	13-16-22		15-18-25		17-20-29		18-22-32		19-23-34		20-25-36		21-27-37	
	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	260 —		350 16		435 22		525 29		610 33		700 38		785 41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 6 .875 SQ. FT.	4B 4C	CFM/SIDE	112	18	150	25	187	31	225	37	262	44	300	50	337	56
		THROW, FT.	11-13-18	4-5-8	13-15-22	5-6-9	15-17-24	6-8-10	16-18-26	6-8-11	17-19-28	8-9-12	18-22-30	8-9-12	19-22-32	9-10-13
	4E	CFM/SIDE	75	56	100	75	125	94	150	113	175	131	200	150	225	169
		THROW, FT.	9-11-15	9-11-14	10-12-17	10-12-16	11-14-19	11-14-18	12-15-22	12-15-19	13-16-22	13-16-22	14-17-24	14-17-22	15-18-25	15-18-24
	3A1	CFM/SIDE	122	18	162	25	203	31	244	37	284	44	325	50	365	56
		THROW, FT.	11-13-18	4-5-8	13-15-22	5-6-9	15-17-24	6-8-10	16-18-26	6-8-11	17-19-28	8-9-12	18-22-30	8-9-12	19-22-32	9-10-13
	2A 2B	CFM/SIDE	131		175		218		262		306		350		393	
		THROW, FT.	11-13-18		13-15-22		15-17-24		16-18-26		17-19-28		18-22-30		19-22-32	
	2C 2D 2E 2F	CFM/SIDE	225	37	300	50	375	62	450	75	525	87	600	100	675	112
		THROW, FT.	13-16-22	6-9-11	15-18-25	8-10-13	17-20-29	9-11-15	18-22-32	10-12-16	19-23-34	10-13-17	22-25-36	11-14-18	22-28-38	12-15-19
	1A 1B	CFM/SIDE	262		350		437		525		612		700		787	
		THROW, FT.	13-16-22		15-18-25		17-20-29		18-22-32		19-23-34		22-25-36		22-28-38	
	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	300 —		400 16		500 23		600 30		700 34		800 39		900 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 6 1.0 SQ. FT.	4B 4C	CFM/SIDE	131	18	175	25	219	31	263	37	306	44	350	50	394	56
		THROW, FT.	11-13-18	4-5-8	13-15-22	5-6-9	15-17-24	6-8-10	16-18-26	6-8-11	17-19-28	8-9-12	18-22-30	8-9-12	19-22-32	9-10-13
	4E	CFM/SIDE	75	75	100	100	125	125	150	150	175	175	200	200	225	225
		THROW, FT.	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	141	18	187	25	234	31	281	37	328	44	375	50	422	56
		THROW, FT.	11-13-18	4-5-8	13-15-22	5-6-9	15-17-24	6-8-10	16-18-26	6-8-11	17-19-28	8-9-12	18-22-30	8-9-12	19-22-32	9-10-13
	2A 2B	CFM/SIDE	150		200		250		300		350		400		450	
		THROW, FT.	11-13-18		13-15-22		15-17-24		16-18-26		17-19-28		18-22-30		19-22-32	
	2C 2D 2E 2F	CFM/SIDE	260	37	350	50	438	62	525	75	613	87	700	100	788	112
		THROW, FT.	13-16-22	6-9-11	15-18-25	8-10-13	17-20-29	9-11-15	18-22-32	10-12-16	19-23-34	10-13-17	22-25-36	11-14-18	22-28-38	12-15-19
	1A 1B	CFM/SIDE	300		400		500		600		700		800		900	
		THROW, FT.	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 D60.

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	
	RETURN FACTORS —SP=3.2 TP NC + 3	CFM NC	375 —		500 17		625 24		750 30		875 35		1000 40		1125 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 6 1.25 SQ. FT.	4B 4C	CFM/SIDE	169	18	225	25	281	31	338	37	393	44	450	50	506	56
		THROW, FT.	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	94	94	125	125	156	156	188	188	219	219	250	250	282	282
		THROW, FT.	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	178	18	237	25	297	31	356	37	415	44	475	50	534	56
		THROW, FT.	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	187		250		312		375		437		500		562	
		THROW, FT.	12-15-20		14-17-23		16-19-26		17-22-29		18-22-31		19-24-33		21-25-35	
	2C 2D 2E 2F	CFM/SIDE	337	37	450	50	563	62	675	75	788	87	900	100	1013	112
		THROW, FT.	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	375		500		625		750		875		1000		1125	
		THROW, FT.	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44	
	RETURN FACTORS —SP=3.9 TP NC + 4	CFM NC	225 —		300 17		375 23		450 28		525 33		600 36		675 40	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
12 x 9 .75 SQ. FT.	4B 4C	CFM/SIDE	70	42	94	56	117	70	141	84	164	98	188	112	211	126
		THROW, FT.	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	91	42	121	56	152	70	183	84	213	98	244	112	274	126
		THROW, FT.	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	75	75	100	100	125	125	150	150	175	175	200	200	225	225
		THROW, FT.	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	112		150		187		225		262		300		337	
		THROW, FT.	11-13-18		13-15-22		15-17-24		16-18-26		17-19-28		18-22-30		19-22-32	
	2C 2D 2E 2F	CFM/SIDE	141	84	188	112	234	141	281	169	328	197	375	225	422	253
		THROW, FT.	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	225		300		375		450		525		600		675	
		THROW, FT.	13-16-22		15-18-25		17-20-29		18-22-32		19-23-34		22-25-36		22-28-38	
	RETURN FACTORS —SP=1.7 TP NC + 3	CFM NC	280 —		375 18		470 24		565 29		655 34		750 37		845 41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
15 x 9 .93 SQ. FT.	4B 4C	CFM/SIDE	98	42	131	56	165	70	198	84	230	98	263	112	296	126
		THROW, FT.	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	70	70	94	94	117	117	141	141	164	164	188	188	211	211
		THROW, FT.	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	120	42	159	56	200	70	240	84	279	98	319	112	359	126
		THROW, FT.	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	117	82	155	110	196	137	233	165	272	192	312	219	351	247
		THROW, FT.	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	140		187		235		281		328		375		422	
		THROW, FT.	11-13-18		13-15-22		15-17-24		16-18-26		17-19-28		18-22-30		19-22-32	
	2C 2D 2E 2F	CFM/SIDE	197	84	263	112	329	141	394	169	459	197	525	225	592	253
		THROW, FT.	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	281		375		470		563		656		750		845	
		THROW, FT.	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 D60.

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	
	RETURN FACTORS —SP=2.1 TP NC + 3	CFM NC	335 —		450 19		560 25		675 30		790 35		900 38		1010 42	
			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	126	42	169	56	211	70	254	84	296	98	338	112	380	126
		THROW, FT.	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
	4E	CFM/SIDE	99	70	132	94	164	117	197	141	230	164	263	188	296	211
		THROW, FT.	10-12-17	9-11-15	11-14-19	10-12-17	12-16-22	11-14-19	13-17-23	12-15-22	14-18-25	13-16-22	15-19-26	14-17-24	16-22-29	15-18-25
	3A1	CFM/SIDE	147	42	197	56	246	70	295	84	345	98	394	112	443	126
		THROW, FT.	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
	3B	CFM/SIDE	168	84	225	112	281	141	337	169	394	197	450	225	506	253
		THROW, FT.	9-11-15	9-11-14	10-12-17	10-12-16	11-14-19	11-14-18	12-15-22	12-15-19	13-16-22	13-16-22	14-17-24	14-17-22	15-18-25	15-18-24
	2A 2B	CFM/SIDE	163		225		281		337		394		450		506	
		THROW, FT.	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	253	84	338	112	421	141	506	169	591	197	675	225	759	253
		THROW, FT.	13-16-22	9-11-14	15-18-25	10-12-16	17-20-29	11-14-18	18-22-32	12-15-19	19-23-34	13-16-22	22-25-36	14-17-22	22-28-38	15-18-24
	1A 1B	CFM/SIDE	337		450		562		675		788		900		1012	
		THROW, FT.	14-17-24		16-19-28		18-22-32		19-23-34		22-25-36		22-26-39		24-29-41	
	RETURN FACTORS —SP=2.5 TP NC + 4	CFM NC	395 —		525 19		655 25		785 31		915 36		1050 38		1180 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 9 1.125 SQ. FT.	4B 4C	CFM/SIDE	154	42	206	56	258	70	309	84	360	98	413	112	464	126
		THROW, FT.	12-15-20	5-6-10	14-17-23	6-8-11	16-19-26	8-9-12	17-22-29	8-10-13	18-22-31	9-10-14	19-24-33	9-11-15	22-25-35	10-12-16
	4E	CFM/SIDE	98	98	131	131	163	163	196	196	229	229	261	261	294	294
		THROW, FT.	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	175	42	234	56	292	70	351	84	410	98	468	112	527	126
		THROW, FT.	12-15-20	5-6-10	14-17-23	6-8-11	16-19-26	8-9-12	17-22-29	8-10-13	18-22-31	9-10-14	19-24-33	9-11-15	22-25-35	10-12-16
	2A 2B	CFM/SIDE	196		262		327		393		458		525		590	
		THROW, FT.	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	308	84	412	112	514	141	617	169	720	197	825	225	927	253
		THROW, FT.	14-17-24	9-11-14	16-19-28	10-12-16	18-22-32	11-14-18	19-23-34	12-15-19	22-25-36	13-16-22	22-26-39	14-17-22	24-29-41	15-18-24
	1A 1A 1B	CFM/SIDE	393		524		655		786		917		1050		1180	
		THROW, FT.	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44	
	RETURN FACTORS —SP=2.9 TP NC + 4	CFM NC	450 —		600 19		750 25		900 31		1050 36		1200 38		1350 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 9 1.5 SQ. FT.	4B 4C	CFM/SIDE	183	42	244	56	305	70	366	84	427	98	488	112	549	126
		THROW, FT.	12-15-20	5-6-10	14-17-23	6-8-11	16-19-26	8-9-12	17-22-29	8-10-13	18-22-31	9-10-14	19-24-33	9-11-15	22-25-35	10-12-16
	4E	CFM/SIDE	126	99	169	132	211	164	253	197	295	230	337	263	379	296
		THROW, FT.	11-13-18	10-12-17	13-15-22	11-14-19	15-17-24	12-16-22	16-18-26	13-17-23	17-19-28	14-18-25	18-22-30	15-19-26	19-22-32	16-22-29
	3A1	CFM/SIDE	204	42	272	56	340	70	408	84	476	98	544	112	612	126
		THROW, FT.	12-15-20	5-6-10	14-17-23	6-8-11	16-19-26	8-9-12	17-22-29	8-10-13	18-22-31	9-10-14	19-24-33	9-11-15	22-25-35	10-12-16
	2A 2B	CFM/SIDE	225		300		375		450		525		600		675	
		THROW, FT.	13-16-22		15-18-25		17-20-29		18-22-32		19-23-34		22-25-36		22-28-38	
	2C 2D 2E 2F	CFM/SIDE	365	84	488	112	609	141	731	169	853	197	975	225	1097	253
		THROW, FT.	15-18-25	9-11-14	17-22-30	10-12-16	19-24-34	11-14-18	22-26-36	12-15-19	22-28-39	13-16-22	24-30-42	14-17-22	25-32-44	15-18-24
	1A 1B	CFM/SIDE	450		600		750		900		1050		1200		1350	
		THROW, FT.	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 D60.

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
	RETURN FACTORS —SP=3.9 TP NC + 5	CFM NC	560 —	750 20	935 26	1125 32	1310 37	1500 39	1685 44
			A B	A B	A B	A B	A B	A B	A B
30 x 9 1.875 SQ. FT.	4B 4C	CFM/SIDE	238 42	319 56	398 70	478 84	557 98	638 112	716 126
		THROW, FT.	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	155 126	206 169	258 211	310 253	361 295	413 337	465 379
		THROW, FT.	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	259 42	347 56	433 70	520 84	606 98	694 112	779 126
		THROW, FT.	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	281	375	468	562	655	750	842
		THROW, FT.	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	476 84	638 112	796 141	956 169	1113 197	1275 225	1432 253
		THROW, FT.	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	562	750	937	1125	1310	1500	1685
		THROW, FT.	16-19-28	18-22-32	20-25-36	22-28-39	23-30-42	25-32-44	28-34-47
	RETURN FACTORS —SP=5.0 TP NC + 6	CFM NC	675 —	900 21	1125 27	1350 33	1575 38	1800 40	2025 44
			A	B A	B A	B A	B A	B A	B A B
36 x 9 2.25 SQ. FT.	4B 4C	CFM/SIDE	295 42	394 56	492 70	591 84	689 98	788 112	886 126
		THROW, FT.	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	183 155	244 206	305 258	366 310	427 361	488 413	549 465
		THROW, FT.	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	316 42	422 56	527 70	633 84	738 98	844 112	949 126
		THROW, FT.	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	337	450	562	675	787	900	1012
		THROW, FT.	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	590 84	788 112	984 141	1181 169	1378 197	1575 225	1772 253
		THROW, FT.	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	675	900	1125	1350	1575	1800	2025
		THROW, FT.	17-22-30	20-24-34	23-28-39	24-30-41	26-32-44	29-35-47	31-37-50
	RETURN FACTORS —SP=1.6 TP NC + 2	CFM NC	375 —	500 19	625 25	750 30	875 34	1000 38	1125 41
			A B	A B	A B	A B	A B	A B	A B
15 x 12 1.25 SQ. FT.	4B 4C	CFM/SIDE	112 75	150 100	187 125	225 150	262 175	300 200	337 225
		THROW, FT.	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	150 75	200 100	250 125	300 150	350 175	400 200	450 225
		THROW, FT.	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	117 129	156 172	195 215	234 258	273 301	312 344	351 387
		THROW, FT.	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	187	250	312	375	437	500	567
		THROW, FT.	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	225 150	300 200	375 250	450 300	525 350	600 400	675 450
		THROW, FT.	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	375	500	625	750	875	1000	1125
		THROW, FT.	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 D60.

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	
	RETURN FACTORS —SP=1.9 TP NC + 3	CFM NC	450 —		600 20		750 26		900 31		1050 35		1200 39		1350 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 12 1.5 SQ. FT.	4B 4C	CFM/SIDE	150	75	200	100	250	125	300	150	350	175	400	200	450	225
		THROW, FT.	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
	3A1	CFM/SIDE	187	75	250	100	312	125	375	150	437	175	500	200	562	225
		THROW, FT.	12-15-20	6-9-11	14-17-23	8-10-13	16-19-26	9-11-15	17-22-29	10-12-16	18-22-31	10-13-17	19-24-33	11-14-18	22-25-35	12-15-1
	3A2	CFM/SIDE	168	141	225	187	281	234	337	281	394	328	450	375	506	422
		THROW, FT.	10-12-17	9-11-15	11-14-19	10-12-17	12-16-22	11-14-19	13-17-23	12-15-22	14-18-25	13-16-22	15-19-26	14-17-24	16-22-29	15-18-25
	2A 2B	CFM/SIDE	225		300		375		450		525		600		675	
		THROW, FT.	13-16-22		15-18-25		17-20-29		18-22-32		19-23-34		22-25-36		22-28-38	
	2C 2D 2E 2F	CFM/SIDE	300	150	400	200	500	250	600	300	700	350	800	400	900	450
		THROW, FT.	14-17-24	10-12-17	16-19-28	11-14-19	18-22-32	12-16-22	19-23-34	13-17-23	22-25-36	14-18-25	22-26-39	15-19-26	24-29-41	16-22-29
	1A 1B	CFM/SIDE	450		600		750		900		1050		1200		1350	
		THROW, FT.	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44	
	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	525 —		700 20		875 26		1050 31		1225 35		1400 39		1575 42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 12 1.75 SQ. FT.	4B 4C	CFM/SIDE	187	75	250	100	312	125	375	150	437	175	500	200	562	225
		THROW, FT.	12-15-20	6-9-11	14-17-23	8-10-13	16-19-26	9-11-15	17-22-29	10-12-16	18-22-31	10-13-17	19-24-33	11-14-18	22-25-35	12-15-19
	4E	CFM/SIDE	150	112	200	150	250	187	300	225	350	262	400	300	450	337
		THROW, FT.	11-13-18	11-13-18	13-15-22	13-15-22	15-17-24	15-17-24	16-18-26	16-18-26	17-19-28	17-19-28	18-22-30	18-22-30	19-22-32	19-22-32
	3A1	CFM/SIDE	225	75	300	100	375	125	450	150	525	175	600	200	675	225
		THROW, FT.	13-16-22	6-9-11	15-18-25	8-10-13	17-20-29	9-11-15	18-22-32	10-12-16	19-23-34	10-13-17	22-25-36	11-14-18	22-28-38	12-15-19
	3A2	CFM/SIDE	148	230	197	306	246	382	295	460	345	535	394	612	443	688
		THROW, FT.	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
	2A 2B	CFM/SIDE	262		350		437		525		612		700		787	
		THROW, FT.	13-16-22		15-18-25		17-20-29		18-22-32		19-23-34		22-25-36		22-28-38	
	2C 2D 2E 2F	CFM/SIDE	375	150	500	200	625	250	750	300	875	350	1000	400	1125	450
		THROW, FT.	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
	1A 1B	CFM/SIDE	525		700		875		1050		1225		1400		1575	
		THROW, FT.	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47	
	RETURN FACTORS —SP=2.6 TP NC + 5	CFM NC	600 12		800 21		1000 27		1200 32		1400 36		1600 40		1800 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 12 2.0 SQ. FT.	4B 4C	CFM/SIDE	225	75	300	100	375	125	450	150	525	175	600	200	675	225
		THROW, FT.	13-16-22	6-9-11	15-18-25	8-10-13	17-20-29	9-11-15	18-22-32	10-12-16	19-23-34	10-13-17	22-25-36	11-14-18	22-28-38	12-15-19
	4E	CFM/SIDE	150	150	200	200	250	250	300	300	350	350	400	400	450	450
		THROW, FT.	11-13-18	11-13-18	13-15-22	13-15-22	15-17-24	15-17-24	16-18-26	16-18-26	17-19-28	17-19-28	18-22-30	18-22-30	19-22-32	19-22-32
	3A1	CFM/SIDE	262	75	350	100	437	175	525	150	612	175	700	200	787	225
		THROW, FT.	13-16-22	6-9-11	15-18-25	8-10-13	17-20-29	9-11-15	18-22-32	10-12-16	19-23-34	10-13-17	22-25-36	11-14-18	22-28-38	12-15-19
	3B	CFM/SIDE	300	150	400	200	500	250	600	300	700	350	800	400	900	450
		THROW, FT.	11-13-18	10-12-17	13-15-22	11-14-19	15-17-24	12-16-22	16-18-26	13-17-23	17-19-28	14-18-25	18-22-30	15-19-26	19-22-32	16-22-29
	2A 2B	CFM/SIDE	300		400		500		600		700		800		900	
		THROW, FT.	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	450	150	600	200	750	250	900	300	1050	350	1200	400	1350	450
		THROW, FT.	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
	1A 1B	CFM/SIDE	600		800		1000		1200		1400		1600		1800	
		THROW, FT.	17-22-30		20-24-34		23-28-39		24-30-41		26-32-44		29-35-47		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 D60.

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	
	RETURN FACTORS —SP=3.3 TP NC + 6	CFM NC	750 15		1000 23		1250 29		1500 33		1750 37		2000 41		2250 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 12 2.5 SQ. FT.	4B 4C	CFM/SIDE	300	75	400	100	500	125	600	150	700	175	800	200	900	225
		THROW, FT.	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	183	183	250	250	313	313	375	375	437	437	500	500	562	562
		THROW, FT.	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	337	75	450	100	562	125	675	150	787	175	900	200	1012	225
		THROW, FT.	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	375		500		625		750		875		1000		1125	
		THROW, FT.	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44	
	2C 2D 2E 2F	CFM/SIDE	600	150	800	200	1000	250	1200	300	1400	350	1600	400	1800	450
		THROW, FT.	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	750		1000		1250		1500		1750		2000		2250	
		THROW, FT.	18-22-32		22-25-36		24-29-41		26-32-44		28-34-47		30-36-50		32-38-53	
	RETURN FACTORS —SP=4.0 TP NC + 7	CFM NC	900 16		1200 25		1500 30		1800 34		2100 38		2400 42		2700 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 12 3.0 SQ. FT.	4B 4C	CFM/SIDE	375	75	500	100	625	125	750	150	875	175	1000	200	1125	225
		THROW, FT.	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	225	225	300	300	375	375	450	450	525	525	600	600	675	675
		THROW, FT.	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	412	75	550	100	687	125	825	150	962	175	1100	200	1237	225
		THROW, FT.	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	450		600		750		900		1050		1200		1350	
		THROW, FT.	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44	
	2C 2D 2E 2F	CFM/SIDE	750	150	1000	200	1250	250	1500	300	1750	350	2000	400	2250	450
		THROW, FT.	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	900		1200		1500		1800		2100		2400		2700	
		THROW, FT.	19-24-33		22-28-38		25-32-43		28-34-46		30-36-50		32-39-53		34-41-57	
	RETURN FACTORS —SP=2.0 TP NC + 4	CFM NC	560 14		750 21		935 28		1125 32		1310 36		1500 39		1685 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
18 x 15 1.875 SQ. FT.	4B 4C	CFM/SIDE	164	117	219	156	273	195	328	234	383	273	438	312	492	351
		THROW, FT.	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	222	117	297	156	371	195	445	234	519	273	594	312	668	351
		THROW, FT.	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	168	197	225	262	281	328	337	394	394	459	450	525	506	590
		THROW, FT.	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	281		375		468		562		656		750		843	
		THROW, FT.	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	329	234	438	312	547	390	657	468	766	546	876	624	985	702
		THROW, FT.	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	562		750		937		1125		1312		1500		1687	
		THROW, FT.	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 D60.

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	
	RETURN FACTORS —SP=2.1 TP NC + 5	CFM NC	655 12		875 21		1090 28		1310 33		1530 36		1750 39		1970 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 15 2.185 SQ. FT.	4B 4C	CFM/SIDE	210	117	281	156	361	195	422	234	493	273	563	312	634	351
		THROW, FT.	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
	4E	CFM/SIDE	164	164	218	218	273	273	327	327	382	382	437	437	491	491
		THROW, FT.	12-15-20	12-15-20	14-17-24	14-17-24	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	269	117	359	156	448	195	539	234	629	273	719	312	809	351
		THROW, FT.	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	230	213	306	284	382	355	460	426	535	498	612	569	688	641
		THROW, FT.	11-13-18	10-12-17	13-15-22	11-14-19	15-17-24	12-16-22	16-18-26	13-17-23	17-19-28	14-18-25	18-22-30	15-19-26	19-22-32	16-22-29
	2A 2B	CFM/SIDE	327		437		596		656		766		875		985	
		THROW, FT.	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	422	234	563	312	702	390	844	468	966	546	1126	624	1268	702
		THROW, FT.	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	22-25-35
	1A 1B	CFM/SIDE	655		875		1092		1312		1532		1750		1970	
		THROW, FT.	17-22-30		20-24-34		23-28-39		24-30-41		26-32-44		29-35-47		31-37-50	
	RETURN FACTORS —SP=2.6 TP NC + 6	CFM NC	750 14		1000 22		1250 29		1500 34		1750 37		2000 39		2250 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 15 2.5 SQ. FT.	4B 4C	CFM/SIDE	258	117	344	156	430	195	516	234	602	273	688	312	774	351
		THROW, FT.	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
	4E	CFM/SIDE	211	164	281	218	352	273	422	327	492	382	563	437	633	491
		THROW, FT.	13-16-22	12-15-20	15-18-25	14-17-24	17-20-29	16-19-26	18-22-32	17-22-29	19-23-34	18-22-31	22-25-36	19-24-33	22-28-38	22-25-35
	3A1	CFM/SIDE	316	117	422	156	527	195	633	234	738	273	844	312	949	351
		THROW, FT.	14-17-24	8-10-13	16-19-28	9-11-15	18-22-32	10-12-17	19-23-34	11-13-18	22-25-36	12-14-19	22-26-39	12-15-22	24-29-41	13-16-22
	3A2	CFM/SIDE	300	225	400	300	500	375	600	450	700	525	800	600	900	675
		THROW, FT.	13-16-22	11-13-18	15-18-25	13-15-22	17-20-29	15-17-24	18-22-32	16-18-26	19-23-34	17-19-28	22-25-36	18-22-30	22-28-38	19-22-32
	2A 2B	CFM/SIDE	375		500		625		750		875		1000		1125	
		THROW, FT.	15-18-25		17-22-30		19-24-34		22-26-36		22-28-39		24-30-42		25-32-44	
	2C 2D 2E 2F	CFM/SIDE	516	234	688	312	860	390	1032	468	1204	546	1376	624	1548	702
		THROW, FT.	16-19-28	12-15-20	18-22-32	14-17-23	20-25-36	16-19-26	22-28-39	17-22-29	23-30-42	18-22-31	25-32-44	19-24-33	28-34-47	22-25-35
	1A 1B	CFM/SIDE	750		1000		1250		1500		1750		2000		2250	
		THROW, FT.	18-22-32		22-25-36		24-29-41		26-32-44		28-34-47		30-36-50		32-38-53	
	RETURN FACTORS —SP=3.1 TP NC + 7	CFM NC	935 14		1250 23		1565 30		1875 36		2190 39		2500 40		2810 45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 15 3.125 SQ. FT.	4B 4C	CFM/SIDE	351	117	469	156	587	195	703	234	822	273	938	312	1054	351
		THROW, FT.	14-17-24	8-10-13	16-19-28	9-11-15	18-22-32	10-12-17	19-23-34	11-13-18	22-25-36	12-14-19	22-26-39	12-15-22	24-29-41	13-16-22
	4E	CFM/SIDE	258	211	344	281	430	352	516	422	602	492	688	583	775	633
		THROW, FT.	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	410	117	547	156	685	195	820	234	958	273	1094	312	1224	351
		THROW, FT.	15-18-25	8-10-13	17-22-30	9-11-15	19-24-34	10-12-17	22-26-36	11-13-18	22-28-39	12-14-19	24-30-42	12-15-22	25-32-44	13-16-22
	3B	CFM/SIDE	468	234	625	312	782	391	937	469	1095	547	1250	625	1406	702
		THROW, FT.	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
	2A 2B	CFM/SIDE	468		625		782		937		1095		1250		1405	
		THROW, FT.	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47	
	2C 2D 2E 2F	CFM/SIDE	702	234	938	312	1175	390	1407	468	1644	546	1876	624	2108	702
		THROW, FT.	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	34-37-50	22-25-35
	1A 1B	CFM/SIDE	937		1250		1565		1875		2190		2500		2810	
		THROW, FT.	19-24-33		22-28-38		25-32-43		28-34-46		30-36-50		32-39-53		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 x .82 = B.

For performance notes, see page D60.

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	
	RETURN FACTORS —SP=3.8 TP NC + 7	CFM NC	1125 13		1500 23		1875 31		2250 37		2625 40		3000 41		3375 46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 15 3.75 SQ. FT.	4B 4C	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
	4E	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 2D 2E 2F	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	
	RETURN FACTORS —SP=2.2 TP NC + 5	CFM NC	785 14		1050 21		1310 27		1575 32		1840 36		2100 40		2360 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
21 x 18 2.625 SQ. FT.	4B 4C	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 2D 2E 2F	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	
	RETURN FACTORS —SP=2.5 TP NC + 6	CFM NC	900 15		1200 22		1500 28		1800 33		2100 37		2400 40		2700 43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 18 3.0 SQ. FT.	4B 4C	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 2D 2E 2F	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 x .82 = B.

For performance notes, see page D60.

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	
	RETURN FACTORS —SP=3.1 TP NC + 7	CFM NC	1125 15		1500 23		1875 29		2250 34		2625 38		3000 42		3375 45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 18 3.75 SQ. FT.	4B 4C	CFM/SIDE	394	169	525	225	657	281	788	337	918	394	1050	450	1181	506
		THROW, FT.	15-18-25	9-11-15	17-22-30	10-12-17	19-24-34	11-14-19	22-26-36	12-15-22	22-28-39	13-16-22	24-30-42	14-17-24	25-32-44	15-18-25
	4E	CFM/SIDE	281	281	375	375	469	469	563	563	657	657	750	750	845	845
		THROW, FT.	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
	3A1	CFM/SIDE	478	169	637	225	797	281	956	337	1115	394	1275	450	1434	506
		THROW, FT.	16-19-28	9-11-15	18-22-32	10-12-17	20-25-36	11-14-19	22-28-39	12-15-22	23-30-42	13-16-22	25-32-44	14-17-24	28-34-47	15-18-25
	3A2	CFM/SIDE	469	327	625	437	782	546	937	656	1093	766	1250	875	1406	984
		THROW, FT.	14-17-24	12-15-20	16-19-28	14-17-23	18-22-32	16-19-26	19-23-34	17-22-29	22-25-36	18-22-31	22-26-39	19-24-33	24-29-41	22-25-35
	2A 2B	CFM/SIDE	562		750		937		1125		1312		1500		1687	
		THROW, FT.	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47	
	2C 2D 2E 2F	CFM/SIDE	787	337	1050	450	1313	562	1575	675	1838	787	2100	900	2363	1012
		THROW, FT.	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
	1A 1B	CFM/SIDE	1125		1500		1875		2250		2625		3000		3375	
		THROW, FT.	20-25-35		23-29-39		26-33-45		29-35-49		31-38-52		33-40-57		35-43-60	
	RETURN FACTORS —SP=3.6 TP NC + 8	CFM NC	1350 16		1800 24		2250 30		2700 35		3150 39		3600 42		4050 45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 18 4.5 SQ. FT.	4B 4C	CFM/SIDE	506	169	675	225	844	281	1013	337	1181	394	1350	450	1519	506
		THROW, FT.	16-19-28	9-11-15	18-22-32	10-12-17	22-25-36	11-14-19	22-28-39	12-15-22	23-30-42	13-16-22	25-32-44	14-17-24	28-34-47	15-18-25
	4E	CFM/SIDE	339	339	452	452	565	565	678	678	791	791	904	904	1020	1020
		THROW, FT.	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
	3A1	CFM/SIDE	591	169	787	225	984	281	1181	337	1378	394	1575	450	1772	506
		THROW, FT.	17-22-30	9-11-15	20-24-34	10-12-17	23-28-39	11-14-19	24-30-41	12-15-22	26-32-44	13-16-22	29-35-47	14-17-24	31-37-50	15-18-25
	3B	CFM/SIDE	675	337	900	450	1125	562	1350	675	1575	787	1800	900	2025	1012
		THROW, FT.	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
	2A 2B	CFM/SIDE	675		900		1125		1350		1575		1800		2025	
		THROW, FT.	17-22-30		20-24-34		23-28-39		24-30-41		26-32-44		29-35-47		31-37-50	
	2C 2D 2E 2F	CFM/SIDE	1010	337	1350	450	1688	562	2025	675	2363	787	2700	900	3038	1012
		THROW, FT.	20-25-35	13-16-22	23-29-40	15-18-25	26-33-45	17-20-29	29-35-49	18-22-32	31-38-52	19-23-34	33-40-57	22-25-36	35-43-60	22-28-38
	1A 1B	CFM/SIDE	1350		1800		2250		2700		3150		3600		4050	
		THROW, FT.	22-25-37		24-30-42		28-34-48		30-36-51		32-39-56		34-42-58		37-44-63	
	RETURN FACTORS —SP=2.1 TP NC + 7	CFM NC	1050 15		1400 22		1750 28		2100 33		2450 37		2800 41		3150 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
24 x 21 3.5 SQ. FT.	4B 4C	CFM/SIDE	295	230	394	306	493	382	590	460	690	535	788	612	887	688
		THROW, FT.	12-15-20	10-12-17	14-17-23	11-14-19	16-19-26	12-16-22	17-22-29	13-17-23	18-22-31	14-18-25	19-24-33	15-19-26	22-25-35	16-22-29
	3A1	CFM/SIDE	410	230	547	306	684	382	820	460	957	535	1094	612	1231	688
		THROW, FT.	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
	3A2	CFM/SIDE	375	300	500	400	625	500	750	600	875	700	1000	800	1125	900
		THROW, FT.	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
	2A 2B	CFM/SIDE	525		700		875		1050		1225		1400		1575	
		THROW, FT.	16-19-28		18-22-32		20-25-36		22-28-39		23-30-42		25-32-44		28-34-47	
	2C 2D 2E 2F	CFM/SIDE	591	459	788	612	986	764	1180	920	1380	1070	1576	1224	1774	1376
		THROW, FT.	17-22-30	14-17-24	20-24-34	16-19-28	23-28-39	18-22-32	24-30-41	19-23-34	26-32-44	22-25-36	29-35-47	22-26-39	31-37-50	24-29-41
	1A 1B	CFM/SIDE	1050		1400		1750		2100		2450		2800		3150	
		THROW, FT.	20-25-35		23-29-40		26-33-45		29-35-49		31-38-52		33-40-51		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 D60.

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	
	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1310 16		1750 23		2185 29		2625 34		3060 38		3500 41		3935 44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 21 4.375 SQ. FT.	4B 4C	CFM/SIDE	425	230	569	306	710	382	852	460	995	535	1138	612	1279	688
		THROW, FT.	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
	4E	CFM/SIDE	360	295	480	394	600	492	720	591	840	690	960	788	1080	887
		THROW, FT.	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
	3A1	CFM/SIDE	540	230	722	306	901	382	1082	460	1262	535	1444	612	1623	688
		THROW, FT.	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
	3A2	CFM/SIDE	468	422	625	562	782	701	937	844	1093	983	1250	1125	1406	1264
		THROW, FT.	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
	2A 2B	CFM/SIDE	655		875		1092		1312		1530		1750		1968	
		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 2D 2F	CFM/SIDE	853	457	1138	612	1421	764	1705	920	1990	1070	2276	1224	2559	1376
		THROW, FT.	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
	1A 1B	CFM/SIDE	1310		1750		2185		2625		3060		3500		3935	
		THROW, FT.	22-25-37		24-30-42		28-34-48		30-36-51		32-39-56		34-42-58		37-44-63	
	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	1575 16		2100 24		2625 30		3150 34		3675 38		4200 42		4725 45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
36 x 21 5.25 SQ. FT.	4B 4C	CFM/SIDE	558	230	744	306	930	382	1115	460	1306	535	1488	612	1674	688
		THROW, FT.	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
	4E	CFM/SIDE	427	360	568	480	710	600	852	720	945	840	1135	960	1280	1080
		THROW, FT.	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
	3A1	CFM/SIDE	672	230	897	306	1121	382	1345	460	1570	535	1794	612	2018	688
		THROW, FT.	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
	3A2	CFM/SIDE	675	450	900	600	1125	750	1350	900	1575	1050	1800	1200	2025	1350
		THROW, FT.	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
	2A 2B	CFM/SIDE	787		1050		1312		1575		1837		2100		2362	
		THROW, FT.	18-22-32		22-25-36		24-29-41		26-32-44		28-34-47		30-36-50		32-38-53	
	2C 2E 2D 2F	CFM/SIDE	1115	460	1488	612	1861	764	2230	920	2605	1070	2976	1224	3349	1376
		THROW, FT.	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
	1A 1B	CFM/SIDE	1575		2100		2625		3150		3675		4200		4725	
		THROW, FT.	24-30-41		23-34-47		32-39-53		34-41-58		36-44-62		39-47-67		41-50-72	
	RETURN FACTORS —SP=3.1 TP NC + 8	CFM NC	1500 17		2000 25		2500 30		3000 35		3500 39		4000 43		4500 46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
30 x 24 5.0 SQ. FT.	4B 4C	CFM/SIDE	450	300	600	400	750	500	900	600	1050	700	1200	800	1350	900
		THROW, FT.	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
	4E	CFM/SIDE	375	375	500	500	625	625	750	750	875	875	1000	1000	1125	1125
		THROW, FT.	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
	3A1	CFM/SIDE	600	300	800	400	1000	500	1200	600	1400	700	1600	800	1800	900
		THROW, FT.	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
	3A2	CFM/SIDE	515	470	687	625	859	782	1031	937	1203	1093	1375	1250	1548	1406
		THROW, FT.	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
	2A 2B	CFM/SIDE	750		1000		1250		1500		1750		2000		2250	
		THROW, FT.	19-24-33		22-28-38		25-32-43		28-34-46		30-36-50		32-39-53		34-41-57	
	2C 2E 2D 2F	CFM/SIDE	900	600	1200	800	1500	1000	1800	1200	2100	1400	2400	1600	2700	1800
		THROW, FT.	22-25-37		24-30-42		28-34-48		30-36-51		32-39-56		34-42-58		37-44-63	
	1A 1B	CFM/SIDE	1500		2000		2500		3000		3500		4000		4500	
		THROW, FT.	35-43-61		41-49-69		44-55-77		49-59-86		53-65-90		56-69-96		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 x .82 = B.

For performance notes, see page D60.

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	
	RETURN FACTORS —SP=3.3 TP NC + 8	CFM NC	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
36 x 24 6.0 SQ. FT.	4B 4C	CFM/SIDE	600	300	800	400	1000	500	1200	600	1400	700	1600	800	1800	900
		THROW, FT.	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
	4E	CFM/SIDE	450	450	600	600	750	750	900	900	1050	1050	1200	1200	1350	1350
		THROW, FT.	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
	3A1	CFM/SIDE	750	300	1000	400	1250	500	1500	600	1750	700	2000	800	2250	900
		THROW, FT.	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
	3A2	CFM/SIDE	676	562	900	750	1125	937	1350	1125	1575	1312	1800	1500	2025	1687
		THROW, FT.	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
	2A 2B	CFM/SIDE	900		1200		1500		1800		2100		2400		2700	
		THROW, FT.	19-24-33		22-28-38		25-32-43		28-34-46		30-36-50		32-39-53		34-41-57	
	2C 2D 2E 2F	CFM/SIDE	1200	600	1600	800	2000	1000	2400	1200	2800	1400	3200	1600	3600	1800
		THROW, FT.	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
	1A 1B	CFM/SIDE	1800		2400		3000		3600		4200		4800		5400	
		THROW, FT.	24-30-41		28-34-47		32-39-53		34-41-58		36-44-62		39-47-67		41-50-72	
	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	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
36 x 30 7.5 SQ. FT.	4B 4C	CFM/SIDE	657	468	875	625	1093	782	1313	937	1532	1093	1750	1250	1969	1406
		THROW, FT.	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
	3A1	CFM/SIDE	890	468	1187	625	1484	782	1781	937	2078	1093	2375	1250	2672	1406
		THROW, FT.	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
	3A2	CFM/SIDE	787	675	1050	900	1312	1125	1575	1350	1837	1575	2100	1800	2362	2025
		THROW, FT.	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
	2A 2B	CFM/SIDE	1125		1500		1875		2250		2625		3000		3375	
		THROW, FT.	20-25-35		23-29-40		26-33-45		29-35-49		31-38-52		33-40-57		35-43-60	
	2C 2D 2E 2F	CFM/SIDE	1312	938	1750	1250	2188	1562	2625	1875	3063	2187	3500	2500	3938	2812
		THROW, FT.	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
	1A 1B	CFM/SIDE	2250		3000		3750		4500		5250		6000		6750	
		THROW, FT.	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 x .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 D47).

- NC = 23 + 7 = 30
- Total Pressure = .08 x 1.65 = 0.132
- Throw = 15 x 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 D47).

- Return NC = 28 + 4 = 32.
- Return negative SP = 1.3 x (– .116) = – .151.

RECOMMENDED MAXIMUM AIRFLOW – TABLE 3

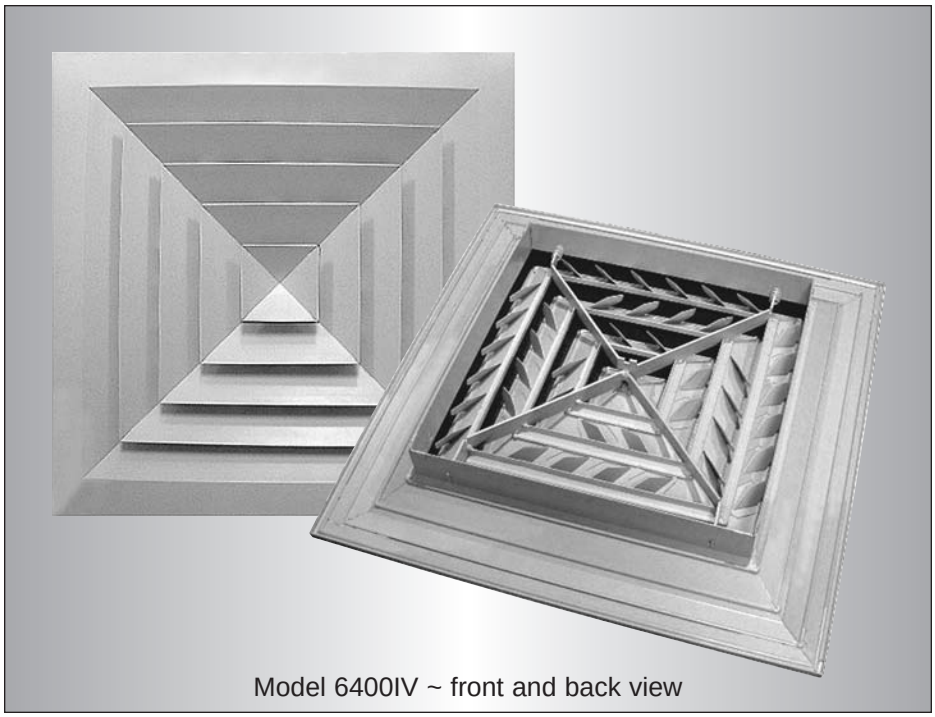
Diffuser mounting height and air temperature differential (ΔT) are both to be considered when selecting diffusers. As air travels from a diffuser, room air is entrained into the supply air stream and the delivery pattern thickens. If the volume or throw requirement is too great, the lower part of the 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.)	MAXIMUM 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

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



Model 6400IV ~ front and back view

Model:
6400IV Fixed Pattern

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

The **Nailor 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. 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 horizontal blow in a wide selection of square and rectangular neck sizes. (See page D65).
- Clean lines with no unsightly visible screws.
- Square-to-round transition collars are available (SR option).
- Optional opposed blade damper with screwdriver slot operator for square and rectangular necks. Radial opposed blade dampers are also available for round necks.

Material: Extruded 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:

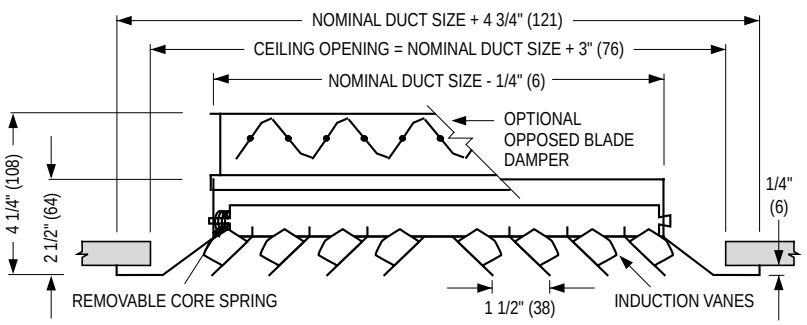
Types S, B and D: 36" x 36" (914 x 914).

Types L, SP, TL, M and F: see page D63.

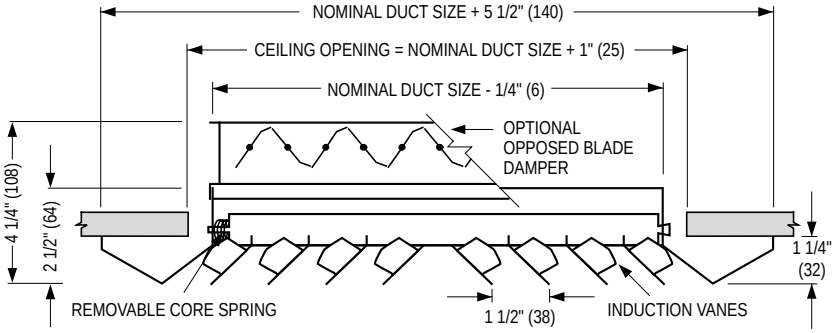
Dimensional Data and Frame Types

Model Series 6400IV

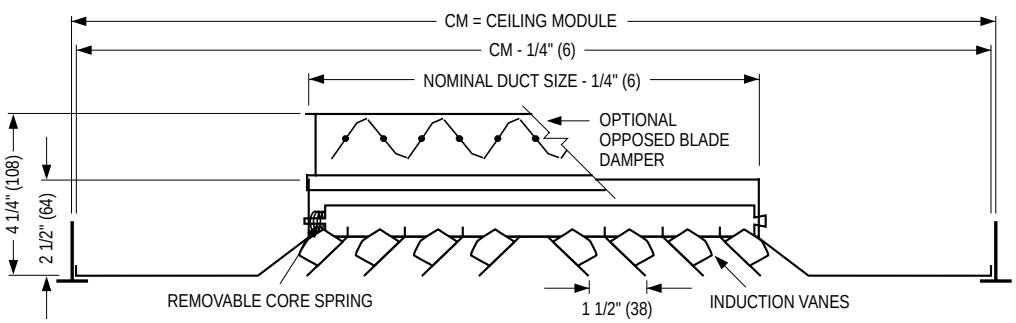
Type S
Surface Mount
Frame



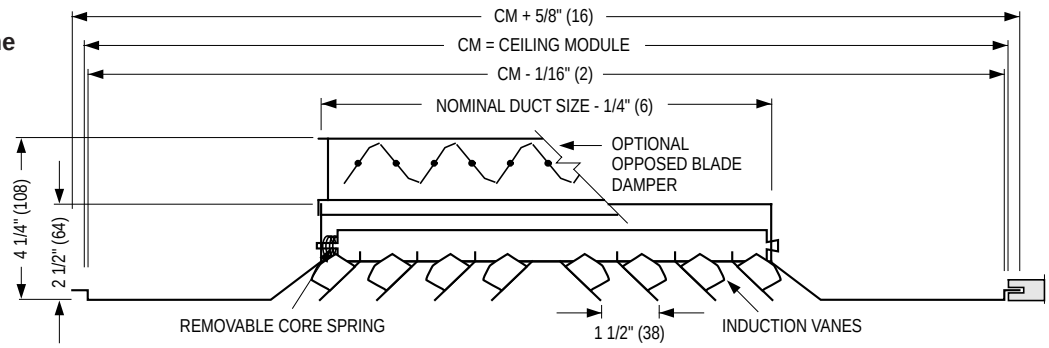
Type B
Beveled Drop
Face Frame



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, M, TL 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.

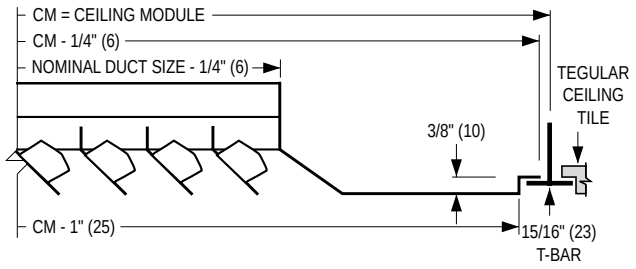
Ceiling Module Size	Maximum Duct Size Frames L, SP, and M	Maximum Duct Size Frames TL and F
12 x 12 (305 x 305)	9 x 9 (229 x 229)	6 x 6 (152 x 152)
20 x 20 (508 x 508)	15 x 15 (381 x 381)	–
24 x 12 (610 x 305)	21 x 9 (533 x 229)	18 x 6 (457 x 152)
24 x 24 (610 x 610)	21 x 21 (533 x 533)	18 x 18 (457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

Dimensions are in inches (mm).

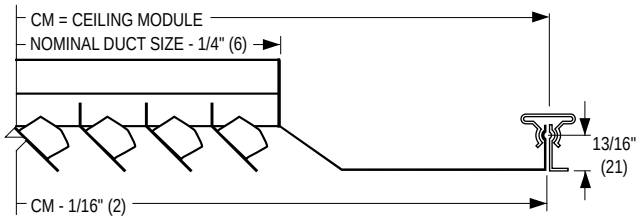
Dimensional Data and Frame Types

Model Series 6400IV

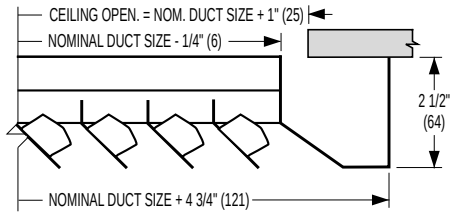
Type TL Tegular Lay-in



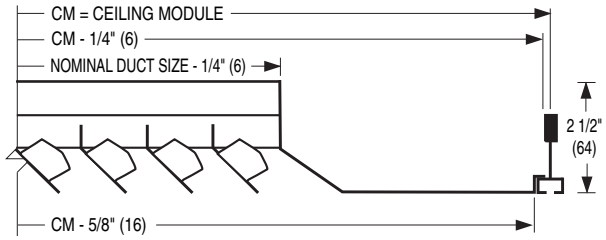
Type M Metal Pan (Snap-in)



Type D Deep Drop Face

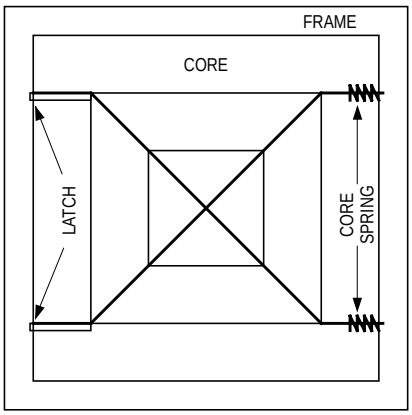


Type F Fineline®



SPRING LOADED REMOVABLE CORE

- Standard feature.
- 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

Type 1S

Type 2S

Type 2G

Type 3A

Type 4A

Contact factory for special core configurations.

	SQUARE	RECTANGULAR	CORE	SIZES AVAILABLE MINIMUM	SIZES AVAILABLE 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	2C, 2D, 2E, 2F	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, 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), 3C, 3E (B is less than A/2)	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	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. 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).

HOW TO SPECIFY OR TO ORDER

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

High Capacity Induction Vane Pattern Ceiling Diffusers – Model 6400IV

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

MODEL
- Aluminum Fixed Pattern 6400IV

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
- Alum. Extended Panel Option	PLA

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 page D65).

FINISH

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

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

SUGGESTED SPECIFICATION: Specification Text File

Furnish and install **Nailor Model 6400IV High Capacity Induction Vane Pattern Ceiling Diffusers** of the size and type shown on the plans and air distribution schedules. Diffusers shall be designed for optimum performance in both heating and cooling applications. Diffuser shall be of 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 on 1 1/2" (38) centers, capable of producing either a 1, 2, 3 or 4-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 tools for the purpose of installation, cleaning or damper adjustment. Diffuser 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 70-2006.

ADPI - Air Diffusion Performance Index Analysis - Room Temperature/Velocity Traverse

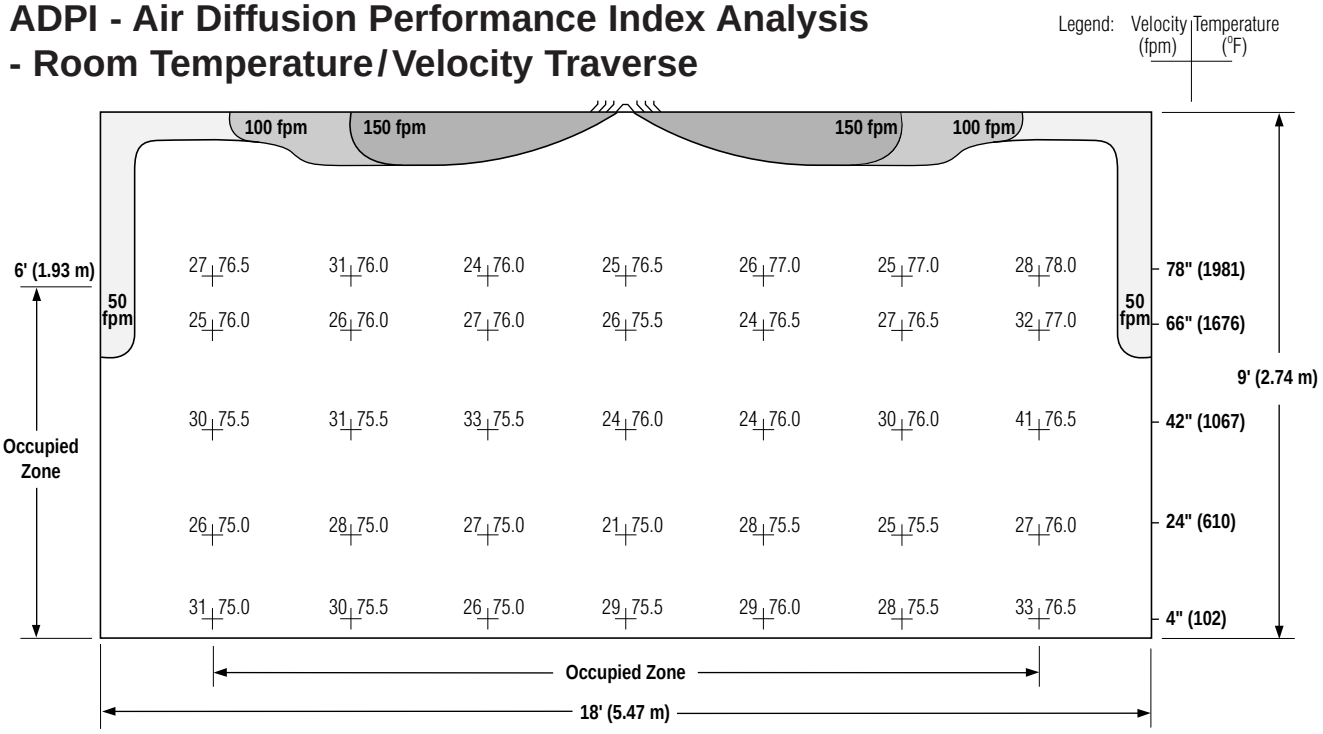


Figure 1. ADPI Analysis.

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:

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

where: ø = 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 (Δt = 20°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.

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.

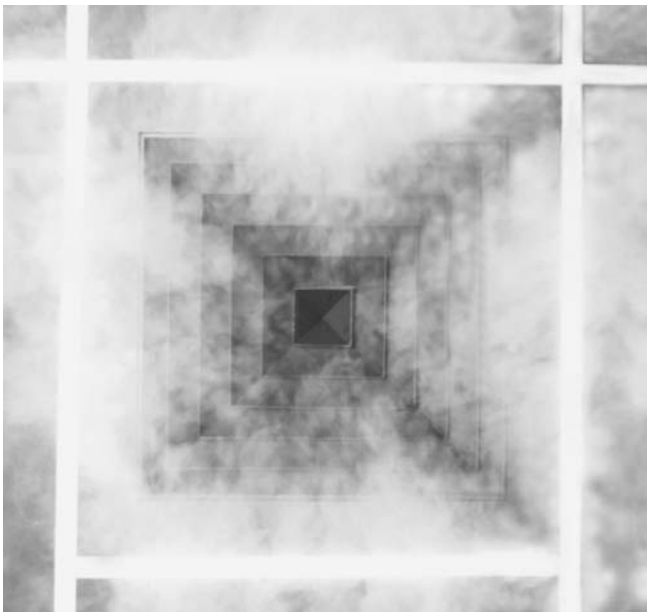


Figure 5. Laboratory Smoke Test.
6400IV Induction Vane Diffuser, 4-way Blow Pattern.

Figure 2.
Traditional Pattern Diffuser.

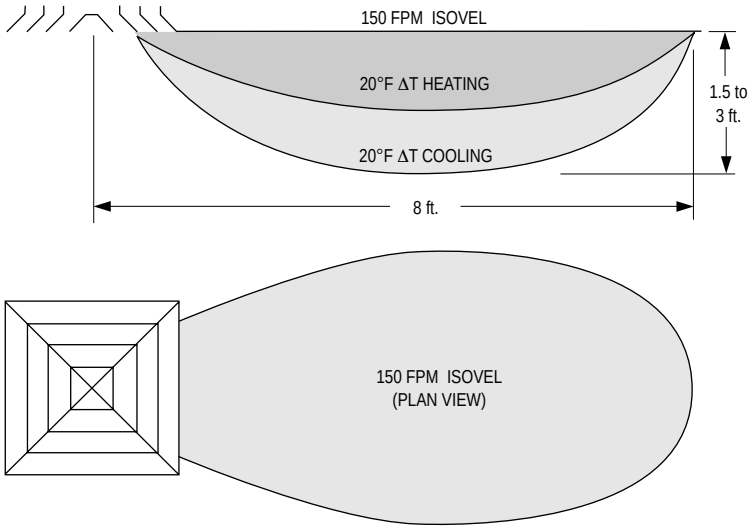


Figure 3.
Pattern Diffuser with Horizontal Lip on Louvers.

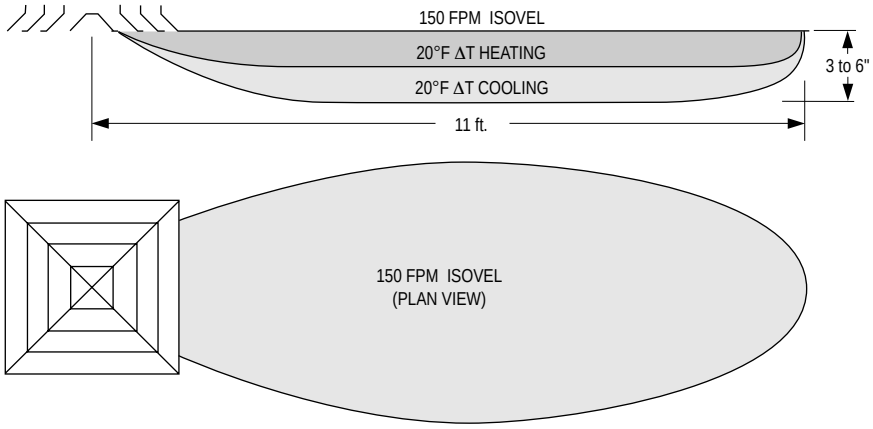
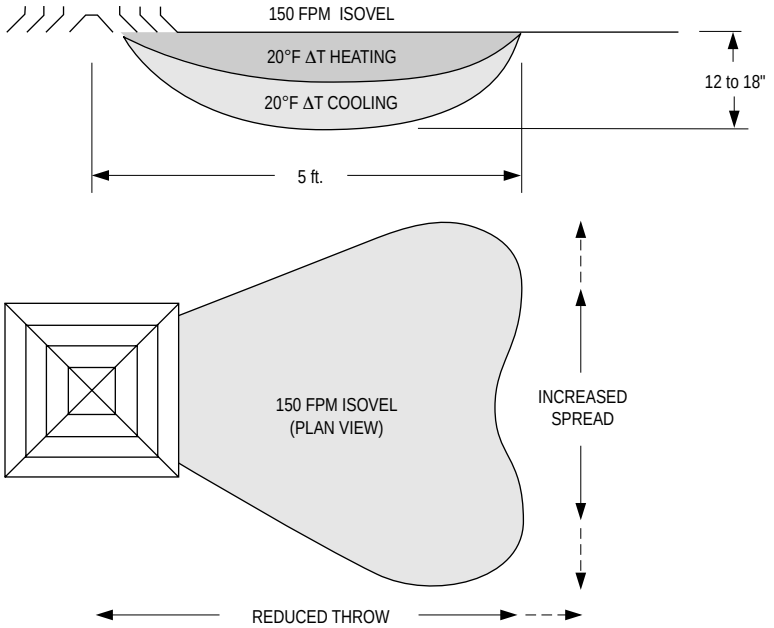


Figure 4.
6400IV Series Induction Vane Diffuser



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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.012	0.026	0.046	0.072	0.103	0.140
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
	NC	–	–	–	–	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
	NC	–	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	12	19	26	32	37

For performance notes, see page D77.

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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.012	0.026	0.046	0.072	0.103	0.140
6 x 6	Total Airflow, cfm	25	50	75	100	125	150	175
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	–	15	21	26
9 x 9	Total Airflow, cfm	56	113	169	225	281	338	394
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	–	18	24	29
12 x 12	Total Airflow, cfm	100	200	300	400	500	600	700
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	13	20	27	32
15 x 15	Total Airflow, cfm	156	313	469	625	781	938	1094
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	34
18 x 18	Total Airflow, cfm	225	450	675	900	1125	1350	1575
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.171
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
	NC	–	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	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
	NC	–	–	14	21	28	34	39

For performance notes, see page D77.

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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.171
6 x 6	Total 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
	NC	–	–	–	–	17	23	28
9 x 9	Total 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
	NC	–	–	–	13	20	27	32
12 x 12	Total 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
	NC	–	–	–	15	22	29	34
15 x 15	Total 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
	NC	–	–	–	17	24	31	36
18 x 18	Total 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
	NC	–	–	–	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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.171
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
	NC	–	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	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
	NC	–	–	14	21	28	34	39

For performance notes, see page D77.

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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.012	0.026	0.046	0.072	0.103	0.140
9 x 6	Total Airflow, cfm	38	75	113	150	188	225	263
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	11	22	26	29
12 x 6	Total Airflow, cfm	50	100	150	200	250	300	350
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	12	19	26	30
12 x 9	Total Airflow, cfm	75	150	225	300	375	450	525
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	13	20	27	32
15 x 9	Total Airflow, cfm	94	188	281	375	469	563	656
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	14	21	28	32
18 x 9	Total Airflow, cfm	113	225	338	450	563	675	788
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	33
21 x 9	Total Airflow, cfm	131	263	394	525	656	788	919
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	16	23	30	34
15 x 12	Total Airflow, cfm	125	250	375	500	625	750	875
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	34
18 x 12	Total Airflow, cfm	150	300	450	600	750	900	1050
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	16	23	30	35
21 x 12	Total Airflow, cfm	175	350	525	700	875	1050	1225
	Throw (cfm) 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 (cfm) 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)
	NC	–	16	–	16	23	31	36
24 x 12	Total Airflow, cfm	200	400	600	800	1000	1200	1400
	Throw (cfm) 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 (cfm) 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)
	NC	–	17	–	17	24	31	36
18 x 15	Total Airflow, cfm	186	375	563	750	938	1125	1313
	Throw (cfm) 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 (cfm) 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)
	NC	–	16	–	17	24	31	37
21 x 18	Total Airflow, cfm	263	525	785	1050	1310	1575	1840
	Throw (cfm) 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 (cfm) 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)
	NC	–	18	13	19	26	33	38
24 x 18	Total Airflow, cfm	300	600	900	1200	1500	1800	2100
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	14	20	27	34	39

For performance notes, see page D77.

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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.012	0.026	0.046	0.072	0.103	0.140
12 x 6	Total Airflow, cfm	50	100	150	200	250	300	350
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	12	19	27	30
18 x 9	Total Airflow, cfm	113	225	338	450	563	675	788
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	33
24 x 12	Total Airflow, cfm	200	400	600	800	1000	1200	1400
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	17	24	31	36

Core Style 3A2 • 3-way blow pattern

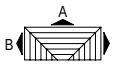
Nominal Neck Size	Neck Velocity, fpm	100	200	300	400	500	600	700
	Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.012	0.026	0.046	0.072	0.103	0.140
9 x 6	Total Airflow, cfm	38	75	113	150	188	225	263
	Throw (cfm) Side A	2-2-3 (15)	2-3-5 (28)	3-4-7 (42)	4-5-10 (56)	5-6-12 (70)	5-7-14 (84)	6-9-16 (98)
	Throw (cfm) 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)
	NC	–	–	–	11	22	26	29
12 x 9	Total Airflow, cfm	75	150	225	300	375	450	525
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	13	20	27	32
15 x 9	Total Airflow, cfm	94	188	281	375	469	563	656
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	14	21	28	32
15 x 12	Total Airflow, cfm	125	250	375	500	625	750	875
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	34
18 x 15	Total Airflow, cfm	188	375	563	750	938	1125	1313
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	17	24	31	37

For performance notes, see page D77.

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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.012	0.026	0.046	0.072	0.103	0.140
15 x 6	Total Airflow, cfm	63	125	188	250	313	375	438
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	12	19	26	31
21 x 9	Total Airflow, cfm	131	263	394	525	656	788	919
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	16	23	30	34
24 x 9	Total Airflow, cfm	150	300	450	600	750	900	1050
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	17	24	31	36

Core Style 3A1 • 3-way blow pattern

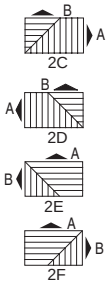
Nominal Neck Size	Neck Velocity, fpm	100	200	300	400	500	600	700
	Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.012	0.026	0.046	0.072	0.103	0.140
9 x 6	Total Airflow, cfm	38	75	113	150	188	225	263
	Throw (cfm) Side A	2-2-3 (16)	3-3-6 (31)	3-5-8 (47)	4-6-10 (62)	5-7-13 (78)	6-8-15 (93)	7-9-18 (109)
	Throw (cfm) 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)
	NC	–	–	–	11	22	26	29
12 x 6	Total Airflow, cfm	50	100	150	200	250	300	350
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	12	19	26	30
12 x 9	Total Airflow, cfm	75	150	225	300	375	450	525
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	13	20	27	32
15 x 9	Total Airflow, cfm	94	188	281	375	469	563	656
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	14	21	28	32
15 x 12	Total Airflow, cfm	125	250	375	500	625	750	875
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	34
18 x 12	Total Airflow, cfm	150	300	450	600	750	900	1050
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	16	23	30	35
18 x 15	Total Airflow, cfm	186	375	563	750	938	1125	1313
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	17	24	31	37

For performance notes, see page D77.

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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.171
9 x 6	Total Airflow, cfm	38	75	113	150	188	225	263
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	11	18	25	29
12 x 6	Total Airflow, cfm	50	100	150	200	250	300	350
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	12	19	26	30
12 x 9	Total Airflow, cfm	75	150	225	300	375	450	525
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	13	20	27	32
15 x 9	Total Airflow, cfm	94	188	281	375	469	563	656
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	14	21	28	32
18 x 9	Total Airflow, cfm	113	225	338	450	563	675	788
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	33
15 x 12	Total Airflow, cfm	125	250	375	500	625	750	875
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	15	22	29	34
18 x 12	Total Airflow, cfm	150	300	450	600	750	900	1050
	Throw (cfm) 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 (cfm) 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)
	NC	–	–	–	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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.171
15 x 9	Airflow, cfm	94	188	281	375	469	563	656
	Throw (cfm / 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)
	NC	–	–	–	14	21	28	32
18 x 9	Airflow, cfm	113	225	338	450	563	675	788
	Throw (cfm / 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)
	NC	–	–	–	15	22	29	33
21 x 9	Airflow, cfm	131	263	394	525	656	788	919
	Throw (cfm / 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)
	NC	–	–	–	15	23	30	34
15 x 12	Airflow, cfm	125	250	375	500	625	750	875
	Throw (cfm / 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)
	NC	–	–	–	15	22	29	34
18 x 12	Airflow, cfm	150	300	450	600	750	900	1050
	Throw (cfm / 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)
	NC	–	–	–	16	23	30	35
21 x 12	Airflow, cfm	175	350	525	700	875	1050	1225
	Throw (cfm / 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)
	NC	–	16	–	17	24	31	36
24 x 12	Airflow, cfm	200	400	600	800	1000	1200	1400
	Throw (cfm / 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)
	NC	–	–	–	18	25	31	36

For performance notes, see page D77.

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	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.171
9 x 6	Airflow, cfm	38	75	113	150	188	225	263
	Throw (cfm / side)	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)
	NC	–	–	–	11	18	26	29
12 x 6	Airflow, cfm	50	100	150	200	250	300	350
	Throw (cfm / side)	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)
	NC	–	–	–	12	19	26	30
12 x 9	Airflow, cfm	75	150	225	300	375	450	525
	Throw (cfm / side)	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)
	NC	–	–	–	15	23	30	34

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


1A


1B

Nominal Neck Size	Neck Velocity, fpm	100	200	300	400	500	600	700
	Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031
	Total Pressure	0.003	0.014	0.031	0.056	0.087	0.126	0.171
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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	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
	NC	–	–	–	17	24	31	36

Performance Notes:

1. All pressure 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. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts.
4. 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.
   NC: Add +4 to catalog value.
5. Correction factor for round inlets, see next page.
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 D70).

- NC = 20 + 7 = 27
- Total Pressure = .072 x 1.65 = 0.119
- Throw = 16 x 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
	8	4	1.40	1.10	1.10	1.10
12 x 12	8	17	3.50	1.15	1.15	1.20
	10	7	1.65	1.10	1.10	1.15
15 x 15	10	17	3.50	1.15	1.15	1.20
	12	9	1.90	1.10	1.10	1.15
	14	3	1.25	1.05	1.05	1.10
18 x 18	12	17	3.50	1.15	1.15	1.20
	14	10	2.00	1.10	1.10	1.15
	16	5	1.45	1.10	1.10	1.10
21 x 21	14	17	3.70	1.15	1.15	1.20
	16	11	2.25	1.10	1.10	1.15
	18	6	1.60	1.10	1.10	1.10
	20	3	1.20	1.05	1.05	1.10
24 x 24	16	17	3.50	1.15	1.15	1.20
	18	12	2.35	1.10	1.10	1.15
	20	7	1.65	1.10	1.10	1.15

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.

TABLE 2 Maximum Recommended Airflow

CEILING HEIGHT (ft.)	MAXIMUM 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

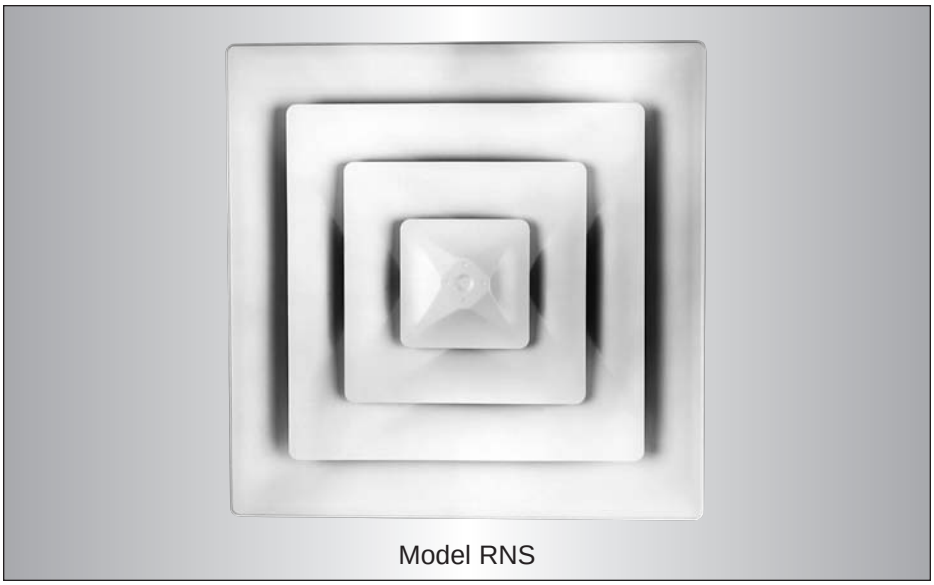
STAMPED SQUARE CEILING DIFFUSERS

- FIXED AIR PATTERN
- HIGH PERFORMANCE
- SQUARE FACE
- ROUND NECK

Models:

RNS Steel

ARNS Aluminum



Model RNS

The **Nailor RNS Series Square Ceiling Air Diffusers** have been specially designed to provide an extremely cost effective, value engineered product. They offer both the unobtrusive appearance required for architectural excellence and the 360° diffusion pattern at minimum NC levels required for high engineering performance. For these reasons the **RNS Series** diffuser is the most popular choice for general applications.

The stamped one-piece cones eliminate mitered corners and the die-formed curves provide consistent quality and performance. The stepped down core design increases capacity and minimizes streaking and smudging of the ceiling.

The diffusers provide stable diffusion and mixing patterns under constant and changing load conditions and are particularly suitable for variable air volume systems.

The diffusers are available with various frame/border designs to suit many ceiling systems including surface mount, T-Bar lay-in, and panel applications. Standard finish is a high quality baked enamel for long life and easy cleaning. A variety of neck sizes are available to suit your system design. The collar is a full 1 1/4" (32) in height for easy, secure connection. Steel models are available in all size and frame type combinations. Aluminum models are available in a 24" x 24" (610 x 610) and a 20" x 20" (508 x 508) full face Type L frame module and 12" x 12" (305 x 305) modules with a full face Type L or Type S frame.

FEATURES:

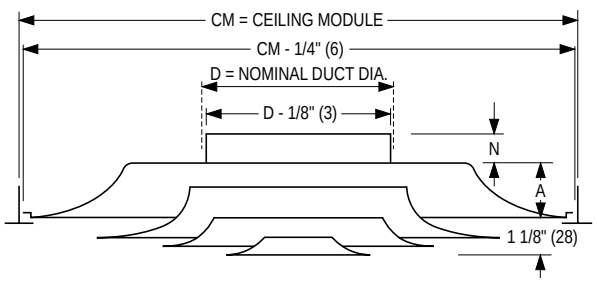
- Spring loaded core is securely held in position and is removable without the use of tools.
- Engineered air diffusion pattern.
- Steel stamped shapes for uniformity.
- High neck collars for solid connection.
- All 12" x 12" (305 x 305) and 24" x 24" (610 x 610) modules feature four cones in all neck sizes, providing a uniform and balanced appearance. The 20" x 20" (508 x 508) module has three cones.
- Screwdriver adjustment of the optional balancing damper is achieved through the inner cone assembly.
- Optional QB Quadrant Blanks for 1, 2 and 3-way blow.

Material: Heavy gauge, corrosion-resistant steel or aluminum with miscellaneous steel components.

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

Type L Lay-in, T-Bar Frame

12 x 12 (300 x 300) and 24 x 24 (600 x 600) modules



Dimensional Data

Ceiling Module CM		Imperial Units (inches)					Metric Units (mm)				
Imperial Modules	Metric Modules	Duct Size D	N	A	B	F	Duct Size D	N	A	B	F
12 x 12	300 x 300	4 *	3 1/4	1	11	13	102 *	83	25	279	330
		5, 6, 7, 8	1 1/4				127, 152, 178, 203	32			
24 x 24	600 x 600	6, 8, 10, 12, 14, 15	1 1/4	2 5/16	22	24 3/4	152, 203, 254, 305, 356, 381	32	59	559	629

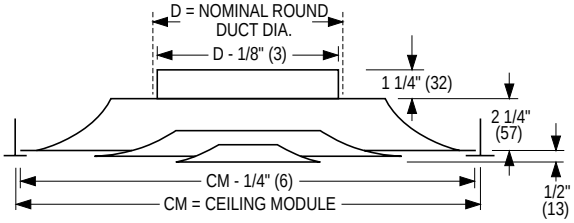
* Supplied with a reducer.

Dimensional Data and Frame Types

Models RNS and ARNS

Type L Lay-in T-Bar

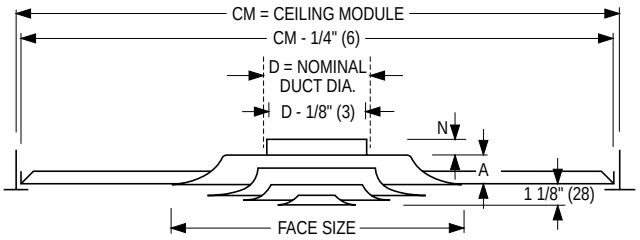
20" x 20" (500 x 500) module



CM		Imperial Units (inches)		Metric Units (mm)	
Imperial Modules	Metric Modules	Duct Size D	B	Duct Size D	B
20 x 20	500 x 500	6, 8, 10	18 1/2	152, 203, 254	470

The 20 x 20 (500 x 500) module is only available in this frame style.

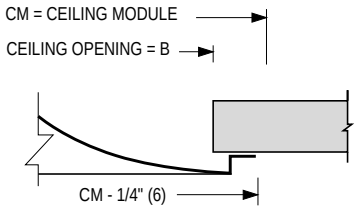
Type PL Panel Mounted Lay-in T-Bar



CM		Imperial Units (inches)				Metric Units (mm)			
Imperial Modules	Metric Modules	Face Size	Duct Size D	N	A	Face Size	Duct Size D	N	A
24 x 24	600 x 600	12	4 *	3 1/4	1	300	102	83	25
24 x 12 20 x 20	600 x 300 500 x 500	x 12	5, 6, 7, 8	1 1/4		x 300	127, 152, 178, 203	32	
30 x 30	750 x 750	24 x 24	6, 8, 10, 12, 14, 15	1 1/4	2 5/16	600 x 600	152, 203, 254, 305, 356, 381	32	59
48 x 24	1200 x 600	24 x 24	6, 8, 10, 12, 14, 15	1 1/4	2 5/16	600 x 600	152, 203, 254, 305, 356, 381	32	59

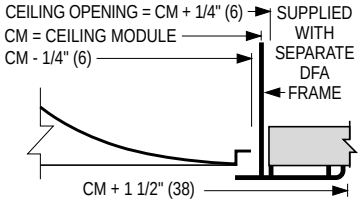
* Supplied with a reducer.

Type L Surface Mount



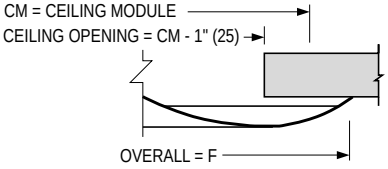
Hard duct connection recommended.

Type L Surface Mount with DFA



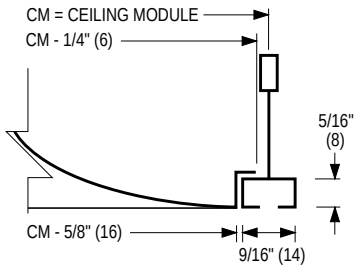
Drywall/Plaster Frame. Recommended for flexible duct and ceiling access.

Type S Surface Mount

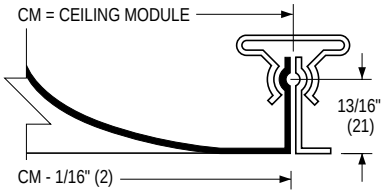


Hard duct connection recommended.

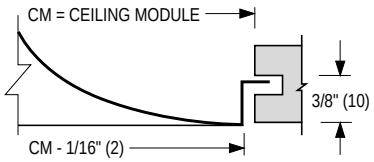
Type F Fineline®



Type M Metal Pan (Snap-in)



Type SP Spline



For one directional exposed T-bar or fully concealed grid. One spline on two opposite sides, steel lift bracket on others.

HOW TO SPECIFY OR TO ORDER

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

Stamped Square Ceiling Diffusers – Models RNS and ARNS

RNS - 08 - 24 x 24 - L - AW - –

MODEL

- Steel, Fixed Pattern	RNS
- Aluminum, Fixed Pattern	ARNS

NECK SIZE (inches)

- 04, 05, 06, 07, 08
- 10, 12, 14, 15

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 20 x 20	500 x 500
- 24 x 12 (PL only)	600 x 300 (PL only)
- 24 x 24	600 x 600
- 30 x 30 (PL only)	750 x 750 (PL only)
- 48 x 24 (PL only)	1200 x 600 (PL only)

FRAME STYLE

- T-Bar Lay-in	L
- Surface Mount	S
- Panel T-Bar Lay-in	PL
- Spline	SP
- Metal Pan Snap-In	M
- Fineline®	F

ACCESSORIES

- None (default)	—
- External Foil Back Insulation	EX
- Earthquake Tabs	EQT
- Quadrant Blanks	
3-Way Blow	QB3
2-Way Opposite Blow	QB2
2-Way Corner Blow	QC2
1-Way Blow	QB1

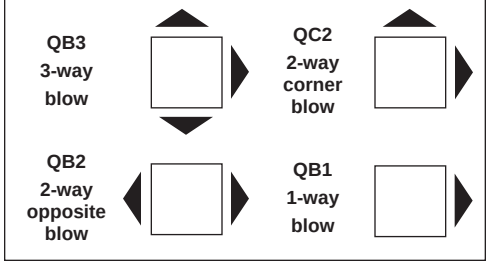
AIR BALANCING DEVICES

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

FINISH

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

BLOW PATTERNS WITH OPTIONAL FACTORY INSTALLED QUADRANT BLANKS.



Notes:

1. Face sizes 12" x 12" (300 x 300) and 24" x 12" (600 x 300) are available in a 4" (102) through 8" (203) neck, 20" x 20" (500 x 500) face size is available in a 6", 8" or 10" (152, 203 or 254) neck and 24" x 24" (600 x 600) face size is available in a 6" (152) through 15" (381) neck.
2. Face size 20" x 20" (500 x 500) is available only in frame style **L**.
3. Consult text as to limitations of material, module size and frame style combinations.

SUGGESTED SPECIFICATION:

Specification Text File

RNS – Steel Construction

Furnish and install **Nailor Model RNS Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and have four die-formed concentric cones in all sizes, except the 20" x 20" (500 x 500) module size which will consist of three cones. The inner cone assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

ARNS – Aluminum Construction

Furnish and install **Nailor Model ARNS Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have four die-formed aluminum concentric cones in all sizes, except the 20" x 20" (500 x 500) module size which will consist of three cones. The inner cone assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models RNS and ARNS • 12 x 12 (300 x 300) Face Size

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
4" Dia.	TP	.014	.022	.032	.043	.056	.071	.088	.126	.172	.224
	Airflow, CFM	35	44	52	61	70	79	87	105	122	140
	T	1-2-4	2-2-5	2-3-5	2-3-6	2-4-7	3-4-7	3-5-7	4-5-8	4-6-9	5-7-9
	NC	—	—	—	—	—	11	19	25	30	35
5" Dia.	TP	.017	.026	.038	.051	.067	.085	.105	.151	.206	.269
	Airflow, CFM	55	68	82	95	109	123	136	164	191	218
	T	2-2-5	2-3-6	2-4-6	2-4-7	2-5-8	3-6-9	4-6-9	5-7-10	5-8-11	6-8-11
	NC	—	—	—	—	—	14	22	28	33	38
6" Dia.	TP	.018	.029	.043	.060	.079	.100	.128	.175	.250	.325
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-2-4	1-2-5	1-3-6	2-3-6	2-4-8	3-4-8	3-4-10	4-5-10	4-6-14	5-8-14
	NC	—	—	11	16	20	22	24	31	38	41
7" Dia.	TP	.022	.035	.050	.068	.089	.112	.138	.199	.271	.354
	Airflow, CFM	107	134	160	187	214	241	267	321	374	428
	T	2-4-8	3-5-9	4-6-10	4-7-11	5-8-12	5-9-13	6-10-14	7-10-14	9-11-15	10-12-16
	NC	—	—	12	17	20	24	27	33	39	42
8" Dia.	TP	.031	.047	.065	.087	.110	.140	.168	.235	.310	.395
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	3-5-9	4-5-11	5-7-13	5-8-14	6-9-14	6-10-15	7-11-16	8-12-17	10-13-18	11-14-18
	NC	—	—	13	18	22	26	29	35	40	44

Models RNS and ARNS • 20 x 20 (500 x 500) Face Size

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	.015	.023	.033	.045	.058	.074	.091	.130	.176	.230
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-1-3	1-2-4	1-2-4	1-3-5	2-3-6	2-3-6	2-4-7	3-5-8	3-5-8	4-6-9
	NC	—	—	14	18	21	26	29	34	38	41
8" Dia.	TP	.018	.028	.041	.055	.072	.091	.112	.161	.219	.286
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	1-2-5	2-3-6	2-4-6	3-4-7	3-5-7	4-5-8	4-6-8	5-6-9	6-7-10	6-8-11
	NC	—	11	16	20	23	28	31	36	40	43
10" Dia.	TP	.023	.036	.052	.071	.092	.117	.144	.207	.281	.367
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	T	2-4-6	3-4-7	4-5-8	4-6-9	5-6-9	5-7-10	6-7-10	6-8-11	7-9-12	8-9-13
	NC	—	13	18	22	25	30	33	38	42	45

For performance notes, see next page.

Performance Data

Models RNS and ARNS • 24 x 24 (600 x 600) Face Size

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	.015	.023	.035	.045	.060	.076	.095	.135	.186	.240
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-1-4	1-2-5	1-2-6	1-3-7	2-4-9	2-5-9	3-6-11	3-6-12	4-7-14	6-8-15
	NC	—	—	—	13	17	21	24	27	32	36
8" Dia.	TP	.021	.033	.047	.063	.082	.105	.128	.183	.245	.325
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	1-1-5	1-2-6	1-3-8	2-4-8	3-5-10	3-6-10	4-6-13	5-8-13	6-8-16	7-10-17
	NC	—	—	13	17	20	25	28	33	37	40
10" Dia.	TP	.024	.037	.047	.074	.097	.123	.150	.215	.293	.372
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	T	1-3-6	2-4-8	3-5-9	4-6-12	5-6-12	5-7-14	6-9-15	6-10-15	8-13-17	9-13-18
	NC	—	11	16	20	23	28	31	36	40	43
12" Dia.	TP	.026	.039	.057	.075	.097	.127	.150	.245	.310	.410
	Airflow, CFM	315	390	470	550	630	705	785	990	1100	1255
	T	2-3-7	3-4-9	3-5-10	4-6-13	5-7-13	5-8-15	5-8-16	7-9-18	9-11-18	10-12-19
	NC	—	13	18	21	24	29	32	37	41	44
14" Dia.	TP	.030	.050	.070	.100	.110	.160	.200	.240	.390	.490
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	T	3-4-9	4-5-11	4-7-13	5-7-16	6-9-16	7-11-16	7-11-19	9-13-19	11-16-19	11-16-27
	NC	—	14	19	22	25	29	32	37	42	45
15" Dia.	TP	.033	.054	.072	.100	.127	.163	.204	.280	.395	.500
	Airflow, CFM	490	615	735	860	985	1110	1230	1470	1720	1970
	T	5-7-10	6-8-11	7-9-14	8-10-17	8-13-18	10-15-19	11-16-22	12-18-27	13-20-32	15-22-34
	NC	—	15	20	23	26	30	33	38	43	46

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

Performance Notes:

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

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

3. The addition of quadrant blanks reduces the effective area and for a given air volume, increases the discharge velocity. This will result in an increase in throw, pressure drop and sound level. To determine throw, select the diffuser as if it were supplying a larger volume of air. The table shows the percentage increase required to determine selection of diffuser size and throw. To correct pressure drop and NC, use correction factors as shown for 4-way blow values.

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	12 x 12	0.131
8	12 x 12	0.202
6	24 x 24	0.180
8	24 x 24	0.227
10	24 x 24	0.331
12	24 x 24	0.450
14	24 x 24	0.511
15	24 x 24	0.625

Quadrant Blanks (Blow)	% Increase in Air Volume for Throw Determination	% Increase in Static Pressure Drop	NC Sound Level Increase
1 (3-way)	35	125	8
2 (2-way)	100	450	19

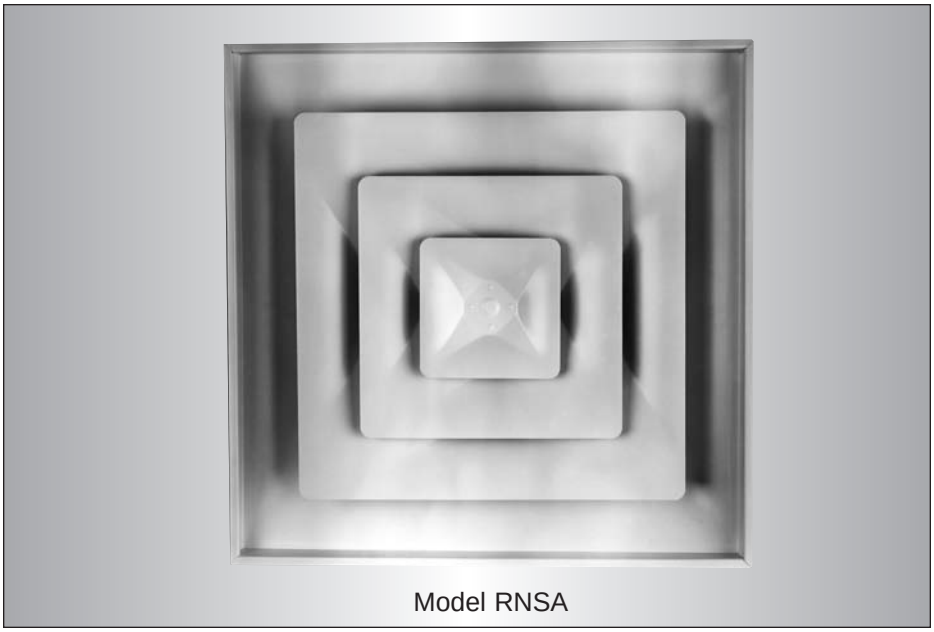
ADJUSTABLE STAMPED SQUARE CEILING DIFFUSERS

- HIGH PERFORMANCE
- SQUARE FACE
- ROUND NECK
- HORIZONTAL TO VERTICAL ADJUSTABLE DISCHARGE PATTERN

Models:

RNSA Steel

ARNSA Aluminum



Model RNSA

The **Nailor Models RNSA and ARNSA Adjustable Square Ceiling Air Diffusers** have been specially designed to provide both the unobtrusive appearance required for architectural excellence and the 360° diffusion pattern at minimum NC levels required for high engineering performance. They provide the flexibility of a standard horizontal discharge or near vertical discharge pattern, useful in high ceiling applications where better air penetration or spot heating may be desired. The stamped one-piece cones eliminate mitered corners and the die-formed curves provide consistent quality and performance.

The adjustable diffusers provide stable diffusion and mixing patterns under constant and changing load conditions and are particularly suitable for variable air volume systems. They are available to suit many situations including surface mount, T-Bar lay-in and panel applications. Standard finish is a high quality baked enamel for long life and easy cleaning. A variety of neck sizes are available to suit your system design. The collar is a full 1 1/4" (32) in height for easy, secure connection.

FEATURES:

- Removable core.
- Steel stamped shapes for uniformity.
- High neck collars for solid connection.
- All 12" x 12" (305 x 305) and 24" x 24" (610 x 610) modules feature four cones in all neck sizes, providing a uniform and balanced appearance. The 20" x 20" (508 x 508) module has three cones.
- Compatible with **Model 4275** Radial Opposed Blade Damper (option). Other dampers may need adaptors.
- Screwdriver adjustment of the optional balancing damper through the core.
- Optional QB quadrant blanks for 1, 2 and 3-way blow.

Material: Heavy gauge corrosion-resistant steel or aluminum with miscellaneous steel components.

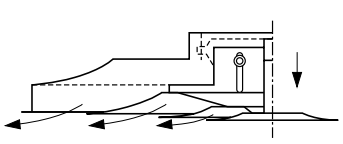
Finish: AW Appliance White baked enamel finish is standard. Other finishes are available.

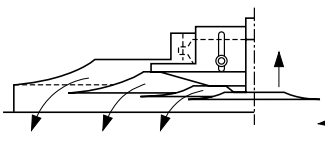
Adjustment: Unique design permits gradual adjustment of air pattern from horizontal flow with the inner cone assembly extended to vertical flow by retracting the inner cone assembly. Available as Type 1 or 2.

Type 1 'Sliding Type'

Adjusted by sliding the inner cone assembly up or down. Core is securely retained by a spring loaded friction arrangement. Steel or aluminum construction.

Horizontal Air Pattern | **Vertical Air Pattern**

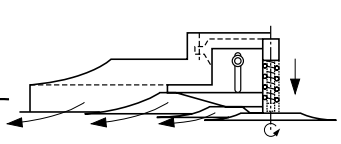


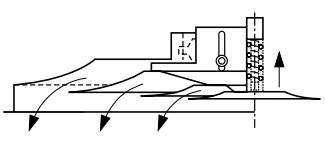


Type 2 'Rotating Type'

A unique 'screw type' arrangement where the angle of discharge is varied by rotating the center cone. Steel construction only.

Horizontal Air Pattern | **Vertical Air Pattern**



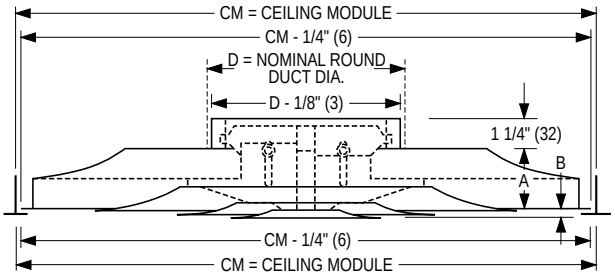


Dimensional Data and Frame Types

Models RNSA and ARNSA

Type L Lay-in T-Bar

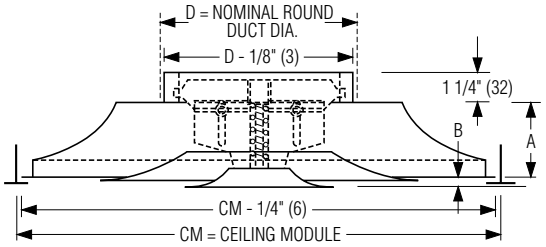
12 x 12 (300 x 300) and 24 x 24 (600 x 600) modules



	Imperial Modules				Metric Modules	
	Imperial Units (inches)		SI Units (mm)		SI Units (mm)	
Listed Neck Size	CM = 12 x 12		CM = 305 x 305		CM = 300 x 300	
	A	B	A	B	A	B
6, 8 (inches) 152, 203 (metric)	2 1/4	0 to 1/2	57	0 to 13	57	0 to 13
	CM = 24 x 24		CM = 610 x 610		CM = 600 x 600	
	A	B	A	B	A	B
6, 8, 10, 12, 14, 15 (inches) 152, 203, 254, 305, 356, 381 (metric)	3 3/4	0 to 3/8	95	0 to 10	95	0 to 10

Type L Lay-in T-Bar

20 x 20 (500 x 500) module

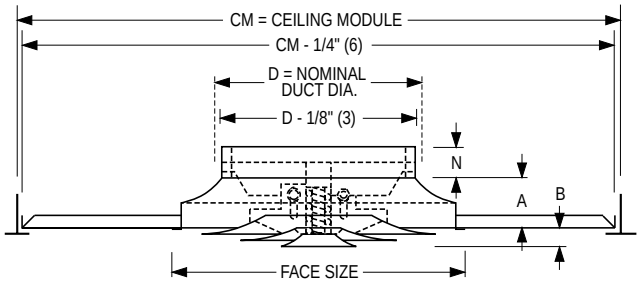


	Imperial Modules				Metric Modules	
	Imperial Units (inches)		SI Units (mm)		SI Units (mm)	
Listed Neck Size	CM = 20 x 20		CM = 508 x 508		CM = 500 x 500	
	A	B	A	B	A	B
6 (152) 8 (203) 10 (254)	3 1/8	0 to 3/8	79	0 to 10	79	0 to 10

Type PL Panel Mounted Lay-in T-Bar

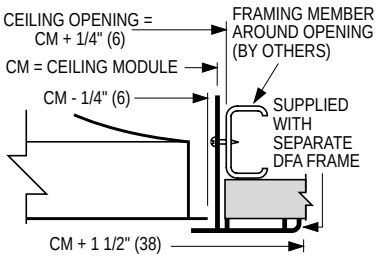
	Imperial Modules (inches)				SI Units (mm)			
Listed Neck Size	Face Size = 12 x 12				Face Size = 305 x 305			
	D	N	A	B	D	N	A	B
4 *	4	3 1/4	2 1/4	0 to 1/2	102	83	57	0 to 13
5 *	5				127			
6	6	1 1/4			152	32		
8	8				203			
	Face Size = 24 x 24				Face Size = 610 x 610			
6	6	1 1/4	3 3/4	0 to 3/8	152	32	95	0 to 10
8	8				203			
10	10				254			
12	12				305			
14	14				356			
15	15				381			

* Supplied with a reducer.

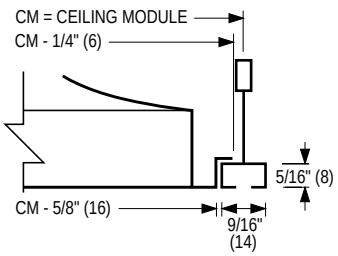


Available Ceiling Modules CM		
Imperial Modules		Metric Modules
Imperial Units (inches)	SI Units (mm)	SI Units (mm)
Face Size 12 x 12 (305 x 305) Listed Neck Sizes 4, 5, 6, 8 (102, 127, 152, 203)		
20 x 20 24 x 12 24 x 24	508 x 508 610 x 305 610 x 610	500 x 500 600 x 300 600 x 600
Face Size 24 x 24 (610 x 610) Listed Neck Sizes 6, 8, 10, 12, 14, 15 (152, 203, 254, 305, 356, 381)		
30 x 30 48 x 24	762 x 762 1219 x 610	750 x 750 1200 x 600

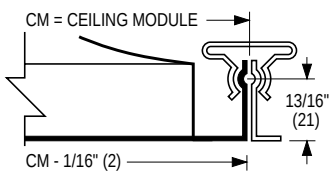
Type S Surface Mount



Type F Fineline®



Type M Metal Pan (Snap-in)



Steel models only

HOW TO SPECIFY OR TO ORDER

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

Stamped Square Adjustable Ceiling Diffusers – Models RNSA and ARNSA

RNSA1 - 08 - 24 x 24 - L - AW - –

MODEL

- Steel, Adjustable 'Sliding Type'	RNSA1
- Steel, Adjustable 'Rotating Type'	RNSA2
- Aluminum, Adjustable 'Sliding Type'	ARNSA

NECK SIZE (inches)

- 04, 05, 06, 07, 08
- 10, 12, 14, 15

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 20 x 20	500 x 500
- 24 x 12 (PL only)	600 x 300 (PL only)
- 24 x 24	600 x 600
- 30 x 30 (PL only)	750 x 750 (PL only)
- 48 x 24 (PL only)	1200 x 600 (PL only)

FRAME STYLE

- T-Bar Lay-in	L
- Surface Mount	S
- Panel T-Bar Lay-in	PL
- Spline	SP
- Metal Pan Snap-In	M
- Fineline®	F

ACCESSORIES

- None (default)	—
- External Foil Back Insulation	EX
- Earthquake Tabs	EQT
- Quadrant Blanks	
3-Way Blow	QB3
2-Way Opposite Blow	QB2
2-Way Corner Blow	QC2
1-Way Blow	QB1

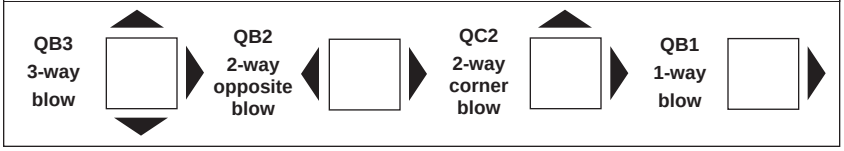
AIR BALANCING DEVICES

- Radial Opposed Blade Damper	4275
- Equalizing Grid	EGR
- Damper/Equalizing Grid	DEGR

FINISH

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

BLOW PATTERNS WITH OPTIONAL FACTORY INSTALLED QUADRANT BLANKS.



Notes:

1. Face sizes 12" x 12" (300 x 300) and 24" x 12" (600 x 300) are available in a 4" (102) through 8" (203) neck, 20" x 20" (500 x 500) face size is available in a 6", 8" or 10" (152, 203 or 254) neck and 24" x 24" (600 x 600) face size is available in a 6" (152) through 15" (381) neck.
2. Face size 20" x 20" (500 x 500) is available only in frame style **L**.
3. Consult text as to limitations of material, module size and frame style combinations.

SUGGESTED SPECIFICATION:

Specification Text File

RNSA1, RNSA2 – Steel Construction

Furnish and install **Nailor Model** (select one) **RNSA1** or **RNSA2 Adjustable Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and incorporate four die-formed concentric cones in all sizes, except the 20" x 20" (500 x 500) module size which will consist of three cones. Model RNSA1 shall have an adjustable sliding type inner cone assembly that is securely retained by a spring loaded friction arrangement. Model RNSA2 shall have an adjustable rotating type inner cone assembly that is adjusted by rotating the center cone. The inner cone assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

ARNSA – Aluminum Construction

Furnish and install **Nailor Model ARNSA Adjustable Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have four die-formed aluminum concentric cones in all sizes, except the 20" x 20" (500 x 500) module size which will consist of three cones. The diffuser shall have an adjustable sliding type inner cone assembly that is securely retained by a spring loaded friction arrangement. The inner cone assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models RNSA and ARNSA • 12 x 12 (300 x 300) Face Size

Nominal Neck Size	Neck Velocity, FPM		400	500	600	700	800	900	1000	1200	1400	1600
	VP		.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	Horizontal	.019	.028	.039	.057	.074	.093	.121	.150	.192	.247
		Vertical	.023	.034	.057	.086	.110	.146	.168	.246	.316	.415
	Airflow, CFM		80	100	120	140	160	180	200	235	275	315
	T	Horizontal	1-2-4	2-3-6	2-3-6	3-4-7	3-5-7	4-5-8	4-6-10	6-7-11	6-8-11	6-9-12
		Vertical	1-1-2	2-2-5	2-2-6	2-3-5	2-3-5	3-5-6	3-4-7	4-5-8	5-6-9	5-7-10
	NC	Horizontal	—	—	12	17	21	23	24	32	38	41
		Vertical	—	—	16	21	25	27	28	36	42	45
8" Dia.	TP	Horizontal	.020	.031	.043	.059	.071	.090	.110	.150	.200	.259
		Vertical	.032	.052	.063	.096	.120	.159	.186	.258	.342	.443
	Airflow, CFM		140	175	210	245	280	315	350	420	490	560
	T	Horizontal	2-3-6	3-5-8	4-5-8	4-7-10	5-7-12	6-9-14	8-9-15	8-10-16	10-12-18	11-14-20
		Vertical	2-2-3	3-4-7	3-5-6	4-6-9	4-6-9	5-7-10	6-8-11	7-9-12	8-9-13	9-10-14
	NC	Horizontal	—	11	17	22	25	27	29	36	44	47
		Vertical	—	—	21	26	29	31	33	40	48	51

Models RNSA and ARNSA • 20 x 20 (500 x 500) Face Size

Nominal Neck Size	Neck Velocity, FPM		400	500	600	700	800	900	1000	1200	1400	1600
	VP		.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	Horizontal	.017	.026	.038	.051	.067	.085	.105	.149	.202	.264
		Vertical	.023	.036	.052	.070	.091	.116	.143	.201	.274	.359
	Airflow, CFM		80	100	120	140	160	180	200	235	275	315
	T	Horizontal	1-2-4	2-2-5	2-3-6	2-4-6	3-5-6	4-5-7	4-5-7	4-6-8	5-6-8	5-7-9
		Vertical	1-1-2	2-2-3	2-2-4	2-3-5	2-4-5	3-5-6	3-5-7	4-5-8	4-6-9	5-7-10
	NC	Horizontal	—	12	17	22	25	29	32	37	41	45
		Vertical	—	17	22	26	29	32	35	40	44	48
8" Dia.	TP	Horizontal	.019	.031	.044	.059	.077	.098	.120	.173	.235	.307
		Vertical	.031	.049	.070	.094	.122	.155	.192	.275	.373	.489
	Airflow, CFM		140	175	210	245	280	315	350	420	490	560
	T	Horizontal	2-3-5	2-3-7	3-4-8	3-5-8	3-5-9	4-6-9	4-7-10	5-8-11	6-8-12	7-9-12
		Vertical	1-1-4	1-2-5	2-3-6	3-4-6	3-4-8	4-5-8	4-6-9	4-7-10	5-7-10	6-8-12
	NC	Horizontal	—	—	15	20	24	28	31	38	43	47
		Vertical	14	19	24	29	32	35	38	44	48	52
10" Dia.	TP	Horizontal	.024	.039	.056	.076	.098	.125	.153	.220	.299	.391
		Vertical	.041	.065	.094	.127	.165	.209	.258	.370	.502	.657
	Airflow, CFM		220	270	330	380	435	490	545	655	765	875
	T	Horizontal	2-4-7	3-5-8	4-6-9	4-7-10	5-7-10	6-8-11	6-8-12	7-9-13	8-10-14	9-11-15
		Vertical	1-2-4	1-3-6	3-5-7	3-5-8	4-5-9	4-6-10	5-6-10	5-7-11	6-8-12	7-9-12
	NC	Horizontal	—	—	16	21	26	30	33	39	45	49
		Vertical	—	20	25	29	33	36	39	44	48	52

For performance notes, see next page.

Performance Data

Models RNSA and ARNSA • 24 x 24 (600 x 600) Face Size

Nominal Neck Size	Neck Velocity, FPM		400	500	600	700	800	900	1000	1200	1400	1600
	VP		.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	Horizontal	.016	.024	.034	.047	.061	.078	.098	.129	.182	.240
		Vertical	.020	.031	.052	.080	.097	.124	.151	.218	.289	.390
	Airflow, CFM		80	100	120	140	160	180	200	235	275	315
	T	Horizontal	1-2-5	2-3-5	2-3-6	3-4-7	3-5-8	4-5-8	4-6-9	6-8-10	6-10-11	7-10-12
		Vertical	1-1-2	2-2-3	2-2-4	2-3-5	2-4-5	3-5-6	3-5-7	4-5-8	4-6-9	5-7-10
	NC	Horizontal	—	—	—	13	17	20	22	28	32	36
		Vertical	—	—	—	15	19	22	24	30	34	38
8" Dia.	TP	Horizontal	.017	.026	.037	.049	.062	.080	.102	.131	.185	.243
		Vertical	.025	.040	.057	.077	.100	.126	.153	.221	.297	.393
	Airflow, CFM		140	175	210	245	280	315	350	420	490	560
	T	Horizontal	1-2-5	2-4-6	3-5-7	3-5-8	4-6-9	4-7-10	4-7-11	5-8-12	6-9-13	7-10-14
		Vertical	1-1-4	1-2-5	2-3-6	3-4-6	3-4-8	4-5-8	4-6-9	5-7-10	5-7-11	6-8-12
	NC	Horizontal	—	—	13	18	21	22	26	32	38	42
		Vertical	—	—	17	20	25	26	30	36	42	46
10" Dia.	TP	Horizontal	.014	.021	.030	.039	.052	.065	.080	.112	.152	.194
		Vertical	.030	.048	.070	.092	.120	.161	.196	.264	.360	.450
	Airflow, CFM		220	270	330	380	435	490	545	655	765	870
	T	Horizontal	1-4-6	3-5-9	3-6-9	4-7-10	5-7-11	5-9-13	6-10-14	7-11-15	8-11-16	9-12-17
		Vertical	1-2-4	1-3-6	3-5-7	3-5-8	4-5-9	4-6-10	5-6-10	5-7-11	6-8-12	7-9-12
	NC	Horizontal	—	10	15	21	26	30	33	38	43	45
		Vertical	—	14	19	25	31	34	37	42	47	49
12" Dia.	TP	Horizontal	.016	.025	.032	.043	.056	.072	.085	.129	.163	.216
		Vertical	.045	.069	.088	.120	.155	.204	.240	.360	.455	.585
	Airflow, CFM		315	390	470	550	630	705	785	950	1100	1255
	T	Horizontal	2-3-7	3-6-9	4-7-10	5-8-12	6-9-14	6-10-15	7-10-16	8-11-17	9-12-18	10-14-19
		Vertical	2-3-5	2-4-6	3-6-7	5-6-9	5-7-10	5-7-10	6-7-12	7-8-12	8-10-14	8-9-15
	NC	Horizontal	—	15	22	25	30	33	36	43	45	48
		Vertical	12	18	25	28	33	36	39	46	48	51
14" Dia.	TP	Horizontal	.063	.101	.135	.160	.203	.261	.326	.411	.583	.640
		Vertical	.022	.037	.049	.057	.073	.092	.115	.147	.208	.262
	Airflow, CFM		425	530	635	745	855	960	1070	1285	1500	1710
	T	Horizontal	2-4-8	4-5-8	5-6-10	6-8-12	7-10-14	8-10-16	9-11-17	10-11-18	11-12-20	12-14-21
		Vertical	2-3-5	4-4-6	4-5-9	5-7-10	6-9-12	7-9-13	8-9-14	9-10-15	10-11-16	10-13-18
	NC	Horizontal	—	16	22	25	29	33	36	40	42	48
		Vertical	11	19	25	28	32	36	39	43	45	51
15" Dia.	TP	Horizontal	.030	.041	.054	.062	.080	.100	.128	.155	.224	.308
		Vertical	.068	.110	.143	.165	.210	.271	.330	.425	.590	.660
	Airflow, CFM		490	615	735	860	985	1110	1230	1470	1720	1965
	T	Horizontal	5-6-8	5-8-9	8-9-11	9-10-12	10-10-13	11-12-15	12-12-16	12-14-18	14-15-20	15-17-23
		Vertical	3-4-6	3-4-7	5-6-8	6-7-9	6-8-10	8-9-11	10-11-12	11-12-14	11-14-16	12-16-18
	NC	Horizontal	10	18	24	30	34	37	40	42	48	51
		Vertical	13	21	27	33	37	40	43	45	51	54

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

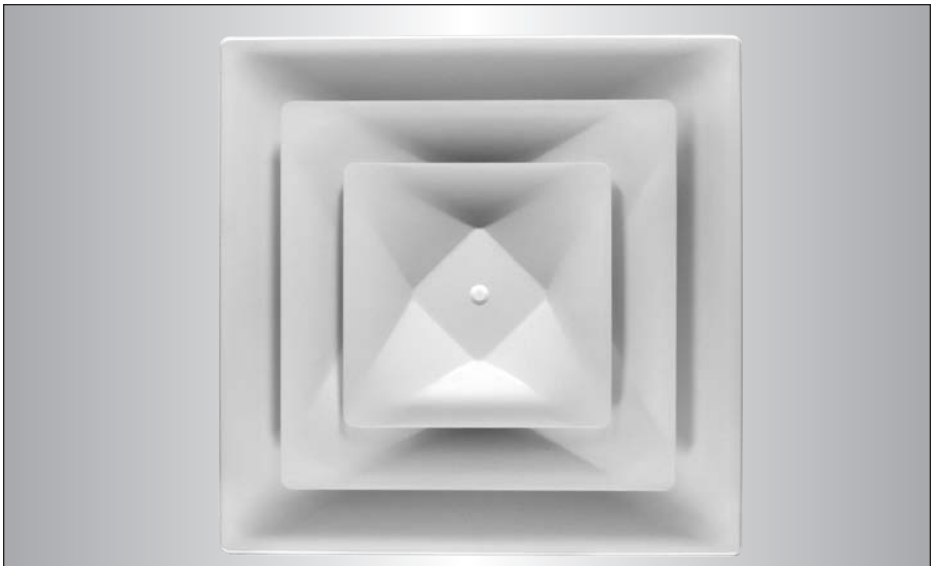
Performance Notes:
1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Horizontal throws are with ceiling coanda effect. For exposed duct mounting, multiply table values by x 0.7. Vertical throw is a free jet.
3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

STAMPED SQUARE CEILING DIFFUSERS

- FIXED AIR PATTERN
- SQUARE FACE
- ROUND NECK
- 3 CONE

Model:

RNS3 Steel



Model RNS3

The **Nailor RNS3 Series Square Ceiling Air Diffusers** have been specially designed to provide an extremely cost effective, value engineered product. They offer both the unobtrusive appearance required for architectural excellence and the 360° diffusion pattern at minimum NC levels required for high engineering performance. For these reasons the **RNS3 Series** diffuser is the most popular choice for general applications.

The stamped one-piece cones eliminate mitered corners and the die-formed curves provide consistent quality and performance. The stepped down core design increases capacity and minimizes streaking and smudging of the ceiling.

The diffusers provide stable diffusion and mixing patterns under constant and changing load conditions and are particularly suitable for variable air volume systems.

The diffusers are available with a frame/border design to suit a lay-in T-bar ceiling and can also be surface mounted using the optional drywall diffuser frame. Standard finish is a high quality baked enamel for long life and easy cleaning. A variety of neck sizes are available to suit your system design. The collar is a full 1 1/4" (32) in height for easy, secure connection.

FEATURES:

- Features three cones in all neck sizes, providing a uniform and balanced appearance.
- Engineered air diffusion pattern.
- Steel stamped shapes for uniformity.
- High neck collars for solid connection.
- Non-removable core.
- Screwdriver adjustment of the optional balancing damper is achieved through the inner cone assembly.
- Optional QB Quadrant Blanks for 1, 2 and 3-way blow.

Material: Heavy gauge, corrosion-resistant steel.

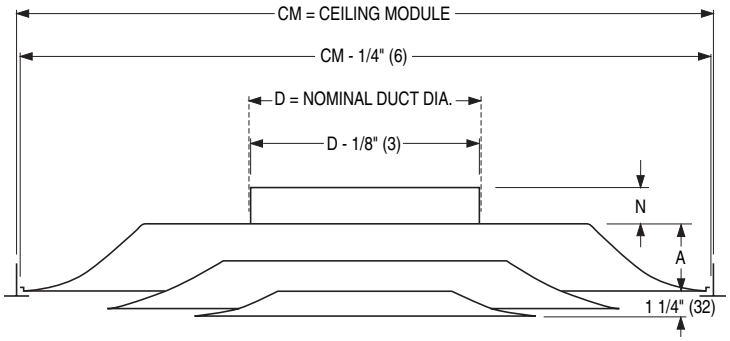
Finish: AW Appliance White baked enamel finish is standard. Other finishes are available.

Dimensional Data and Frame Types

Model RNS3

Type L Lay-in, T-Bar Frame

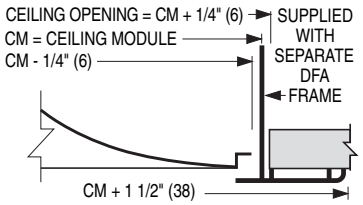
24 x 24 (600 x 600) modules



Dimensional Data

Ceiling Module CM		Imperial Units (inches)			Metric Units (mm)		
Imperial Modules	Metric Modules	Duct Size D	N	A	Duct Size D	N	A
24 x 24	600 x 600	6, 8, 10, 12, 14, 15	1 1/4	2 5/16	152, 203, 254, 305, 356, 381	32	59

Type L Surface Mount with ADF



HOW TO SPECIFY OR TO ORDER

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

Stamped Square Ceiling Diffusers – Model RNS3

RNS3 - 08 - 24 x 24 - L - AW - –

MODEL
- Steel, Fixed Pattern — RNS3

NECK SIZE (inches)
- 06, 08, 10, 12, 14, 15

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 24 x 24	600 x 600

FRAME STYLE
- T-Bar Lay-in — L

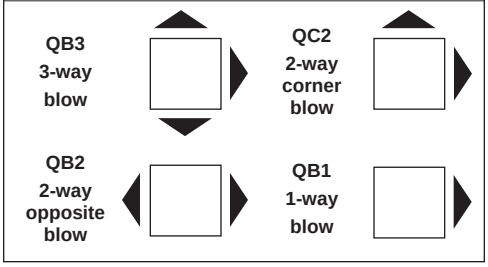
ACCESSORIES
- None (default) — —
- External Foil Back Insulation — EX
- Earthquake Tabs — EQT
- Quadrant Blanks
  - 3-Way Blow — QB3
  - 2-Way Opposite Blow — QB2
  - 2-Way Corner Blow — QC2
  - 1-Way Blow — QB1

AIR BALANCING DEVICES
- Radial Sliding Blade Damper — 4250
- Radial Opposed Blade Damper — 4275

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

Nominal Round Neck (Duct) Size	Ceiling Module
6, 8, 10, 12, 14, 15 (152, 203, 254, 305, 356, 381)	24 x 24 (600 x 600)

BLOW PATTERNS WITH OPTIONAL QUADRANT BLANKS.



Notes:

1. Consult text as to limitations of material, module size and frame style combinations.

SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model RNS3 Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and have three die-formed concentric cones in all sizes. The inner cone assembly is to be non-removable. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model RNS3 • 24 x 24 (600 x 600) Face Size

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	.015	.023	.035	.045	.060	.076	.095	.135	.186	.240
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-1-4	1-2-5	1-2-6	1-3-7	2-4-9	2-5-9	3-6-11	3-6-12	4-7-14	6-8-15
	NC	—	—	—	13	17	21	24	27	32	36
8" Dia.	TP	.021	.033	.047	.063	.082	.105	.128	.183	.245	.325
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	1-1-5	1-2-6	1-3-8	2-4-8	3-5-10	3-6-10	4-6-13	5-8-13	6-8-16	7-10-17
	NC	—	—	13	17	20	25	28	33	37	40
10" Dia.	TP	.024	.037	.047	.074	.097	.123	.150	.215	.293	.372
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	T	1-3-6	2-4-8	3-5-9	4-6-12	5-6-12	5-7-14	6-9-15	6-10-15	8-13-17	9-13-18
	NC	—	11	16	20	23	28	31	36	40	43
12" Dia.	TP	.026	.039	.057	.075	.097	.127	.150	.245	.310	.410
	Airflow, CFM	315	390	470	550	630	705	785	990	1100	1255
	T	2-3-7	3-4-9	3-5-10	4-6-13	5-7-13	5-8-15	5-8-16	7-9-18	9-11-18	10-12-19
	NC	—	13	18	21	24	29	32	37	41	44
14" Dia.	TP	.030	.050	.070	.100	.110	.160	.200	.240	.390	.490
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	T	3-4-9	4-5-11	4-7-13	5-7-16	6-9-16	7-11-16	7-11-19	9-13-19	11-16-19	11-16-27
	NC	—	14	19	22	25	29	32	37	42	45
15" Dia.	TP	.033	.054	.072	.100	.127	.163	.204	.280	.395	.500
	Airflow, CFM	490	615	735	860	985	1110	1230	1470	1720	1970
	T	5-7-10	6-8-11	7-9-14	8-10-17	8-13-18	10-15-19	11-16-22	12-18-27	13-20-32	15-22-34
	NC	—	15	20	23	26	30	33	38	43	46

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

Performance Notes:

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

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

3. The addition of quadrant blanks reduces the effective area and for a given air volume, increases the discharge velocity. This will result in an increase in throw, pressure drop and sound level. To determine throw, select the diffuser as if it were supplying a larger volume of air. The table shows the percentage increase required to determine selection of diffuser size and throw. To correct pressure drop and NC, use correction factors as shown for 4-way blow values.

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	24 x 24	0.180
8	24 x 24	0.227
10	24 x 24	0.331
12	24 x 24	0.450
14	24 x 24	0.511
15	24 x 24	0.625

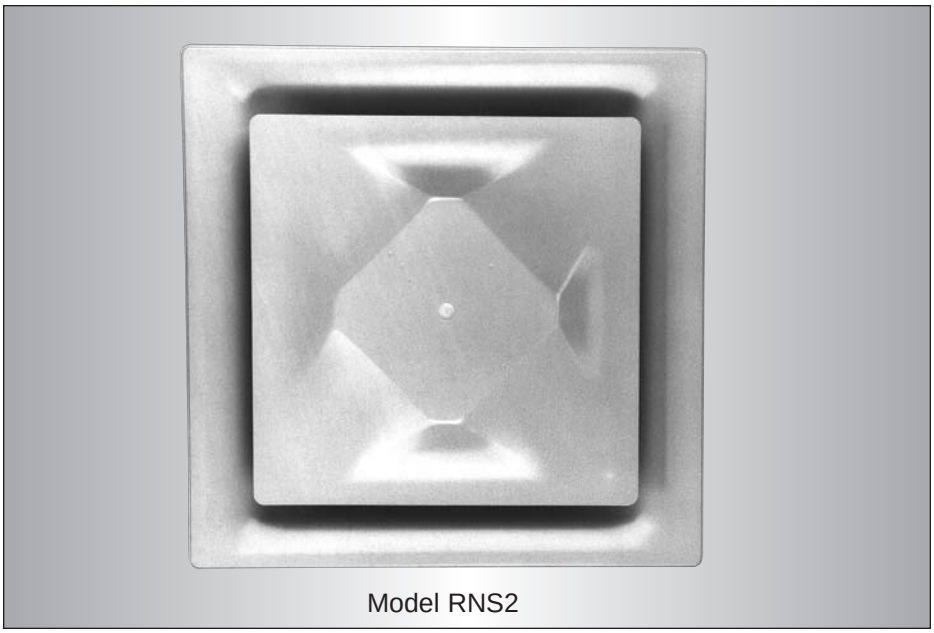
Quadrant Blanks (Blow)	% Increase in Air Volume for Throw Determination	% Increase in Static Pressure Drop	NC Sound Level Increase
1 (3-way)	35	125	8
2 (2-way)	100	450	19

STAMPED SQUARE CEILING DIFFUSERS

- HIGH PERFORMANCE
- SQUARE FACE
- ROUND NECK
- STEEL

Model:

RNS2 Steel



Model RNS2

The **Nailor Model RNS2 Square Ceiling Air Diffuser** has been specially designed to provide the mechanical engineer with the most cost effective engineered diffuser currently available in the industry. It combines the high performance expected from a louvered face type ceiling diffuser with a cost as low as any lesser performing commercial diffuser currently available. The **RNS2** has a 360° diffusion pattern at minimum NC levels required for high engineering performance. The diffuser provides stable diffusion and mixing patterns under constant and changing load conditions and is eminently suitable for variable air volume systems. It can accommodate a turn down of 80% without losing the ceiling coanda effect and dumping. The stamped one-piece cones eliminate mitered corners and the die-formed curves provide consistent quality and performance.

The **Model RNS2** diffusers are available to suit many situations including surface mount, T-Bar lay-in and panel applications. Standard finish is a high quality, baked enamel for long life and easy cleaning. A variety of neck sizes are available to suit your system design. The collar is a full 1 1/4" (32) in height for easy, secure connection.

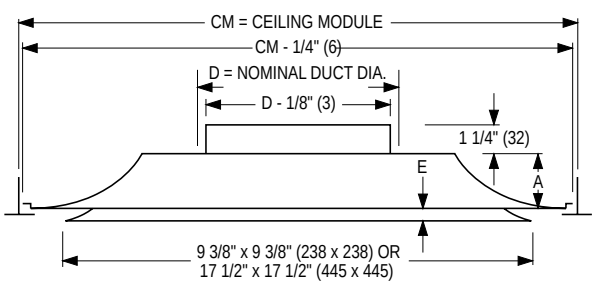
FEATURES:

- Engineered air diffusion pattern.
- Steel stamped shapes for uniformity.
- High neck collars for solid connection.
- With 2 cones in all sizes, the diffusers provide a uniform appearance.
- Screwdriver adjustment of optional balancing damper is achieved through the inner cone assembly.
- Optional QB Quadrant Blanks for 1, 2 and 3-way blow.

Material: Heavy gauge, corrosion-resistant steel.

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

Type L Lay-in T-Bar Frame



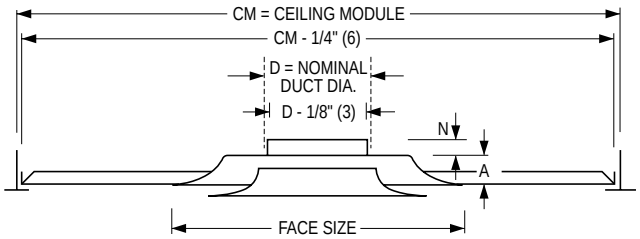
Dimensional Data

Ceiling Module CM		Imperial Units (inches)					Metric Units (mm)				
Imperial Modules	Metric Modules	Duct Size D	A	B	E	F	Duct Size D	A	B	E	F
12 x 12	300 x 300	6, 8	1	11	1 5/16	13	152, 203	25	279	33	330
24 x 24	600 x 600	6, 8, 10, 12, 14, 15	2 5/16	22	15/16	24 3/4	152, 203, 254, 305, 356, 381	59	519	24	629

Dimensional Data and Frame Types

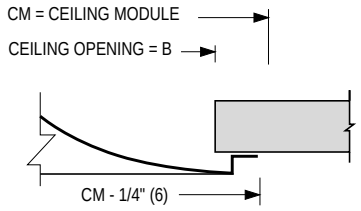
Model RNS2

Type PL Panel Mounted Lay-in T-Bar



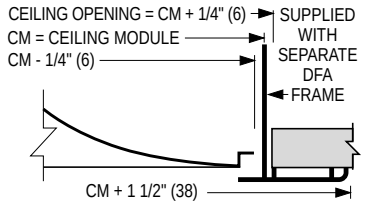
CM		Imperial Units (inches)				Metric Units (mm)			
Imperial Modules	Metric Modules	Face Size	Duct Size D	N	A	Face Size	Duct Size D	N	A
24 x 24 24 x 12 20 x 20	600 x 600 600 x 300 500 x 500	12 x 12	6, 8	1 1/4	1	300 x 300	152, 203	32	25
48 x 24	1200 x 600	24 x 24	6, 8, 10, 12, 14, 15	1 1/4	2 5/16	600 x 600	152, 203, 254, 305, 356, 381	32	59

Type L Surface Mount



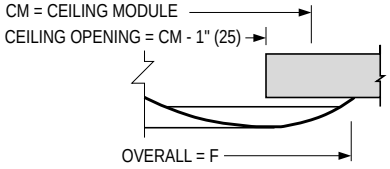
Hard duct connection recommended.

Type L Surface Mount with DFA



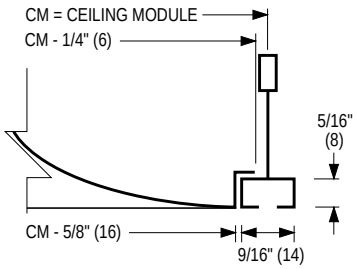
Drywall/Plaster Frame. Recommended for flexible duct and ceiling access.

Type S Surface Mount

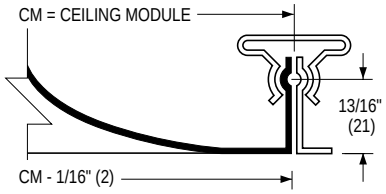


Hard duct connection recommended.

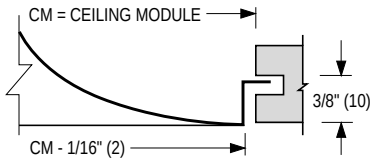
Type F Fineline®



Type M Metal Pan (Snap-in)



Type SP Spline



For one directional exposed T-bar or fully concealed grid. One spline on two opposite sides, steel lift bracket on others.

HOW TO SPECIFY OR TO ORDER

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

Stamped Square Ceiling Diffusers – Model RNS2

RNS2 - 08 - 24 x 24 - L - AW - –

MODEL

- Steel, Fixed Pattern	RNS2

NECK SIZE (inches)

- 06, 08,
- 10, 12, 14, 15

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 20 x 20 (PL only)	500 x 500 (PL only)
- 24 x 12 (PL only)	600 x 300 (PL only)
- 24 x 24	600 x 600

FRAME STYLE

- T-Bar Lay-in	L
- Surface Mount	S
- Panel T-Bar Lay-in	PL
- Spline	SP
- Metal Pan Snap-In	M
- Fineline®	F

ACCESSORIES

- None (default)	—
- External Foil Back Insulation	EX
- Earthquake Tabs	EQT
- Quadrant Blanks	
3-Way Blow	QB3
2-Way Opposite Blow	QB2
2-Way Corner Blow	QC2
1-Way Blow	QB1

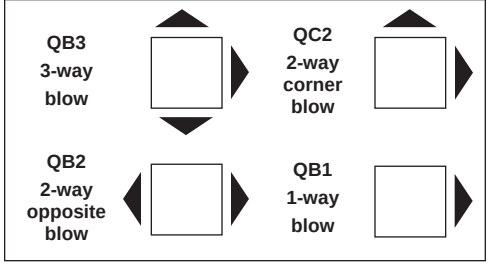
AIR BALANCING DEVICES

- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275
- Radial OBD with Operating Arm	4275-OA
- Butterfly Damper	4675
- Equalizing Grid	EGR
- Damper/Equalizing Grid	DEGR

FINISH

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

BLOW PATTERNS WITH OPTIONAL FACTORY INSTALLED QUADRANT BLANKS.



Notes:

1. Face sizes 12" x 12" (300 x 300) and 24" x 12" (600 x 300) are limited to a 6" (152) or 8" (203) neck and 24" x 24" (600 x 600) is available in a 6" (152) through 15" (381) neck.

Specification Text File

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model RNS2 Stamped Square Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and incorporate two die-formed concentric cones. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model RNS2 • 12 x 12 (300 x 300) Face Size

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	.021	.032	.045	.060	.080	.100	.120	.167	.220	.290
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-2-6	2-3-8	2-4-10	3-5-11	3-6-12	4-7-13	5-9-14	7-10-15	8-11-17	9-13-18
	NC	—	—	—	—	—	—	—	14	24	34
8" Dia.	TP	.025	.037	.052	.070	.091	.113	.138	.195	.260	.340
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	2-4-10	3-6-13	4-8-15	5-9-16	7-11-17	8-12-19	9-14-20	11-16-22	13-17-23	15-18-26
	NC	—	—	—	—	—	—	10	19	27	34

Model RNS2 • 24 x 24 (600 x 600) Face Size

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	.026	.040	.058	.080	.104	.131	.190	.262	.350	.500
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-2-4	1-2-5	2-2-6	2-3-7	2-4-8	2-4-9	3-5-9	4-6-10	5-7-12	6-8-13
	NC	—	—	—	11	14	18	21	27	33	38
8" Dia.	TP	.043	.065	.092	.125	.165	.210	.257	.400	.540	.740
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	1-3-5	2-3-6	2-4-7	3-4-8	3-5-9	4-5-10	5-6-11	6-7-13	6-8-14	7-9-15
	NC	—	11	16	20	23	27	30	37	42	47
10" Dia.	TP	.045	.069	.098	.137	.176	.225	.274	.421	.568	.774
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	T	1-3-6	2-3-7	2-4-8	3-4-10	4-5-11	5-6-12	5-7-13	6-8-14	7-9-15	8-10-16
	NC	10	15	20	24	28	32	35	40	45	50
12" Dia.	TP	.046	.070	.100	.140	.180	.230	.280	.430	.580	.790
	Airflow, CFM	315	390	470	550	630	705	785	990	1100	1255
	T	3-4-7	4-5-9	4-6-10	5-7-11	6-8-12	7-9-13	7-10-14	8-11-15	9-12-16	10-13-17
	NC	11	16	21	25	29	33	36	41	46	51
14" Dia.	TP	.047	.072	.104	.145	.185	.240	.285	.440	.590	.805
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	T	3-4-7	4-5-9	4-6-10	5-7-11	6-8-12	7-9-13	7-10-14	8-11-15	9-12-16	10-13-17
	NC	13	18	23	27	31	34	37	43	53	57
15" Dia.	TP	.048	.075	.110	.150	.195	.250	.300	.455	.610	.825
	Airflow, CFM	490	615	735	860	985	1110	1230	1470	1720	1970
	T	4-5-8	4-6-10	5-7-11	6-8-12	6-9-13	7-10-14	8-10-15	9-12-16	10-13-17	11-14-18
	NC	14	19	24	29	32	36	39	45	56	60

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

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

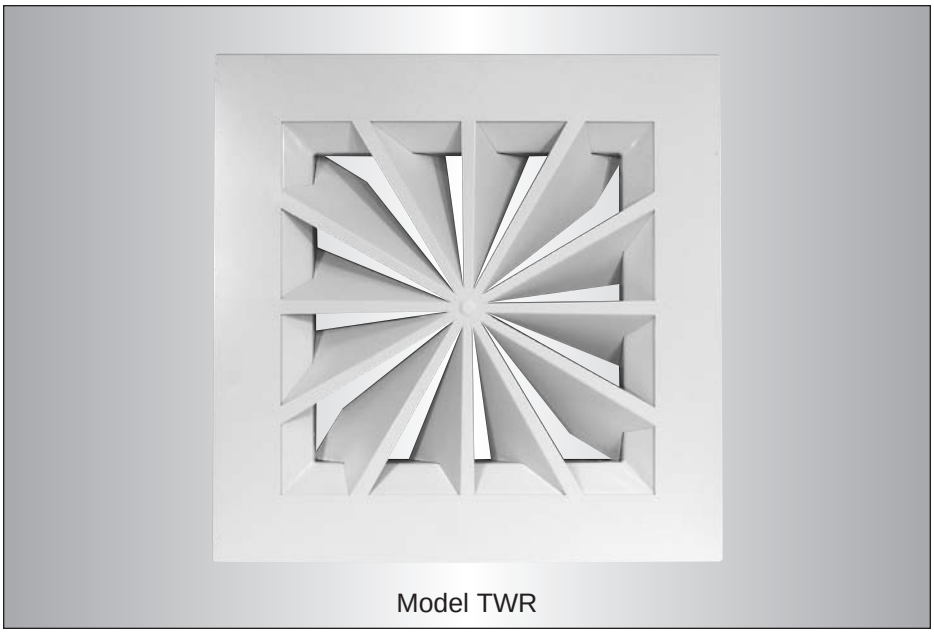
Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	12 x 12	0.157
8	12 x 12	0.232
6	24 x 24	0.185
8	24 x 24	0.226
10	24 x 24	0.285
12	24 x 24	0.382
14	24 x 24	0.505
15	24 x 24	0.577

"TWISTER" STAMPED CEILING SWIRL DIFFUSER

- HIGH PERFORMANCE
- HIGH INDUCTION
- ROUND NECK

Model:

TWR Steel



Model TWR

The **Nailor Model Series TWR "Twister" Stamped Square Ceiling Diffuser** is a high performance ceiling diffuser that is ideal for VAV applications. The name "Twister" is given to this diffuser because of its tight horizontal 360° swirl air pattern. The contemporary architectural radial vane design produces an unmatched high induction swirl pattern engineered to optimize occupant comfort by minimizing stratification over a wide range of air volumes. The "Twister's" superior coanda effect air pattern eliminates dumping and is ideal for VAV applications.

The diffuser features the popular 2' x 2' (600 x 600) module size and is available with frame/border styles to suit all ceiling systems. The round neck design includes a full 1 1/4" (32) high collar for an easy, secure connection.

FEATURES:

- Constructed from heavy gauge corrosion-resistant steel.
- Stamped face design allows for uniformity of the radial vanes.
- Superior coanda effect air pattern, eliminates dumping and is ideal for VAV applications.
- 24" x 24" (600 x 600) ceiling module size available with frame/border types to suit all ceiling systems.
- Engineered 'swirl' air diffusion pattern.
- Designed for 60 – 750 cfm; available in five neck sizes 6" – 14" (152 – 356).
- High neck collars for solid connection.
- Removable plug for screwdriver adjustment of the optional damper from below the face.

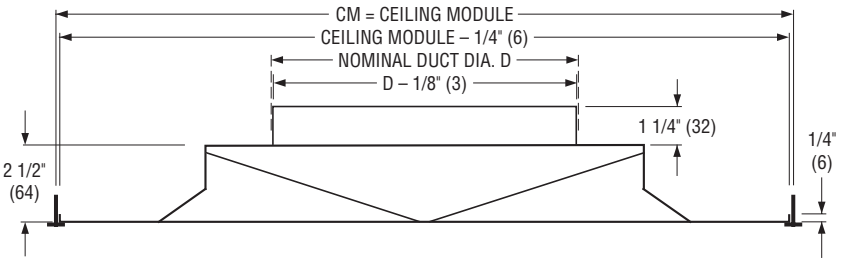
Material: Heavy gauge, corrosion-resistant steel.

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

Dimensional Data and Frame Types

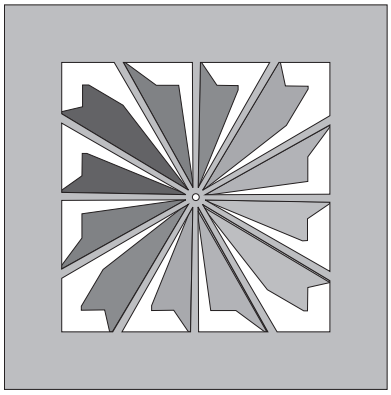
Model TWR

Type L Lay-in T-Bar Frame



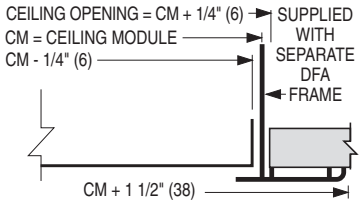
DIMENSIONAL DATA:

CEILING MODULE CM		NOMINAL DUCT SIZE D	
Imperial Modules (in.)	Metric Modules (mm)	Imperial Units (in.)	Metric Units (mm)
24 x 24	600 x 600	6, 8, 10, 12, 14	152, 203, 254, 305, 356



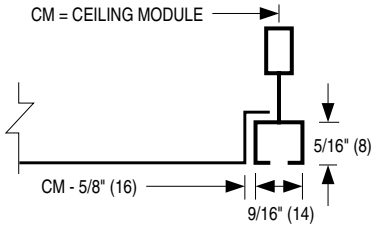
FACE VIEW

Type L Surface Mount with DFA

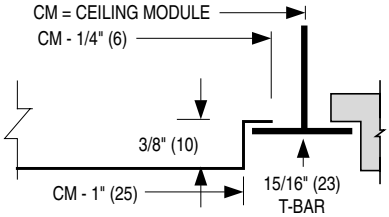


Drywall/Plaster Frame. Recommended for flexible duct and ceiling access.

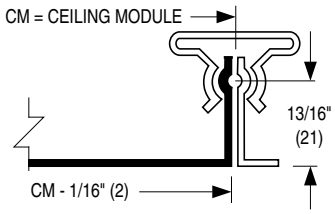
Type F Fineline®



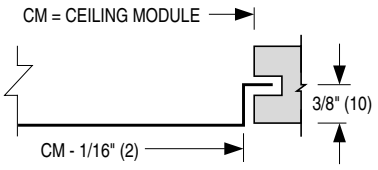
Type TL Tegular Lay-in



Type M Metal Pan (Snap-in)



Type SP Spline



For one directional exposed T-bar or fully concealed grid. One spline on two opposite sides, steel lift bracket on others.

HOW TO SPECIFY OR TO ORDER

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

"Twister" Stamped Square Ceiling Swirl Diffuser – Model TWR

TWR - 08 - 24 x 24 - L - AW - –

MODEL

- Steel Construction	TWR

NECK SIZE (inches)

- 06, 08, 10, 12, 14

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 24 x 24	600 x 600

FRAME STYLE

- T-Bar Lay-in	L
- Spline	SP
- Metal Pan Snap-In	M
- Fineline®	F
- Tegular	TL

ACCESSORIES

- None (default)	—
- Earthquake Tabs	EQT

AIR BALANCING DEVICES

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

FINISH

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

D

CEILING DIFFUSERS

SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model TWR "Twister" Ceiling Swirl Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from heavy gauge corrosion-resistant steel. Radial induction vanes shall be one-piece stamped construction. The diffuser is to be sized to suit a 24" x 24" (600 x 600) ceiling suspension system. The round duct connection collar shall be an integral part of the diffuser assembly, and be not less than 1 1/4" (38) high. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model TWR "Twister" • 24 x 24 (600 x 600) Module

Nominal Neck Size	Neck Velocity, fpm	300	400	500	600	700	800	900	1000	1200	1400	1600
	Velocity Pressure	.006	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	Total Pressure	.014	.026	.041	.058	.079	.102	.131	.162	.212	.315	.413
	Airflow, cfm	60	80	100	120	140	160	180	200	235	275	315
	Throw	1-1-3	1-2-4	2-3-5	2-3-6	2-4-7	3-4-8	3-5-9	4-5-10	4-6-11	5-7-11	5-8-12
	NC	—	—	—	—	—	16	20	24	30	35	38
8" Dia.	Total Pressure	.015	.027	.042	.060	.082	.107	.136	.168	.242	.329	.430
	Airflow, cfm	105	140	175	210	245	280	315	350	420	490	560
	Throw	2-3-5	2-4-7	3-5-9	4-5-10	4-6-11	5-7-11	5-8-12	6-9-12	7-10-14	8-10-15	9-11-16
	NC	—	—	—	—	17	22	25	29	34	38	40
10" Dia.	Total Pressure	.016	.028	.043	.062	.085	.111	.140	.173	.266	.340	.443
	Airflow, cfm	165	220	270	330	380	435	490	545	655	765	870
	Throw	3-5-9	4-5-10	5-7-11	6-8-12	6-9-13	7-10-14	8-10-16	8-11-18	9-11-19	10-12-20	12-16-22
	NC	—	—	—	16	22	27	31	34	39	44	48
12" Dia.	Total Pressure	.016	.028	.043	.063	.086	.113	.142	.176	.280	.346	.451
	Airflow, cfm	235	315	390	470	550	630	705	785	990	1100	1255
	Throw	4-6-10	5-7-12	6-8-14	7-10-16	8-11-18	9-12-18	10-13-20	11-14-21	13-17-24	15-20-27	17-23-30
	NC	—	—	—	20	25	30	34	37	43	48	53
14" Dia.	Total Pressure	.016	.028	.043	.064	.088	.116	.145	.180	.299	.354	.461
	Airflow, cfm	320	425	530	635	745	850	955	1060	1270	1490	1695
	Throw	5-7-12	7-9-15	8-10-17	9-12-18	10-14-21	12-16-22	13-17-24	15-21-27	17-24-31	19-28-35	21-31-40
	NC	—	17	24	30	34	38	41	44	50	54	57

Performance Notes:

1. All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.

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

3. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (-) in spaces indicates an NC level of less 15.

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

Balancing:

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

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	24 x 24	0.181
8	24 x 24	0.264
10	24 x 24	0.330
12	24 x 24	0.458
14	24 x 24	0.521

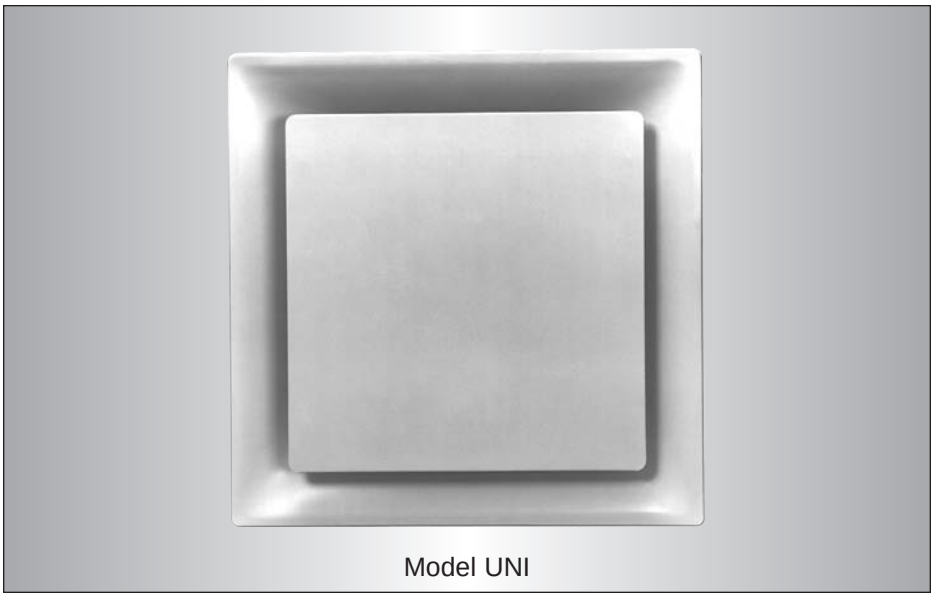
ARCHITECTURAL CEILING DIFFUSERS

- HIGH PERFORMANCE
- SQUARE FACE
- ROUND NECK

Models:

UNI Steel

AUNI Aluminum



Model UNI

The **Nailor Model Series 'UNI' Square Ceiling Air Diffuser** has been specially designed to provide both the unobtrusive appearance required for architectural excellence and the 360° diffusion pattern at minimum NC levels required for high engineering performance. The stamped one-piece outer cone eliminates mitered corners and the die-formed curves provide consistent quality and performance.

The **UNI** diffuser compliments any decor, blending beautifully with virtually any architectural style or requirement. The **UNI** diffuser provides stable diffusion and mixing patterns under constant and changing load conditions and is particularly suitable for variable air volume systems.

The **UNI** diffusers are available to suit many situations including surface mount, T-Bar lay-in and panel applications. Standard finish is a high quality baked enamel for long life and easy cleaning. A variety of neck sizes are available to suit your system design. The collar is a full 1 1/4" (32) in height for easy, secure connection.

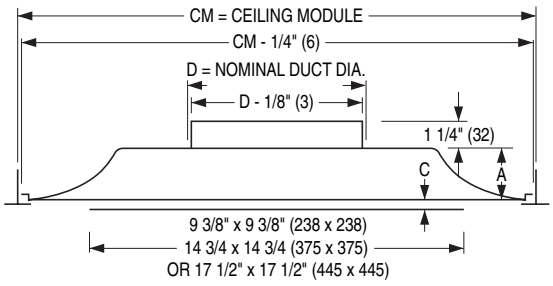
FEATURES:

- Engineered air diffusion pattern.
- Steel stamped shapes for uniformity.
- High neck collars for solid connection.
- Removable inner core.
- Face panel is virtually flush with the ceiling line.
- Face panel is double-skinned for rigidity and strength and features a hemmed edge for a professional finish.
- Unique neck bracketry is virtually invisible from most angles.
- An optional radial opposed blade damper with an operating arm to adjust the damper without removing the core is available.

Material: Heavy gauge, corrosion-resistant steel or aluminum with miscellaneous steel components.

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

Type L Lay-in, T-Bar Frame



Dimensional Data

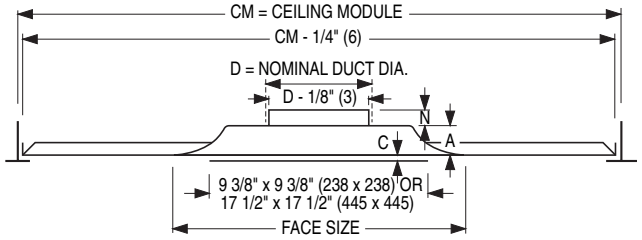
CM		Imperial Units (inches)					Metric Units (mm)				
Imperial Modules	Metric Modules	Duct Size D	A	B	C	F	Duct Size D	A	B	C	F
24 x 24	600 x 600	6, 8, 10, 12, 14, 15	2 5/16	22	3/8	24 3/4	152, 203, 254, 305, 356, 381	59	519	10	629
20 x 20	500 x 500	6, 8, 10,	2 1/4	18 1/2	7/16	N/A	152, 203, 254	57	470	11	N/A
12 x 12	300 x 300	5, 6, 7, 8	1	11	5/8	13	127, 152, 178, 203	25	279	16	330

The 20 x 20 (500 x 500) module is only available with the Type L frame.

Dimensional Data and Frame Types

Models UNI and AUNI

Type PL Panel Mounted Lay-in T-Bar



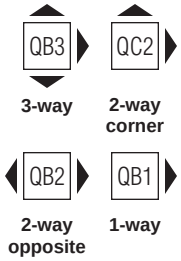
CM		Imperial Units (inches)					Metric Units (mm)				
Imperial Modules	Metric Modules	Face Size	Duct Size D	N	A	C	Face Size	Duct Size D	N	A	C
24 x 24	600 x 600	12 x 12	4 *	3 1/4	1	5/8	300 x 300	102 *	83	25	16
			5, 6, 7, 8	1 1/4				127, 152, 178, 203	32		
24 x 12	600 x 300		4 *	3 1/4				102 *	83		
			5, 6, 7, 8	1 1/4				127, 152, 178, 203	32		
20 x 20	500 x 500		4 *	3 1/4				102 *	83		
			5, 6, 7, 8	1 1/4				127, 152, 178, 203	32		
48 x 24	1200 x 600	24 x 24	6, 8, 10, 12, 14, 15	1 1/4	2 5/16	3/8	600 x 600	152, 203, 254, 305, 356, 381	32	59	10

* Supplied with a reducer.

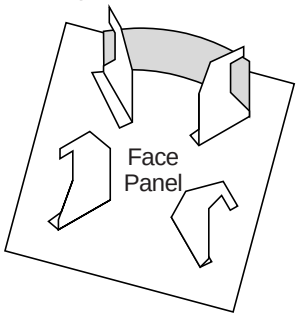
Directional Blow Option • QB Quadrant Blanks

- Converts **UNI** from standard 4-way (360°) blow pattern to 1, 2 or 3-way.
- Supplied factory installed when specified or available loose for simple field installation.
- Installs between outer cone and face panel and locates between neck bracketry.
- Positive full depth blank-off follows neck circumference.

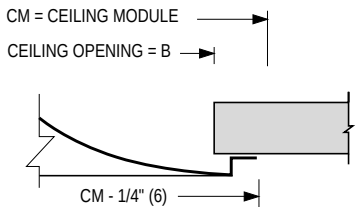
Blow Patterns



QB Illustration

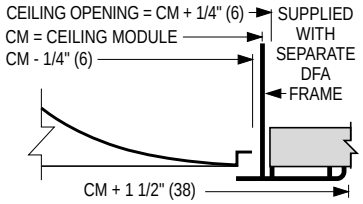


Type L Surface Mount



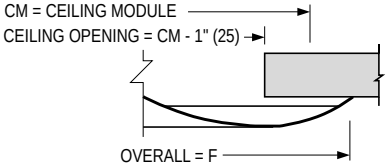
Hard duct connection recommended.

Type L Surface Mount with DFA



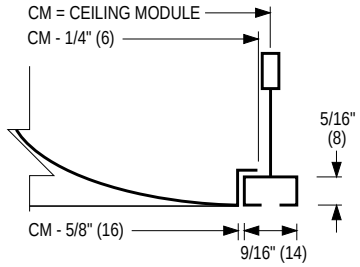
Drywall/Plaster Frame. Recommended for flexible duct and ceiling access.

Type S Surface Mount

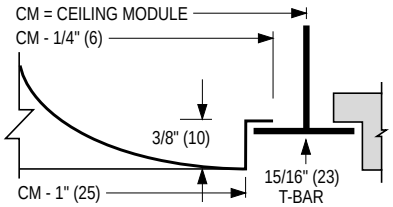


Aluminum model (AUNI) is only available in 12 x 12 (300 x 300) module. Hard duct connection recommended.

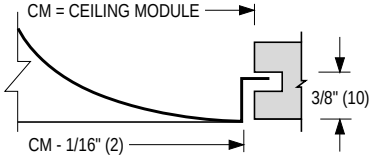
Type F Fineline®



Type TL Tegular Lay-in



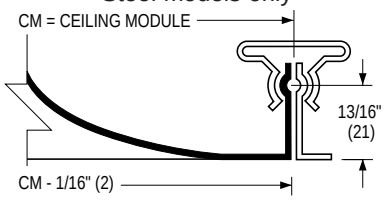
Type SP Spline



Steel models only. For one directional exposed T-Bar or fully concealed grid. One spline on two opposite sides, steel lift bracket on others.

Type M Metal Pan (Snap-in)

Steel models only

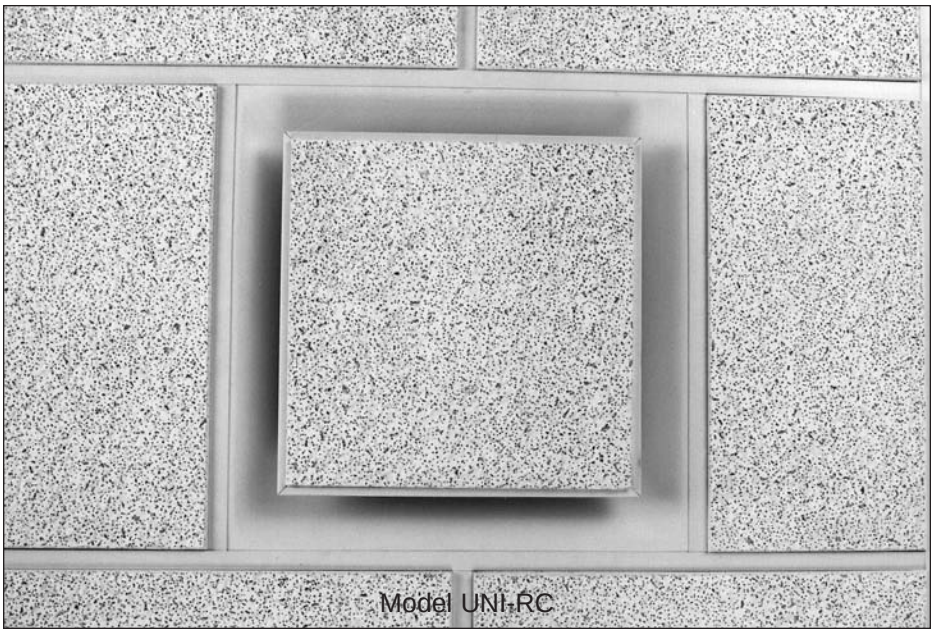


Fineline® is a registered trademark of USG Interiors Inc.

ARCHITECTURAL OPTION

Model:

UNI with optional RC (retaining channel)



Model UNI-RC

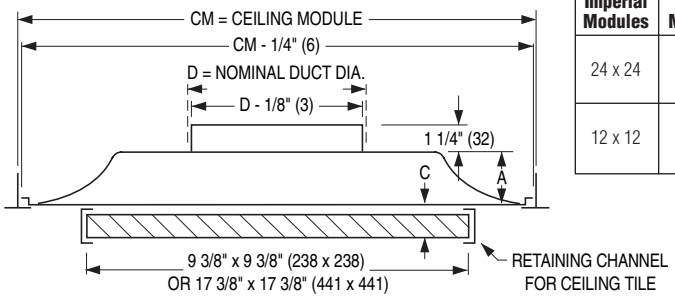
For a unique 'custom' appearance, specify the **UNI** diffuser with the optional RC Retaining Channel. The retaining channel is shipped separately for field installation of a ceiling tile. Simply cut the tile to size and install it directly on the face panel assembly.

The RC Retaining Channel is supplied in two pieces with pop rivets for field assembly as standard.

The result is a high performance diffuser that blends harmoniously with the specified architectural ceiling design.

Tiles (supplied by others) can also be factory installed at additional cost.

Type L Lay-in T-Bar Frame*



Dimensional Data

CM		Imperial Units (inches)					Metric Units (mm)				
Imperial Modules	Metric Modules	Duct Size D	A	B	C	F	Duct Size D	A	B	C	F
24 x 24	600 x 600	6, 8, 10, 12, 14, 15	2 5/16	22	1 1/8	24 3/4	152, 203, 254, 305, 356, 381	59	519	29	629
12 x 12	300 x 300	5, 6, 7, 8	1	11	1 3/8	13	127, 152, 178, 203	25	279	35	330

* Refer to previous page for other frame types and installations.

HOW TO SPECIFY OR TO ORDER

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

Square Architectural Ceiling Diffusers – Model Series UNI

UNI - 08 - 24 x 24 - L - AW - –

MODEL

- Steel	UNI
- Aluminum	AUNI

NECK SIZE (inches)

- 04, 05, 06, 07, 08,
- 10, 12, 14, 15

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 20 x 20	500 x 500
- 24 x 12 (PL only)	600 x 300 (PL only)
- 24 x 24	600 x 600
- 30 x 30 (PL only)	750 x 750 (PL only)
- 48 x 24 (PL only)	1200 x 600 (PL only)

FRAME STYLE

- T-Bar Lay-in	L
- Surface Mount	S
- Panel T-Bar Lay-in	PL
- Spline	SP
- Metal Pan Snap-In	M
- Fineline®	F
- Tegular	TL

ACCESSORIES

- None (default)	—
- External Foil Back Insulation	EX
- Earthquake Tabs	EQT
- Quadrant Blanks	
3-Way Blow	QB3
2-Way Opposite Blow	QB2
2-Way Corner Blow	QC2
1-Way Blow	QB1
- Retaining Channel	RC
- Tile cut and fit	CF

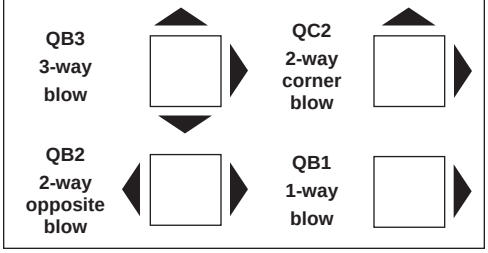
AIR BALANCING DEVICES

- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275
- Radial OBD with Operating Arm	4275-OA
- Butterfly Damper	4675
- Equalizing Grid	EGR
- Damper/Equalizing Grid	DEGR

FINISH

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

BLOW PATTERNS WITH OPTIONAL FACTORY INSTALLED QUADRANT BLANKS.



Notes:

1. Face sizes 12" x 12" (300 x 300) and 24" x 12" (600 x 300) are available in a 4" (102) through 8" (203) neck, 20" x 20" (500 x 500) face size is available in a 6", 8" or 10" (152, 203 or 254) neck and 24" x 24" (600 x 600) face size is available in a 6" (152) through 15" (381) neck.
2. Face size 20" x 20" (500 x 500) is available only in frame style **L**.
3. Consult text as to limitations of material, module size and frame style combinations.

SUGGESTED SPECIFICATION:

Specification Text File

UNI – Steel Construction

Furnish and install **Nailor Model UNI Square Architectural Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a corrosion-resistant steel, stamped outer cone. The inner core shall have a plaque style face. The face shall be double skinned with a hemmed edge. The inner core assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

AUNI – Aluminum Construction

Furnish and install **Nailor Model AUNI Square Architectural Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge aluminum, stamped outer cone. The inner core shall have a plaque style face. The face shall be double skinned with a hemmed edge. The inner core assembly is to be removable using a spring clip arrangement that permits quick, easy installation and removal. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models UNI and AUNI • 12 x 12 (300 x 300) Face Size • 4-way Blow (360° Pattern)

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
4" Dia.	TP	.023	.036	.051	.070	.091	.115	.142	.205	.279	.364
	Airflow, CFM	35	45	50	60	70	80	85	105	120	140
	T	1-2-3	1-2-4	2-2-5	2-3-6	2-3-6	2-4-7	3-4-7	3-5-7	4-6-7	5-7-8
	NC	—	—	—	13	17	21	24	30	35	40
5" Dia.	TP	.027	.043	.061	.083	.109	.138	.170	.245	.334	.436
	Airflow, CFM	55	70	80	95	110	125	135	165	190	220
	T	2-2-4	2-3-5	2-3-6	3-4-7	3-5-8	4-6-9	4-7-9	4-8-10	5-8-10	6-9-11
	NC	—	—	—	14	18	22	25	31	36	41
6" Dia.	TP	.033	.052	.074	.101	.131	.166	.205	.295	.402	.525
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	2-3-5	3-4-6	3-5-7	4-5-8	5-6-9	5-7-10	5-8-10	6-9-11	7-10-12	7-10-13
	NC	—	—	10	15	19	23	26	32	37	42
7" Dia.	TP	.056	.089	.127	.172	.225	.285	.352	.506	.689	.900
	Airflow, CFM	105	135	160	190	215	240	265	320	375	430
	T	3-4-6	3-5-7	4-6-9	4-7-10	5-8-10	6-8-11	6-9-12	7-10-13	8-11-14	9-12-15
	NC	—	—	11	16	20	24	27	33	38	43
8" Dia.	TP	.067	.105	.160	.205	.268	.340	.418	.600	.821	1.070
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	3-5-7	4-6-9	5-7-10	6-8-11	6-9-12	7-9-13	7-10-14	8-11-15	9-12-16	9-12-17
	NC	—	—	12	17	21	25	28	34	39	44

Models UNI and AUNI • 20 x 20 (500 x 500) Face Size • 4-way Blow (360° Pattern)

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	.014	.021	.031	.042	.055	.070	.086	.124	.168	.220
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-3-5	2-3-4	2-4-5	2-4-6	2-5-6	3-4-7	3-5-8	4-6-9	4-6-10	5-6-10
	NC	—	—	—	—	14	18	22	28	34	39
8" Dia.	TP	.019	.029	.042	.057	.074	.094	.116	.167	.227	.296
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	2-2-4	2-3-5	2-3-7	3-4-8	3-5-9	4-6-9	5-7-10	6-8-11	7-9-12	8-10-13
	NC	—	—	—	13	18	22	26	32	38	43
10" Dia.	TP	. 031	.049	.071	.096	.126	.159	.196	.283	.385	.503
	Airflow, CFM	220	270	330	380	435	490	545	655	765	875
	T	3-4-7	3-5-9	3-5-10	4-6-12	5-7-13	6-8-12	7-9-14	8-11-15	10-12-17	11-13-18
	NC	—	—	10	16	21	25	29	35	41	46

For performance notes, see next page.

Performance Data

Models UNI and AUNI • 24 x 24 (600 x 600) Face Size • 4-Way Blow (360° Pattern)

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6" Dia.	TP	.010	.020	.030	.041	.053	.068	.084	.120	.164	.214
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	T	1-3-4	1-3-4	2-4-5	2-4-6	2-5-6	3-4-7	3-5-8	4-6-9	4-6-10	5-6-10
	NC	—	—	—	—	14	18	22	28	34	39
8" Dia.	TP	.018	.028	.037	.056	.072	.092	.112	.162	.220	.288
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	T	2-2-4	2-3-5	2-3-7	3-4-8	3-5-9	4-6-9	5-7-10	6-8-11	7-9-12	8-10-13
	NC	—	—	—	13	18	22	26	32	38	43
10" Dia.	TP	.031	.048	.069	.093	.122	.155	.191	.275	.375	.489
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	T	3-4-7	3-5-9	3-5-10	4-6-12	5-7-13	5-8-12	7-9-14	8-11-15	10-12-17	11-13-18
	NC	—	—	10	16	21	25	29	35	41	46
12" Dia.	TP	.040	.063	.090	.123	.161	.203	.251	.361	.492	.643
	Airflow, CFM	315	390	470	550	630	705	785	940	1100	1255
	T	4-5-10	4-7-13	5-8-14	7-9-16	8-11-17	8-12-17	10-14-19	11-15-20	14-17-23	16-18-25
	NC	—	—	13	19	24	28	32	38	44	49
14" Dia.	TP	.054	.083	.120	.163	.214	.270	.334	.481	.655	.855
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	T	5-7-14	6-9-16	7-11-18	10-13-20	11-15-23	11-17-23	14-19-26	16-21-28	19-22-31	20-24-33
	NC	—	—	15	21	26	30	34	40	46	51
15" Dia.	TP	.065	.102	.147	.200	.260	.330	.408	.588	.799	1.044
	Airflow, CFM	490	615	735	860	985	1110	1230	1470	1720	1970
	T	6-9-17	7-11-19	9-13-21	11-16-24	14-19-26	14-20-27	16-21-30	19-24-33	23-26-35	23-27-38
	NC	—	—	16	22	27	31	35	41	47	52

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

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	12 x 12	0.105
8	12 x 12	0.129
6	24 x 24	0.206
8	24 x 24	0.248
10	24 x 24	0.315
12	24 x 24	0.384
14	24 x 24	0.437
15	24 x 24	0.485

Performance Data

Models UNI and AUNI • 12 x 12 (300 x 300) Face Size • 3-Way Blow

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	900	1000	1200	1400
	VP	.006	.010	.016	.023	.031	.040	.051	.063	.090	.122
6" Dia.	TP	.035	.061	.096	.138	.188	.245	.311	.383	.529	.725
	Airflow, CFM	60	80	100	120	140	160	180	200	235	275
	T	2-4-6	3-6-9	5-7-9	5-8-10	6-9-12	7-9-13	7-10-14	8-11-15	8-12-16	9-13-17
	NC	—	—	12	18	23	27	31	34	40	45
8" Dia.	TP	.076	.135	.211	.304	.414	.540	.684	.844	1.215	1.654
	Airflow, CFM	105	140	175	210	245	280	315	350	420	490
	T	3-5-7	5-7-10	5-8-11	6-9-12	7-10-13	7-10-14	8-11-15	9-12-16	9-12-17	10-13-18
	NC	—	—	14	20	25	29	33	36	42	47

Models UNI and AUNI • 24 x 24 (600 x 600) Face Size • 3-Way Blow

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	900	1000	1200	1400
	VP	.006	.010	.016	.023	.031	.040	.051	.063	.090	.122
6" Dia.	TP	.010	.018	.028	.041	.055	.072	.091	.113	.155	.213
	Airflow, CFM	60	80	100	120	140	160	180	200	235	275
	T	1-3-4	1-3-4	2-4-5	2-5-6	3-4-7	4-5-8	4-6-9	4-6-10	5-6-10	6-7-11
	NC	—	—	—	11	17	22	26	30	36	42
8" Dia.	TP	.016	.028	.043	.062	.085	.111	.140	.173	.249	.339
	Airflow, CFM	105	140	175	210	245	280	315	350	420	490
	T	2-2-4	2-3-6	3-4-8	3-5-8	4-6-9	5-7-10	6-8-11	7-9-12	8-10-13	9-11-14
	NC	—	—	—	15	21	26	30	34	40	46
10" Dia.	TP	.032	.057	.085	.127	.169	.221	.281	.347	.501	.684
	Airflow, CFM	165	220	270	330	380	435	490	545	655	765
	T	3-4-7	3-5-9	4-6-10	5-7-11	5-8-12	7-10-13	8-11-15	9-12-16	11-13-18	12-14-19
	NC	—	—	—	18	24	29	33	37	43	49
12" Dia.	TP	.043	.077	.118	.171	.235	.308	.386	.478	.686	.939
	Airflow, CFM	235	315	390	470	550	630	705	785	940	1100
	T	4-5-10	5-7-13	6-9-15	8-11-17	9-13-18	10-14-19	11-15-20	13-16-22	16-18-25	18-21-28
	NC	—	—	12	21	27	32	36	40	46	52
14" Dia.	TP	.060	.106	.165	.237	.326	.425	.536	.661	.949	1.306
	Airflow, CFM	320	425	530	635	745	850	955	1060	1270	1490
	T	5-7-14	6-9-16	9-12-19	11-15-23	12-18-24	14-19-26	16-21-28	19-21-30	20-24-33	21-26-35
	NC	—	—	14	23	29	34	38	42	48	54
15" Dia.	TP	.074	.130	.205	.293	.401	.526	.668	.820	1.172	1.604
	Airflow, CFM	370	490	615	735	860	985	1110	1230	1470	1720
	T	6-9-17	8-12-20	11-16-24	14-19-26	14-20-27	17-22-31	19-24-33	22-25-35	23-27-38	24-29-40
	NC	—	—	15	24	30	35	39	43	49	55

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

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	12 x 12	0.079
8	12 x 12	0.098
6	24 x 24	0.155
8	24 x 24	0.186
10	24 x 24	0.236
12	24 x 24	0.288
14	24 x 24	0.328
15	24 x 24	0.364

Performance Data

Models UNI and AUNI • 12 x 12 (300 x 300) Face Size • 2-Way Blow

Nominal Neck Size	Neck Velocity, FPM	200	300	400	500	600	700	800	900	1000	1200
	VP	.003	.006	.010	.016	.023	.031	.040	.051	.063	.090
6" Dia.	TP	.032	.071	.126	.198	.284	.387	.506	.640	.790	1.091
	Airflow, CFM	40	60	80	100	120	140	160	180	200	235
	T	2-4-6	4-6-9	5-8-10	6-9-12	7-9-13	8-11-15	8-12-16	9-12-17	9-13-18	10-13-19
	NC	—	—	16	22	25	30	34	38	41	47
8" Dia.	TP	.074	.166	.294	.460	.662	.902	1.178	1.491	1.840	2.650
	Airflow, CFM	70	105	140	175	210	245	280	315	350	420
	T	3-5-7	5-7-10	6-9-12	7-10-14	8-11-15	9-12-16	9-12-17	10-12-18	10-13-19	11-14-20
	NC	—	11	18	24	27	32	36	40	43	49

Models UNI and AUNI • 24 x 24 (600 x 600) Face Size • 2-Way Blow

Nominal Neck Size	Neck Velocity, FPM	200	300	400	500	600	700	800	900	1000	1200
	VP	.003	.006	.010	.016	.023	.031	.040	.051	.063	.090
6" Dia.	TP	.007	.016	.028	.043	.063	.085	.111	.141	.174	.240
	Airflow, CFM	40	60	80	100	120	140	160	180	200	235
	T	1-3-4	2-4-5	2-5-6	3-4-7	4-6-9	4-6-10	5-6-10	6-7-11	6-8-12	7-9-13
	NC	—	—	—	12	18	24	29	33	37	43
8" Dia.	TP	.013	.028	.050	.078	.113	.153	.200	.253	.313	.450
	Airflow, CFM	70	105	140	175	210	245	280	315	350	420
	T	2-2-4	2-3-7	3-5-9	5-7-9	6-8-11	7-9-12	8-10-13	9-11-14	10-12-15	11-13-17
	NC	—	—	—	16	22	28	33	37	41	47
10" Dia.	TP	.029	.065	.115	.174	.259	.344	.451	.572	.707	1.022
	Airflow, CFM	110	165	220	270	330	380	435	490	545	655
	T	3-4-7	3-5-10	5-7-13	7-9-14	8-11-15	10-12-17	11-13-18	11-14-18	12-15-19	13-17-22
	NC	—	—	12	19	25	31	36	41	44	50
12" Dia.	TP	.042	.090	.162	.248	.360	.493	.647	.811	1.005	1.441
	Airflow, CFM	160	235	315	390	470	550	630	705	785	940
	T	4-5-10	5-8-14	8-11-17	10-14-19	11-15-20	14-17-23	16-18-25	16-19-25	18-21-27	19-22-29
	NC	—	—	15	22	28	34	39	43	47	53
14" Dia.	TP	.056	.130	.229	.356	.511	.704	.916	1.156	1.425	2.045
	Airflow, CFM	210	320	425	530	635	745	850	955	1060	1270
	T	5-7-14	7-11-18	11-15-23	14-19-26	16-21-28	19-22-31	20-24-33	20-26-33	23-28-36	25-30-38
	NC	—	—	17	24	30	36	41	45	49	55
15" Dia.	TP	.071	.161	.283	.446	.637	.872	1.144	1.453	1.784	2.548
	Airflow, CFM	245	370	490	615	735	860	985	1110	1230	1470
	T	6-9-17	9-13-21	14-19-26	16-21-30	19-24-33	23-26-35	23-27-38	23-28-39	25-29-42	28-31-42
	NC	—	10	18	25	31	37	42	46	50	56

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

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

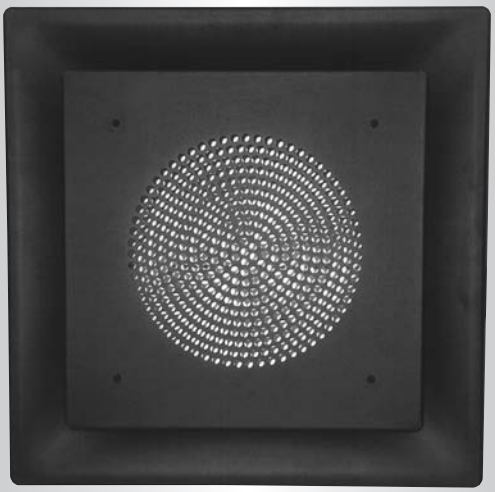
Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	12 x 12	0.053
8	12 x 12	0.065
6	24 x 24	0.103
8	24 x 24	0.124
10	24 x 24	0.158
12	24 x 24	0.192
14	24 x 24	0.219
15	24 x 24	0.243

FIXED PERFORATED DOWNBLAST DIFFUSER

- HIGH PERFORMANCE
- THEATER APPLICATIONS
- SQUARE FACE
- ROUND NECK

Model:

UNI-PD Steel



Model UNI-PD

The **Nailor Model 'UNI-PD' Fixed Perforated Downblast Square Ceiling Diffuser** has been specially designed to provide both the unobtrusive appearance for architectural excellence and the high airflow at minimum NC levels needed in theater, auditorium and other high ceiling applications. A circular perforated aperture in the diffuser face provides both a horizontal and vertical apportion of the airflow. The horizontal portion provides a tight 360° ceiling diffusion pattern and the vertical portion provides a true and long downward projection.

The **Model UNI-PD** heavy duty ceiling diffusers are designed for effective heating and spot cooling applications where conditions and floor to ceiling heights are variable.

Designed to integrate with the popular lay-in type ceiling grid system, this diffuser offers simple installation and a highly economical alternative to the more expensive round spun downblast diffuser design.

FEATURES:

- Engineered air diffusion pattern.
- Steel stamped shapes for uniformity.
- High neck collars for solid connection.
- Fixed inner core.
- Suitable for theaters, auditoriums, factories, warehouses, convention halls, coliseums, shopping malls and other high ceiling applications.
- 360° horizontal discharge pattern plus vertical projection.
- Heavy gauge face plate features a hemmed edge for a professional, clean finish. Perforated face has 3/8" (10) diameter holes on 5/8" (16) staggered centers.

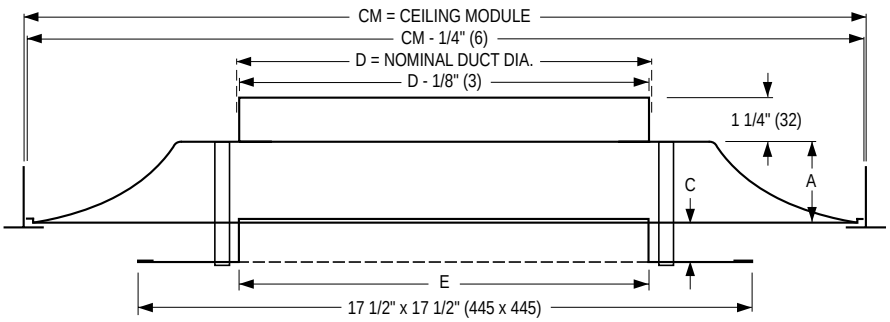
Material: Heavy gauge, corrosion-resistant steel.

Finish: BK Flat Black or AW Appliance White baked enamel. Other finishes are available.

Type L Lay-in, T-Bar Frame*

Dimensional Data

CM		Imperial Units (inches)						Metric Units (mm)					
Imperial Modules	Metric Modules	Duct Size D	E	A	B	C	F	Duct Size D	E	A	B	C	F
24 x 24	600 x 600	12 14	11 1/4	2 5/16	22	1 3/16	24 3/4	305 356	286	59	519	30	629



* Refer to page D102 for other frame types and installations.

HOW TO SPECIFY OR TO ORDER

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

Stamped Square Perforated Downblast Ceiling Diffuser – Model UNI-PD

UNI-PD - 12 - 24 x 24 - L - AW - –

MODEL

- Perforated Downblast	UNI-PD

NECK SIZE (inches)

- 12, 14

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 24 x 24	600 x 600

FRAME STYLE

- T-Bar Lay-in	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-In	M
- Fineline®	F

ACCESSORIES

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

AIR BALANCING DEVICES

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

FINISH

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

SUGGESTED SPECIFICATION:

Specification Text File

UNI-PD – Perforated Downblast

Furnish and install **Nailor Model UNI-PD Square Perforated Downblast Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and include a stamped one-piece construction outer cone with an inner core that has a square face plate that includes perforated holes in a spherical pattern. The perforations shall be 3/8" (10) diameter holes on 5/8" (16) centers. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model UNI-PD • 24 x 24 (600 x 600) Face Size • 4-Way Blow (360° Pattern)

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
12" Dia.	TP	.018	.028	.041	.055	.072	.092	.113	.163	.221	.289
	Airflow, CFM	315	390	470	550	630	705	785	990	1100	1255
	Horizontal Throws, Ft. H	2-3-4	3-5-7	3-5-8	4-6-8	5-6-10	5-7-11	6-8-10	6-9-12	8-11-13	9-12-16
	Vertical Projections, Ft. V	6-9	8-10	8-10	9-12	10-13	12-14	15-17	16-18	17-19	20-21
	NC	–	–	–	13	18	22	26	34	38	42
14" Dia.	TP	.023	.036	.051	.070	.092	.116	.143	.206	.280	.366
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	Horizontal Throws, Ft. H	2-4-5	3-5-6	4-5-7	5-6-7	5-6-8	6-7-8	6-7-9	7-9-11	8-10-13	9-11-14
	Vertical Projections, Ft. V	8-11	9-12	9-13	10-14	11-15	12-16	13-17	15-19	17-21	19-23
	NC	–	–	–	15	20	24	28	36	40	44

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

Performance Notes:

1. Horizontal throws are given at a terminal velocity of 150, 100 and 50 fpm under isothermal conditions.

Horizontal throws for non-isothermal air are determined by applying the following correction factors to the cataloged values:

ΔT	Factor
– 20°F clg.	x 1.20
+ 20°F htg.	x 0.85

Vertical projections are given at a terminal velocity of 50 fpm. Minimum projections are for a 20°F heating temperature differential and maximum projections are for a 20°F cooling differential.

2. Horizontal/Vertical apportion of the airflow:

12" neck approximately 60/40%.

14" neck approximately 65/35%.

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

ADJUSTABLE DOWNBLAST DIFFUSER

- HIGH PERFORMANCE
- THEATER APPLICATIONS
- VERTICAL-TO-HORIZONTAL DISCHARGE PATTERNS
- SQUARE FACE
- ROUND NECK

Model UNI-AD

Model:

UNI-AD Steel

The **Nailor Model 'UNI-AD' Adjustable Downblast Square Ceiling Diffuser** has been specially designed to provide both the unobtrusive appearance for architectural excellence and the high airflow at minimum NC levels needed in theater, auditorium and other high ceiling applications. Radial vanes in the adjustable face damper permit air pattern adjustment from full horizontal to approximately 50/50 horizontal/vertical. Full adjustment requires only a half turn and is easily accomplished from the floor using the ring operator and a pole (by others).

The **Model UNI-AD** heavy duty ceiling diffusers are designed for effective heating and spot cooling applications where conditions and floor to ceiling heights are variable. At the full vertical setting, they provide a true and long downward projection. At full horizontal setting, they produce the tight ceiling pattern that is required for excellent VAV performance.

Designed to integrate with the popular lay-in type ceiling grid system, this diffuser offers simple installation and a highly economical alternative to the more expensive round spun downblast diffuser design.

FEATURES:

- Engineered air diffusion pattern.
- Steel stamped shapes for uniformity.
- High neck collars for solid connection.
- Fixed inner core.
- Suitable for theaters, auditoriums, factories, warehouses, convention halls, coliseums, shopping malls and other high ceiling applications.
- 360° horizontal discharge pattern.
- 0 – 50% airflow vertical projection capability.
- Ring operator can be adjusted using a pole.
- Heavy gauge face plate features a hemmed edge for a professional, clean finish.

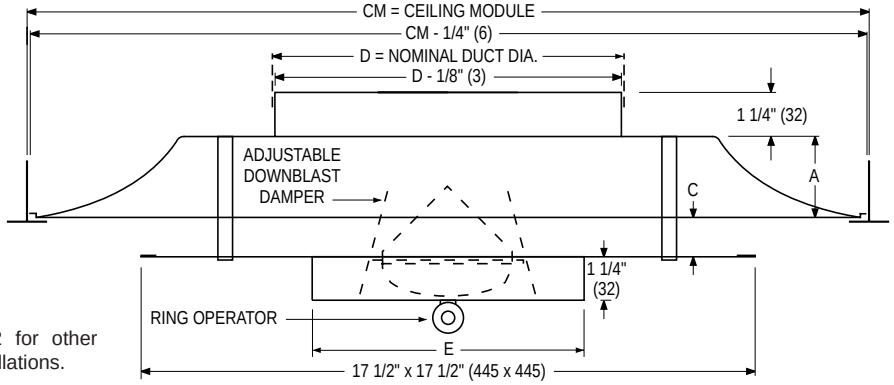
Material: Heavy gauge, corrosion-resistant steel.

Finish: BK Flat Black or AW Appliance White baked enamel. Other finishes are available.

Type L Lay-in, T-Bar Frame*

Dimensional Data

CM		Imperial Units (inches)						Metric Units (mm)					
Imperial Modules	Metric Modules	Duct Size D	E	A	B	C	F	Duct Size D	E	A	B	C	F
24 x 24	600 x 600	12 14	8 10	2 5/16	22	1 3/16	24 3/4	305 356	203 254	59	519	30	629



*Refer to page D102 for other frame types and installations.

HOW TO SPECIFY OR TO ORDER

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

Stamped Square Radial Vane Downblast Ceiling Diffuser – Model UNI-AD

UNI-AD - 12 - 24 x 24 - L - AW - –

MODEL

- Radial Vane Downblast	UNI-AD

NECK SIZE (inches)

- 12, 14

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 24 x 24	600 x 600

FRAME STYLE

- T-Bar Lay-in	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-In	M
- Fineline®	F

ACCESSORIES

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

AIR BALANCING DEVICES

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

FINISH

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

SUGGESTED SPECIFICATION:

UNI-AD – Adjustable Downblast

Specification Text File

Furnish and install **Nailor Model UNI-AD Square Adjustable Downblast Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and include a stamped one-piece construction outer cone with an inner core that has a square face plate and includes a round, easily adjustable radial vane in the center. The radial vane shall have a ring operator that allows for pole operation. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model UNI-AD • 24 x 24 (600 x 600) Face Size • 4-Way Blow (360° Pattern)

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
12" Dia.	TP	.040	.063	.090	.123	.161	.203	.251	.361	.492	.643
	Airflow, CFM	315	390	470	550	630	705	785	940	1100	1255
	Horizontal Throws, Ft. H	5	7	8	9	11	12	14	15	17	18
	Vertical Projections, Ft. V	3-13	4-16	5-20	7-22	8-28	8-32	9-34	10-36	15-59	19-62
	NC	—	—	13	16	21	25	29	35	41	46
14" Dia.	TP	.054	.083	.120	.163	.214	.270	.334	.481	.655	.855
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	Horizontal Throws, Ft. H	7	9	11	13	15	17	19	21	22	24
	Vertical Projections, Ft. V	5-14	5-16	6-20	6-24	8-30	9-32	10-34	14-57	20-65	25-75
	NC	—	—	14	18	23	27	30	37	43	48

CFM - cubic feet per minute
FPM - feet per minute velocity
TP - total pressure - inches w.g.
VP - velocity pressure - inches w.g.
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts. NC values shown are for the horizontal discharge pattern. For downblast (damper open), deduct 5.

Performance Notes:

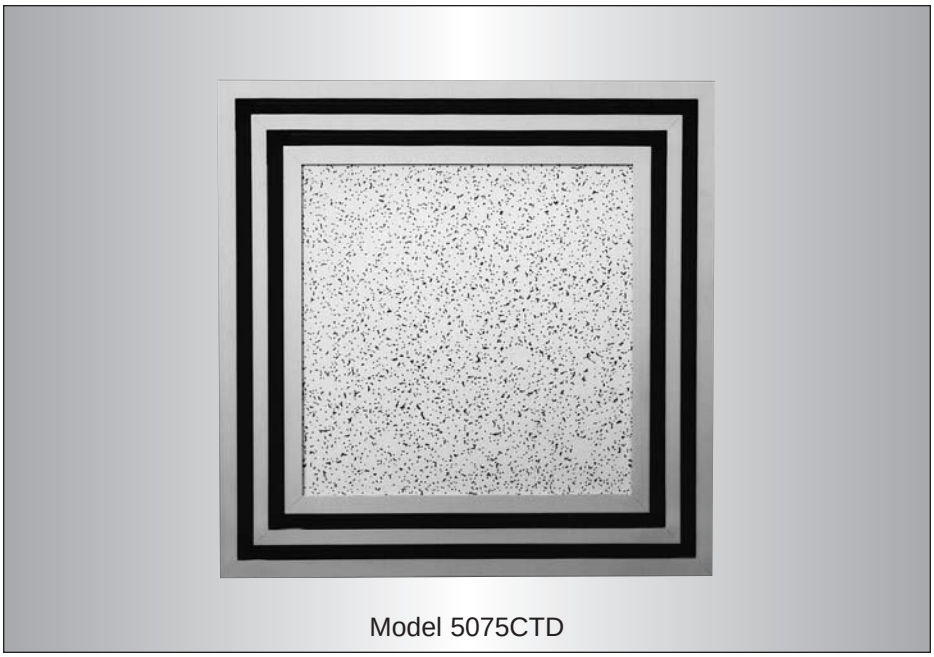
1. Horizontal throws are given at a terminal velocity of 50 fpm and a 20°F cooling temperature differential.

Vertical projections are given at a terminal velocity of 50 fpm. Minimum projections are for a 40°F heating temperature differential and maximum projections are for a 20°F cooling differential.

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

ARCHITECTURAL CEILING TILE SLOT DIFFUSER

- 'ICE TONG' PATTERN CONTROLLERS
- SQUARE FACE
- ROUND NECK (SUPPLY)



Model 5075CTD

Models:

Supply

5075CTD	3/4" (19) Slot
5010CTD	1" (25) Slot

Return

5075RCTD	3/4" (19) Slot
5010RCTD	1" (25) Slot

The **Nailor 5000CTD Series Diffusers** have been designed with the architect in mind to provide an unobtrusive high performance ceiling diffuser that incorporates a center ceiling tile (by others) that matches the surrounding ceiling system. This product is available in a nominal size of 24" x 24" (600 x 600) to suit both imperial and metric exposed grid suspended ceiling systems. The 4-way blow linear slot design utilizes the 'ice-tong' premium quality pattern controller, providing a tight horizontal air pattern, which can accommodate high turn down ratios and is therefore eminently suitable for variable air volume systems.

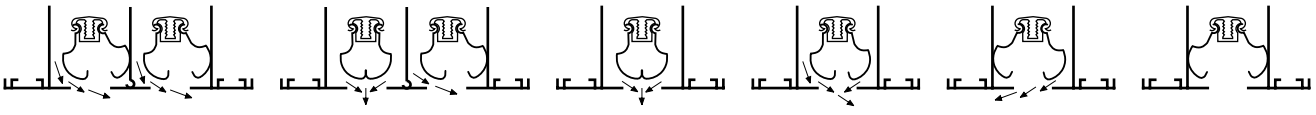
FEATURES:

- Factory precision welding on all mitered corners.
- Pattern controllers are individually adjustable for each slot with 180° air pattern adjustment from horizontal to vertical providing volume control.
- Discharge patterns are fully field adjustable for 1-way, 2-way corner, 2-way opposite, 3-way or 4-way patterns.
- Designed for use with standard 15/16" (24) T-Bar and narrow 9/16" (14) flat T-Bar ceiling systems.
- Available in 1, 2, 3 or 4 slots.
- Choice of 3/4" (19) or 1" (25) slot width.
- Supply diffuser has a round neck for flexible duct connection.
- Optional internal or external insulation available.
- Matching return air unit is similar in design, but minus pattern controllers. For ductless plenum return applications, the **5000RCTD** incorporates a light shield to block out light and prevent see-through.
- Plenum is secured with steel S-clips and is easily removable for installation of a field cut ceiling tile (by others) into the face of the diffuser.

Material: Extruded aluminum frame, roll-formed steel pattern controllers and corrosion-resistant steel plenum.

Finish: AW Appliance White baked enamel face with black pattern controllers. Other finishes are available.

'Ice Tong' Pattern Controller Adjustment



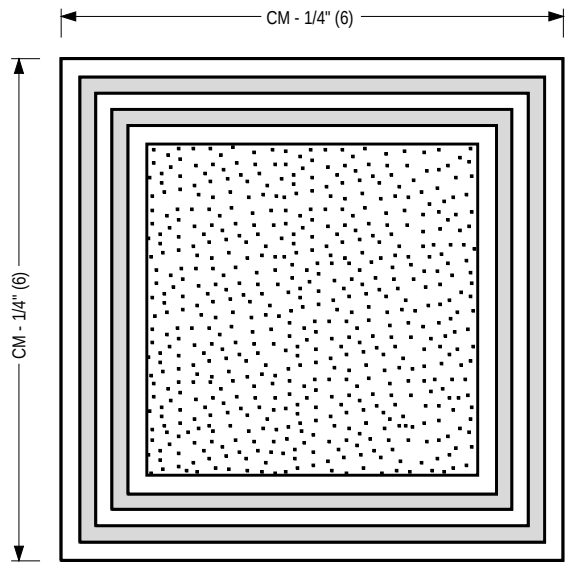
Dimensional Data

Model Series 5000CTD

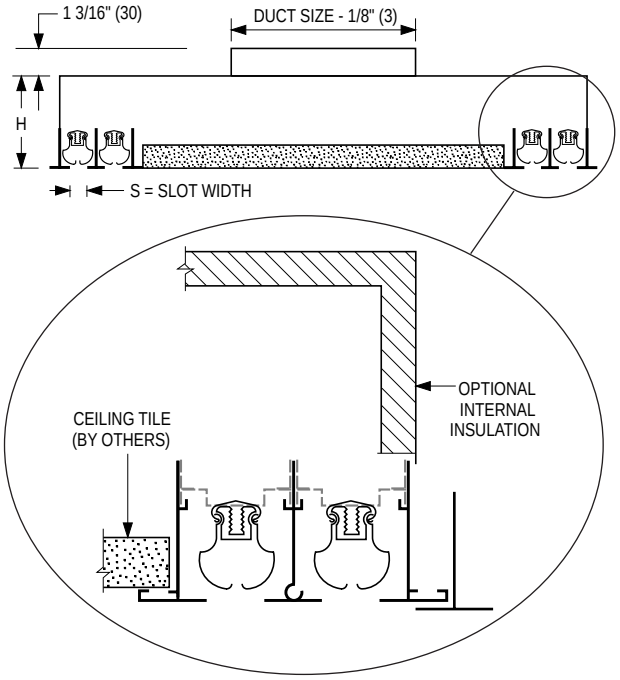
Standard Ceiling Module Sizes:

Imperial: 24" x 24"

Metric: 600 x 600 mm



Supply – Model Series 5000CTD



Ceiling Tile Cutting Dimensions

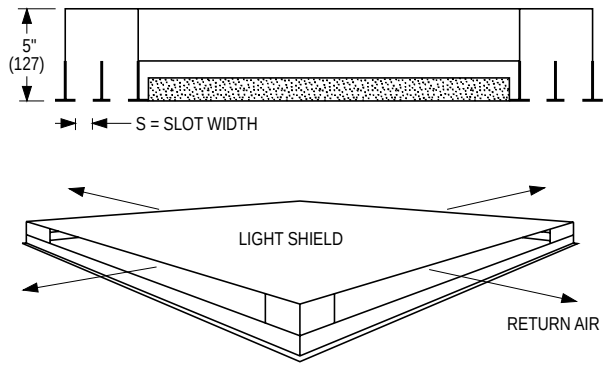
No. of Slots	Imperial Units (inches)			Metric Units (mm)		
	Slot Width(s)		H	Slot Width(s)		H
	S = 3/4	S = 1		S = 19	S = 25	
1	19 1/2 x 19 1/2	19 x 19	5	495 x 495	483 x 483	127
2	16 1/2 x 16 1/2	15 1/2 x 15 1/2	5	419 x 419	394 x 394	127
3	13 1/2 x 13 1/2	12 x 12	6 3/4	343 x 343	305 x 305	171
4	10 1/2 x 10 1/2	8 1/2 x 8 1/2	6 3/4	267 x 267	216 x 216	171

Standard Round Inlet Sizes:

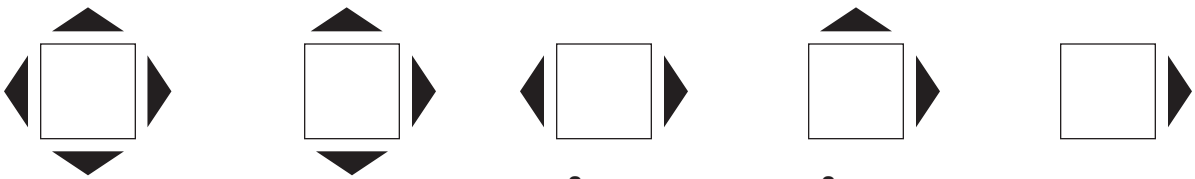
Imperial: 6", 8", 10", 12" and 14" dia.

Metric: 152, 203, 254, 305 and 356 mm dia.

Return – Model Series 5000RCTD



Field Adjustable Discharge Pattern Options



4-way blow | 3-way blow | 2-way opposite blow | 2-way corner blow | 1-way blow

HOW TO SPECIFY OR TO ORDER

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

Architectural Ceiling Tile Slot Diffusers – Model Series 5000CTD

5075CTD - – - 02 - 08 - 24 x 24 - AW - –

MODEL/SLOT SIZE

Supply:

- 3/4" (19)	5075CTD
- 1" (25)	5010CTD

Return:

- 3/4" (19)	5075RCTD
- 1" (25)	5010RCTD

FINELINE® F

ACCESSORIES

- None (default)	—
- Internal Insulation	IN

FINISH

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

CEILING MODULE SIZE

Imperial (inches)	Metric (mm)
- 24 x 24	600 x 600

INLET SIZE (inches)

- 06, 08, 10, 12, 14

NO. OF SLOTS 01 thru 04

Notes:

1. Inlet size to be specified on supply models only.

SUGGESTED SPECIFICATION:

Specification Text File

5075CTD, 5010CTD – Supply Air, Standard T-Bar

Furnish and install **Nailor Model** (select one) **5075CTD** (3/4" (19) slot) or **Model 5010CTD** (1" (25) slot) **Ceiling Tile Slot Supply Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have an extruded aluminum face, roll-formed steel pattern controllers, and a corrosion-resistant steel plenum. The outside face of the diffuser shall incorporate 1, 2, 3, or 4 (select the quantity) discharge air slots which integrate 'ice-tong' shaped adjustable pattern controllers. The center of the diffuser must accommodate a ceiling tile (provided by the installing contractor). The steel plenum shall be easily removable and include a round inlet collar that is not less than 1 3/16" (30) high. The diffuser shall fit a 24" x 24" (610 x 610) or 600 x 600 standard T-Bar ceiling system. (Optional) The diffuser shall have internal insulation. The finish shall be AW Appliance White baked enamel finish. (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.

Specification Text File

5075RCTD, 5010RCTD – Return Air, Standard T-Bar

Furnish and install **Nailor Model** (select one) **5075RCTD** (3/4" (19) slot) or **Model 5010RCTD** (1" (25) slot) **Ceiling Tile Slot Return Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have an extruded aluminum face, and a corrosion-resistant steel plenum. The outside face of the diffuser shall incorporate 1, 2, 3, or 4 (select the quantity) return air slots to match the supply air diffuser of the same model. The center of the diffuser must accommodate a ceiling tile (provided by the installing contractor). The diffuser shall fit a 24" x 24" (610 x 610) or 600 x 600 standard T-Bar ceiling system. A removable light shield shall be factory installed on the rear of the diffuser. The finish shall be AW Appliance White baked enamel finish. (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.

Specification Text File

5075CTD-F, 5010CTD-F – Supply Air, Narrow Regressed T-Bar

Furnish and install **Nailor Model** (select one) **5075CTD-F** (3/4" (19) slot) or **Model 5010CTD-F** (1" (25) slot) **Ceiling Tile Slot Supply Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have an extruded aluminum face, roll-formed steel pattern controllers, and a corrosion-resistant steel plenum. The outside face of the diffuser shall incorporate 1, 2, 3, or 4 (select the quantity) discharge air slots which integrate 'ice-tong' shaped adjustable pattern controllers. The center of the diffuser must accommodate a ceiling tile (provided by the installing contractor). The steel plenum shall be easily removable and include a round inlet collar that is not less than 1 3/16" (30) high. The diffuser shall fit a 24" x 24" (610 x 610) or 600 x 600 Narrow Regressed T-Bar ceiling system. (Optional) The diffuser shall have internal insulation. The finish shall be AW Appliance White baked enamel finish. (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.

Specification Text File

5075RCTD-F, 5010RCTD-F – Return Air, Narrow Regressed T-Bar

Furnish and install **Nailor Model** (select one) **5075RCTD-F** (3/4" (19) slot) or **Model 5010RCTD-F** (1" (25) slot) **Ceiling Tile Slot Return Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have an extruded aluminum face, and a corrosion-resistant steel plenum. The outside face of the diffuser shall incorporate 1, 2, 3, or 4 (select the quantity) return air slots to match the supply air diffuser of the same model. The center of the diffuser must accommodate a ceiling tile (provided by the installing contractor). The diffuser shall fit a 24" x 24" (610 x 610) or 600 x 600 Narrow Regressed T-Bar ceiling system. A removable light shield shall be factory installed on the rear of the diffuser. The finish shall be AW Appliance White baked enamel finish. (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.

Performance Data

Models 5075CTD, 5075CTD-F • 3/4" (19) Slot • Supply

	SIZE	Neck Velocity, FPM VP	200 .002	300 .006	400 .010	500 .016	600 .022	700 .031	800 .040	900 .050
1 SLOT	8" NECK DIA.	Airflow, CFM	70	105	140	175	210	245	280	315
		TP	.017	.039	.070	.109	.156	.213	.278	.351
		T	2-3-6	3-5-10	4-7-12	5-9-14	7-11-16	8-12-17	9-13-18	10-14-19
		NC	—	12	22	28	32	36	40	43
2 SLOT	8" NECK DIA.	Airflow, CFM	70	105	140	175	210	245	280	315
		TP	.008	.019	.033	.052	.075	.102	.134	.169
		T	1-2-5	2-3-7	3-5-10	4-6-13	5-7-14	6-9-15	7-11-17	8-12-18
		NC	—	—	12	18	22	26	30	33
	10" NECK DIA.	Airflow, CFM	110	160	220	270	330	380	435	490
		TP	.017	.036	.068	.102	.153	.203	.266	.337
		T	2-4-8	3-6-11	5-8-14	6-10-16	8-13-18	9-15-20	10-16-21	11-17-22
		NC	—	14	20	26	30	34	38	41
3 SLOT	10" NECK DIA.	Airflow, CFM	110	160	220	270	330	380	435	490
		TP	.011	.024	.045	.068	.101	.136	.176	.224
		T	2-4-7	3-5-9	4-6-12	5-8-15	7-11-19	8-12-21	9-14-23	10-16-25
		NC	—	11	17	23	27	31	35	38
	12" NECK DIA.	Airflow, CFM	155	235	315	390	470	550	630	705
		TP	.020	.045	.081	.125	.181	.248	.326	.408
		T	3-5-10	5-8-14	6-10-18	8-12-21	10-16-25	12-18-26	14-19-27	15-20-28
		NC	13	20	26	32	36	40	44	47
4 SLOT	12" NECK DIA.	Airflow, CFM	155	235	315	390	470	550	630	705
		TP	.015	.034	.062	.092	.138	.189	.248	.310
		T	3-4-9	4-6-13	6-9-17	8-11-20	8-13-22	9-16-23	12-18-25	3-19-26
		NC	10	17	23	29	33	37	41	44
	14" NECK DIA.	Airflow, CFM	215	320	430	535	640	750	855	960
		TP	.027	.059	.106	.165	.236	.324	.420	.530
		T	4-6-12	6-9-18	8-12-21	10-15-23	12-18-25	14-20-27	16-21-29	17-22-31
		NC	17	24	30	36	40	44	48	51

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

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions, using a 4-way pattern.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Performance Data

Models 5010CTD, 5010CTD-F • 1" (25) Slot • Supply

	SIZE	Neck Velocity, FPM VP	200 .002	300 .006	400 .010	500 .016	600 .022	700 .031	800 .040	900 .050
1 SLOT	8" NECK DIA.	Airflow, CFM	70	105	140	175	210	245	280	315
		TP	.014	.031	.055	.087	.125	.170	.221	.280
		T	2-3-6	3-5-10	4-6-12	5-8-14	6-9-15	7-11-17	8-12-18	9-14-19
		NC	—	11	18	24	28	32	36	39
	10" NECK DIA.	Airflow, CFM	110	160	220	270	330	380	435	490
		TP	.030	.064	.122	.184	.274	.364	.477	.605
		T	3-5-10	5-8-14	6-9-15	7-11-17	9-14-19	11-15-21	12-16-22	13-17-23
		NC	—	21	28	34	38	42	46	49
2 SLOT	8" NECK DIA.	Airflow, CFM	70	105	140	175	210	245	280	315
		TP	.007	.015	.027	.042	.060	.082	.106	.135
		T	1-2-4	2-3-6	3-4-9	3-5-11	4-6-13	4-7-15	5-9-16	7-11-19
		NC	—	—	—	14	18	22	26	29
	10" NECK DIA.	Airflow, CFM	110	160	220	270	330	380	435	490
		TP	.013	.027	.051	.077	.115	.153	.200	.254
		T	2-3-7	3-5-11	4-7-13	5-9-16	7-11-19	8-14-22	9-15-23	10-16-25
		NC	—	11	18	24	28	32	36	39
	12" NECK DIA.	Airflow, CFM	155	235	315	390	470	550	630	705
		TP	.023	.052	.094	.144	.210	.287	.377	.472
		T	3-5-11	5-8-15	7-11-19	8-14-21	10-16-23	12-18-25	14-18-26	15-19-28
		NC	—	17	24	30	34	38	42	45
3 SLOT	10" NECK DIA.	Airflow, CFM	110	160	220	270	330	380	435	490
		TP	.008	.018	.033	.050	.075	.099	.130	.165
		T	2-3-6	3-4-9	4-6-12	5-7-15	6-9-18	8-11-20	9-12-22	10-14-24
		NC	—	—	14	20	24	28	32	35
	12" NECK DIA.	Airflow, CFM	155	235	315	390	470	550	630	705
		TP	.014	.032	.057	.088	.128	.175	.229	.287
		T	3-4-9	4-6-13	6-9-18	8-11-20	9-13-23	10-15-25	12-18-27	13-19-28
		NC	1	15	21	27	31	35	39	42
4 SLOT	12" NECK DIA.	Airflow, CFM	155	235	315	390	470	550	630	705
		TP	.010	.024	.042	.065	.094	.129	.170	.210
		T	2-4-8	4-5-11	5-8-15	7-10-20	8-12-21	9-14-23	11-15-25	12-17-27
		NC	—	13	19	25	29	33	37	40
	14" NECK DIA.	Airflow, CFM	215	320	430	535	640	750	855	960
		TP	.017	.039	.070	.108	.154	.212	.275	.347
		T	3-5-10	5-8-15	7-10-21	9-14-23	11-16-25	13-18-28	15-19-30	17-20-32
		NC	13	20	26	32	36	40	44	47

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

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions, using a 4-way pattern.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Performance Data

Models 5075RCTD, 5075RCTD-F • 3/4" (19) Slot • Return

No. of Slots	Neg. SP	.006	.028	.065	.110	.170	.250	.350	.465
1	CFM	70	140	210	280	350	420	490	560
	NC	—	—	16	24	30	35	39	43
2	CFM	130	260	390	520	650	780	910	1040
	NC	—	—	19	27	33	38	42	46
3	CFM	180	360	540	720	900	1080	1260	1440
	NC	—	10	21	29	35	40	44	48
4	CFM	220	440	660	880	1100	1320	1540	1760
	NC	—	10	21	29	35	40	44	48

Models 5010RCTD, 5010RCTD-F • 1" (25) Slot • Return

No. of Slots	Neg. SP	.006	.028	.065	.110	.170	.250	.350	.465
1	CFM	140	210	280	350	420	490	560	700
	NC	—	—	17	23	28	32	36	42
2	CFM	253	380	507	633	760	887	1013	1267
	NC	—	12	20	26	31	35	39	45
3	CFM	340	510	680	850	1020	1190	1360	1700
	NC	—	13	21	27	32	36	40	46
4	CFM	400	600	800	1000	1200	1400	1600	2000
	NC	—	14	22	28	33	37	41	47

CFM - cubic feet per minute

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

Neg. SP - Negative static pressure (inches w.g.)

Performance Notes:

1. Dash (—) in space indicates an NC value of less than 10.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

ARCHITECTURAL PLAQUE DIFFUSERS

- ADJUSTABLE OPENING
- SQUARE FACE
- SQUARE NECK
- STEEL

Model:

6600 Steel

- **Suffix '-O' adds a steel opposed blade damper**

Model 6600

The **Nailor Model Series 6600 Ceiling Diffusers** have been designed to satisfy both architectural and engineering criteria. The clean uncluttered face panel design compliments any decor, blending beautifully with virtually any architectural style or requirement.

The face panel, which is located below the ceiling line, provides a horizontal discharge and a 360° diffusion pattern at minimum NC levels required for high engineering performance. This makes the **6600 Series** ideally suitable for VAV systems. The face panel is adjustable by means of four spring-loaded countersunk screws located at the four corners of the panel which can be positioned to provide a 1/2" (13) to 1 1/4" (32) variable opening. This provides great flexibility, as the diffusers length of throw at any given air volume may be increased or decreased in order to adapt to field conditions.

The **6600 Series** are designed for both surface mount and lay-in T-Bar applications with the addition of a ceiling module sized panel. The collar is a full 1 1/2" (38) in height for easy, secure duct connection.

FEATURES:

- Square duct sizes are available in 3" (76) increments.

Minimum Size: 6" x 6" (152 x 152).

Maximum Size: 18" x 18" (457 x 457).

- High neck collar for secure connection.
- Face panel features a hemmed finish providing both strength and a professional, clean, safety edge.
- Optional roll-formed steel opposed blade damper available with a lever operator that permits volume control without removing face panel.
- Square-to-round transition adaptors are available for round flexible duct connection (SR option).
- Optional factory installed hinged air deflectors are available for 1, 2 or 3-way directional control.

Material: Corrosion-resistant steel.

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

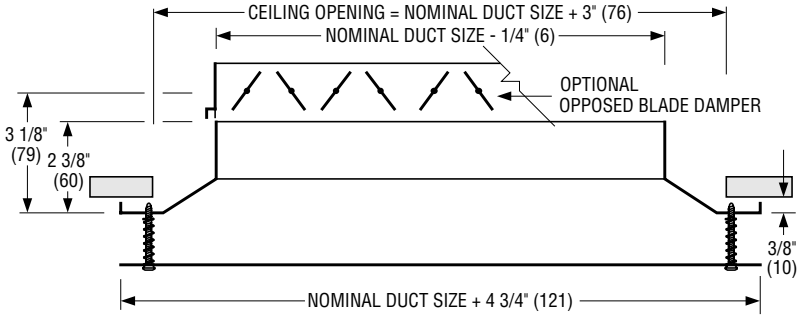
Dimensional Data and Frame Types

Model 6600

Type S Surface Mount

Available Duct Sizes

Inches	mm
6 x 6	152 x 152
9 x 9	229 x 229
12 x 12	305 x 305
15 x 15	381 x 381
18 x 18	457 x 457

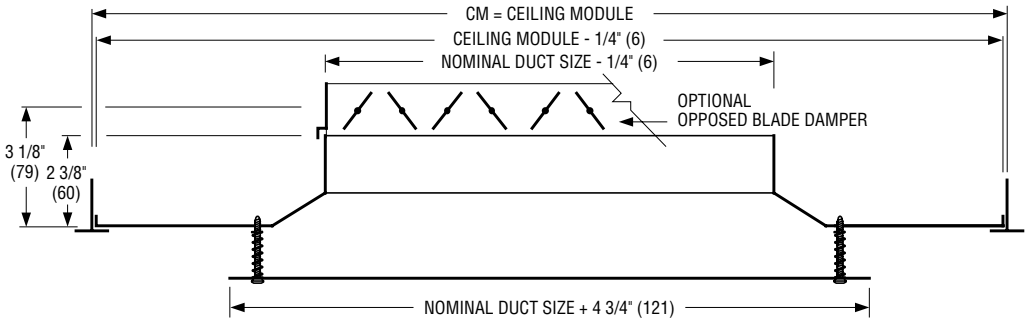


Type PL Panel Mounted Lay-in T-Bar

Available Sizes

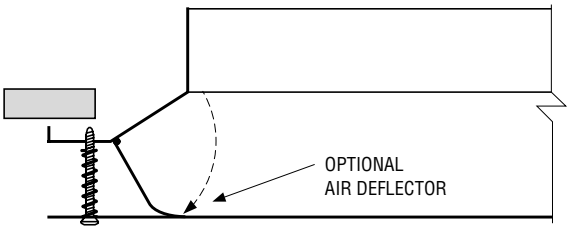
Ceiling Module Size		Duct Size			
Imperial (inches)	Metric (mm)	Minimum		Maximum	
		inches	mm	inches	mm
20 x 20	500 x 500	6 x 6	152 x 152	12 x 12	305 x 305
24 x 24	600 x 600	6 x 6	152 x 152	18 x 18	457 x 457

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

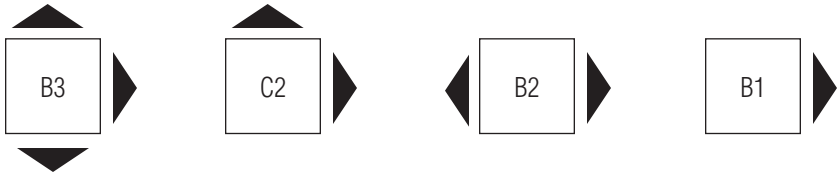


Directional Blow Option

- Factory installed.
- Hinged air deflector(s) for 1, 2 or 3-way blow pattern.
- Simple adjustment from face of diffuser provides field location flexibility.
- Deflector swings up or down from outer cone providing a full length blank-off.
- Finish to match diffuser.
- One, two or three deflectors are supplied and installed dependent upon blow pattern specified.



Blow Patterns



3-way | 2-way corner | 2-way opposite | 1-way

HOW TO SPECIFY OR TO ORDER

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

Plaque Face Diffusers – Model Series 6600

6600 - O - 9 x 9 - 24 x 24 - PL - AW - B4 - SR08

MODEL

- Steel Construction	6600

DAMPER

- No Damper (default)	—
- Opposed Blade Damper	O

NECK SIZE (inches)

- 6 x 6, 9 x 9, 12 x 12, 15 x 15, 18 x 18

CEILING MODULE SIZE

(Type PL only)

Imperial (inches)	Metric (mm)
- 20 x 20	500 x 500
- 24 x 24	600 x 600

FRAME STYLE

- Surface Mount	S
- Panel Lay-in T-Bar	PL

ACCESSORIES

- None (default)	—
- Square to Round Transition Collar (04 thru 18 specify)	SR
- Earthquake Tabs	EQT

AIR BALANCING DEVICES

Square Neck

- Equalizing Grid	EGL
- Damper/Equalizing Grid	DEGL

Round Neck

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

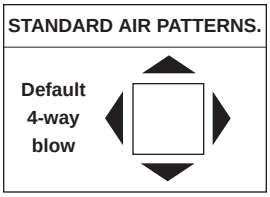
BLOW PATTERN

4-Way Blow (default)	—
3-Way Blow	B3
2-Way Opposite Blow	B2
2-Way Corner Blow	C2
1-Way Blow	B1

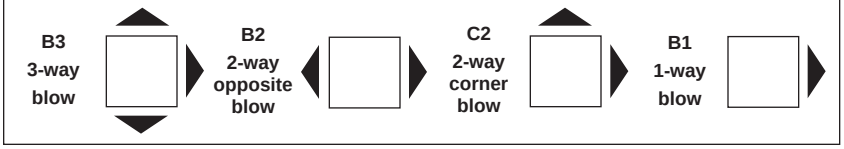
FINISH

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

STANDARD AIR PATTERNS.



BLOW PATTERNS WITH OPTIONAL FACTORY INSTALLED QUADRANT BLANKS.



Specification Text File

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model 6600 Plaque Face Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and include a flat square face panel that can be positioned to provide an opening that is adjustable from 1/2" (13) to 1 1/4" (32). A high neck square duct connection collar shall be an integral part of the frame assembly. 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 and operable from the face of the diffuser, shall be provided with all units.

(Optional) The diffuser shall incorporate factory installed hinged air deflector(s) that will provide a 1-way, 2-way corner, 2-way opposite or 3-way throw pattern (specifier to select a pattern).

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

Performance Data

Model 6600 • Square Neck

Neck Size	Face Opening	Neck Velocity, FPM VP Airflow, CFM	160 .002 40	240 .004 60	320 .006 80	400 .010 100	600 .023 150	800 .040 200	1000 .063 250	1200 .090 300	1400 .122 350
6 x 6	1 1/4"	TP				.03	.06	.10	.16	.23	.31
		T				1	3	5	6	7	9
		NC				13	18	21	25	30	36
	1"	TP			.02	.03	.07	.11	.17	.26	.34
		T			2	2	4	6	7	8	10
		NC			—	13	18	21	25	31	37
	3/4"	TP	.01	.01	.02	.03	.08	.13	.21	.30	.41
		T	2	2	3	3	5	7	8	9	10
		NC	—	—	—	14	19	22	26	32	38
	1/2"	TP	.01	.02	.03	.05	.10	.18	.28	.41	.56
		T	3	3	4	4	6	8	9	10	11
		NC	—	—	—	15	20	23	26	35	40

Neck Size	Face Opening	Neck Velocity, FPM VP Airflow, CFM	89 .001 50	133 .001 75	178 .002 100	267 .004 150	356 .008 200	444 .012 250	533 .018 300	711 .031 400	800 .040 450
9 x 9	1 1/4"	TP				.01	.02	.04	.06	.10	.12
		T				2	3	5	6	8	9
		NC				12	17	20	23	32	37
	1"	TP			.01	.02	.03	.05	.07	.12	.15
		T			2	4	5	6	7	10	11
		NC			—	13	18	21	24	33	39
	3/4"	TP		.01	.01	.03	.04	.07	.10	.17	.21
		T		2	3	5	6	7	9	11	13
		NC		—	—	14	19	22	25	35	40
	1/2"	TP	.01	.01	.02	.04	.07	.12	.17	.29	.37
		T	2	3	4	6	7	9	10	13	14
		NC	—	—	—	15	20	23	26	37	42

Neck Size	Face Opening	Neck Velocity, FPM VP Airflow, CFM	50 .001 50	100 .001 100	150 .002 150	200 .003 200	250 .004 250	300 .006 300	400 .010 400	500 .016 500	600 .023 550
12 x 12	1 1/4"	TP			.01	.01	.02	.03	.04	.07	.09
		T			3	4	6	7	9	12	13
		NC			—	13	17	21	26	33	38
	1"	TP		.01	.01	.02	.03	.04	.06	.09	.12
		T		2	4	5	7	8	10	13	14
		NC		—	—	13	17	21	26	34	38
	3/4"	TP		.01	.01	.03	.04	.06	.09	.15	.18
		T		3	5	6	7	9	11	14	15
		NC		—	—	14	18	22	27	35	40
	1/2"	TP	.01	.01	.03	.05	.07	.10	.18	.28	.34
		T	2	4	6	7	8	10	12	15	17
		NC	—	—	—	15	20	23	30	39	45

For performance notes, see next page.

Performance Data

Model 6600 • Square Neck

Neck Size	Face Opening	Neck Velocity, FPM VP Airflow, CFM	32 .001 50	64 .001 100	96 .001 150	128 .001 200	192 .002 300	256 .004 400	320 .006 500	384 .009 600	448 .013 700
15 x 15	1 1/4"	TP				.01	.01	.03	.05	.06	.09
		T				3	5	6	9	10	12
		NC				—	18	22	27	33	39
	1"	TP			.01	.01	.02	.04	.06	.09	.12
		T			2	4	6	8	11	13	14
		NC			—	13	19	23	28	35	42
	3/4"	TP		.01	.01	.02	.03	.07	.10	.14	.19
		T		2	4	5	8	10	13	15	17
		NC		—	—	—	15	21	26	32	40
	1/2"	TP	.01	.01	.02	.03	.07	.13	.20	.28	.38
		T	2	3	5	6	9	12	15	18	21
		NC	—	—	—	15	21	26	32	40	49

Neck Size	Face Opening	Neck Velocity, FPM VP Airflow, CFM	22 .001 50	44 .001 100	89 .001 200	133 .001 300	178 .002 400	222 .003 500	267 .005 600	311 .006 700	356 .008 800
18 x 18	1 1/4"	TP			.01	.01	.02	.03	.05	.07	.08
		T			2	4	6	6	9	11	13
		NC			—	14	20	23	28	33	40
	1"	TP			.01	.02	.03	.05	.07	.10	.13
		T			3	5	8	8	10	14	15
		NC			—	14	20	24	29	35	43
	3/4"	TP	.01	.01	.01	.03	.05	.07	.12	.15	.20
		T	2	3	5	7	9	10	14	16	18
		NC	—	—	—	15	21	25	31	37	46
	1/2"	TP	.01	.01	.02	.05	.10	.14	.22	.29	.38
		T	2	4	6	9	12	14	17	19	21
		NC	—	—	10	16	22	27	33	40	50

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

Performance Notes:

1. Throw values are given for a terminal velocity of 50 fpm under isothermal conditions.

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

3. The addition of direction blow blank-offs reduces the effective area and for a given air volume, increases the discharge velocity with a resultant increase in throw, pressure drop and sound level. To determine throw, select the diffuser as if it were supplying a larger volume of air. The table shows the percentage increase required to determine diffuser airflow selection to determine throw.

Corrections to pressure drop and NC level may be approximated by using correction factors as shown and applying them to the 4-way blow value listed in the performance tables.

Blow Pattern	% Increase In Air Volume For Throw Determination	TP Increase Correction Factor	NC Sound Level Add
3-way	35	x 1.5	+ 10
2-way	100	x 4.0	+ 15
1-way	400	x 8.0	+ 30

ARCHITECTURAL SLOT PLAQUE DIFFUSER

- PERIMETER SLOT
- PLAQUE CENTER
- ROUND NECK

Model:

66UNI Steel

Model 66UNI

The **Nailor Model Series 66UNI Plaque Diffuser with Perimeter Slots** has been specially designed to provide an unobtrusive appearance required for architectural excellence. A plaque face that sits flush in the center of the diffuser is surrounded by a choice of 1, 2 or 3 perimeter slots. This diffuser is designed specifically to integrate with 2' x 2' (610 x 610) ceiling module suspension systems.

The 66UNI provides a tight horizontal air pattern from maximum to minimum airflow and is ideal for VAV applications. The diffuser is provided with a deep plenum backpan to provide optimum performance by minimizing pressure drop and noise.

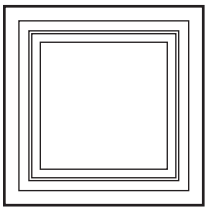
FEATURES:

- Clean lines with no unsightly visible screws.
- 24" x 24" (610 x 610) ceiling module size.
- Available with a choice of 1, 2, or 3 perimeter slots.
- Deep plenum backpan for premium performance.
- Spring loaded core. Removable without the use of tools.
- High neck collar for secure connection.

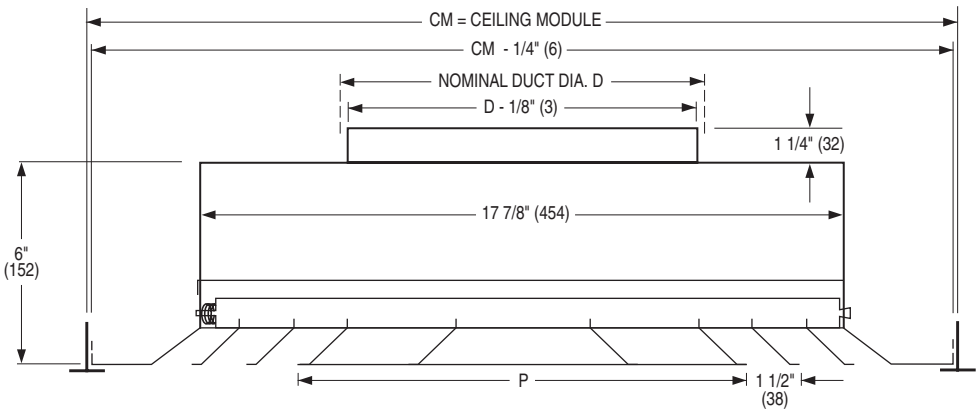
Material: Corrosion-resistant steel.

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

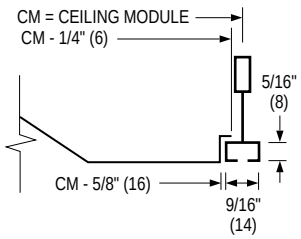
Type L Lay-in T-Bar



FACE VIEW ILLUSTRATION OF 2 SLOT UNIT.



Type F Fineline®



Ceiling Module Size CM	No. of Slots	Nominal Round Duct Size D	Plaque Face P
24 x 24 (610 x 610)	1	6,8,10 (152, 203, 254)	18 5/16 (465)
	2	6,8,10,12 (152, 203, 254, 305)	15 5/16 (389)
	3	8,10,12,14 (203, 254, 305, 356)	12 5/16 (313)

HOW TO SPECIFY OR TO ORDER

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

Architectural Slot Plaque Diffusers – Model Series 66UNI

66UNI - 10 - 2 - 24 x 24 - L - AW - –

MODEL
- Steel Construction — 66UNI

NECK SIZE (inches)
- 06, 08, 10, 12, 14

NO. OF SLOTS
- 1, 2, 3

CEILING MODULE SIZE
(inches) (mm)
- 24 x 24 (610 x 610)

FRAME/BORDER TYPE
- Lay-in T-Bar — L
- Fineline® — F

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

ACCESSORIES
- None (default) — —
- Earthquake Tabs — EQT

AIR BALANCING DEVICES
- Radial Sliding Blade Damper — 4250
- Radial Opposed Blade Damper — 4275
- Butterfly Damper — 4675
- Equalizing Grid — EGR
- Damper/Equalizing Grid — DEGR

Notes:

1. Consult text for availability of neck sizes with "No. of Slots" selection.

Specification Text File

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model 66UNI Slot Plaque Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and include a deep plenum backpan that has a round duct connection collar. The diffuser is to be sized to suit a 24" x 24" (610 x 610) ceiling suspension system. The center of the diffuser shall have a smooth flat plaque face in which 1, 2, or 3 (select one) perimeter slot(s) surround it. The core shall be spring loaded and removable without the use of tools. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model 66UNI • 24 x 24 (610 x 610) Ceiling Module

1 Slot

6" Dia. Neck	Airflow, cfm	79	99	118	138	158	177	197	236	276
	Neck Velocity, fpm	400	500	600	700	800	900	1000	1200	1400
	Total Pressure	0.021	0.033	0.048	0.066	0.086	0.108	0.133	0.192	0.261
	Static Pressure	0.011	0.017	0.026	0.035	0.046	0.058	0.071	0.102	0.139
	Throw	2-3-5	2-3-7	3-4-7	3-5-8	4-5-10	4-6-12	4-7-13	5-8-14	6-8-14
	NC	—	—	17	21	25	8	31	35	40
8" Dia. Neck	Airflow, cfm	140	166	192	218	244	270	297	323	349
	Neck Velocity, fpm	400	475	500	625	700	775	850	925	1000
	Total Pressure	0.026	0.036	0.048	0.063	0.079	0.097	0.117	0.139	0.162
	Static Pressure	0.016	0.022	0.029	0.039	0.048	0.060	0.072	0.086	0.100
	Throw	3-5-8	4-5-10	4-6-12	5-6-13	5-7-13	5-8-14	6-9-14	6-10-15	7-11-15
	NC	—	18	22	25	28	31	33	36	38
10" Dia. Neck	Airflow, cfm	109	150	191	232	273	313	354	395	456
	Neck Velocity, fpm	200	275	350	425	500	575	650	725	800
	Total Pressure	0.008	0.014	0.023	0.034	0.047	0.062	0.080	0.099	0.121
	Static Pressure	0.006	0.009	0.015	0.023	0.031	0.041	0.054	0.066	0.081
	Throw	2-4-6	3-5-9	4-5-12	5-7-13	5-8-14	6-10-14	7-11-15	8-12-16	9-13-17
	NC	—	—	16	21	25	29	32	35	37

2 Slot

6" Dia. Neck	Airflow, cfm	59	94	128	163	197	231	266	300	335
	Neck Velocity, fpm	300	475	650	825	100	1175	1350	1525	17000
	Total Pressure	0.010	0.024	0.045	0.072	0.105	0.146	0.193	0.246	0.305
	Static Pressure	0.004	0.010	0.019	0.030	0.043	0.060	0.079	0.101	0.125
	Throw	0-1-3	1-2-4	2-3-5	2-4-7	3-5-8	4-5-10	4-5-12	5-6-13	5-7-14
	NC	—	—	—	17	22	26	30	33	36
8" Dia. Neck	Airflow, cfm	140	192	244	297	349	401	454	506	558
	Neck Velocity, fpm	400	550	700	850	1000	1150	1300	1450	1600
	Total Pressure	0.021	0.039	0.063	0.092	0.128	0.169	0.217	0.269	0.328
	Static Pressure	0.011	0.020	0.032	0.047	0.066	0.087	0.112	0.138	0.168
	Throw	2-3-6	3-5-8	4-5-11	5-6-13	5-7-15	5-9-16	6-10-18	7-11-19	8-12-20
	NC	—	—	20	25	29	33	36	39	42
10" Dia. Neck	Airflow, cfm	218	273	327	382	436	491	545	600	654
	Neck Velocity, fpm	400	500	600	700	800	900	1000	1100	1200
	Total Pressure	0.024	0.037	0.053	0.073	0.095	0.121	0.149	0.18	0.214
	Static Pressure	0.014	0.021	0.031	0.042	0.055	0.071	0.087	0.105	0.124
	Throw	3-5-9	4-6-12	5-7-14	5-8-16	6-9-17	7-11-18	8-12-19	9-13-21	9-14-22
	NC	—	16	21	25	29	32	35	37	40
12" Dia. Neck	Airflow, cfm	236	314	393	471	550	628	707	785	864
	Neck Velocity, fpm	300	400	500	600	700	800	900	1000	1100
	Total Pressure	0.015	0.027	0.042	0.061	0.083	0.107	0.136	0.168	0.203
	Static Pressure	0.009	0.017	0.026	0.039	0.052	0.067	0.086	0.106	0.128
	Throw	4-5-10	5-7-14	5-8-16	7-10-18	8-12-20	9-14-21	10-15-22	12-16-23	13-17-24
	NC	—	15	21	26	30	33	36	39	42

Performance Notes:

1. All pressures are in inches w.g.

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

3. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (-) in spaces indicates an NC level of less than 15.

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

Balancing:

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

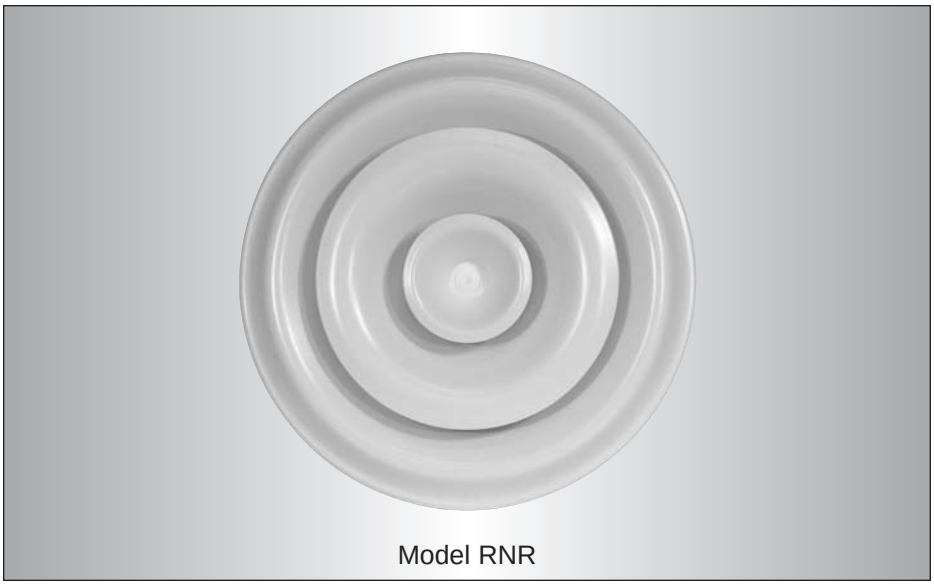
ROUND CEILING DIFFUSERS

- ADJUSTABLE
- HORIZONTAL DISCHARGE PATTERN
- LOUVERED FACE

Models:

RNR Steel

ARNR Aluminum



Model RNR

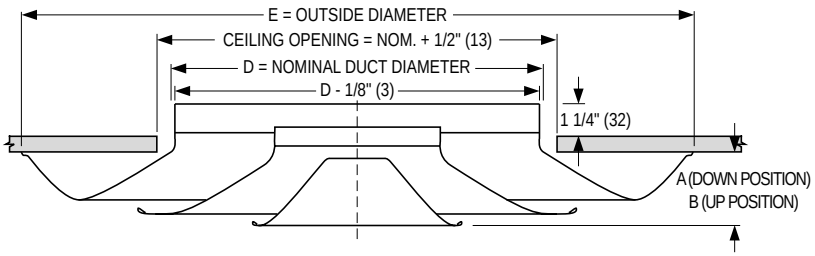
The **Nailor RNR Series Round Ceiling Diffusers** feature three concentric cones in all sizes to offer a balanced appearance where different sizes are used in the same area. The diffusers deliver the air in a true 360° radial horizontal pattern and produce excellent performance in variable air volume systems.
The **Models RNR** and **ARNR** feature infinite horizontal discharge patterns that allow the diffusers to accommodate different flow rate conditions. Position A (cones down) provides maximum capacity at minimum NC levels while Position B (cones up) provides higher induction and more air movement.

FEATURES:

- Engineered 360° air diffusion pattern.
- High neck collars for solid connection.
- All sizes feature three cones for a uniform and balanced appearance.
- A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
- Discharge positions are easily field set by sliding the inner cone assembly up or down. The core is securely retained by a spring loaded friction arrangement.
- Designed for both heating and cooling applications.
- Screwdriver adjustment of the optional balancing damper through the cones.

Material: Corrosion-resistant steel or aluminum.

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



Dimensional Data

	Imperial Units (inches)			Metric Units (mm)		
Listed Size	A	B	E	A	B	E
6	1 3/4	1 1/8	11 5/8	44	29	295
8	2 1/8	1 1/2	14 3/8	54	38	365
10	2 7/8	2 1/8	17 15/16	73	54	456
12	3 1/8	2 3/8	21 5/8	79	60	549
14	3 3/8	2 5/8	25 1/4	86	67	641
16	4	3 1/4	29	102	83	737
*18	4 3/4	3 7/8	33 1/2	121	98	851
*20	5 7/8	4 7/8	37 1/4	149	124	946
*24	7 3/4	6 5/8	43 7/8	197	168	1114

* RNR ONLY

HOW TO SPECIFY OR TO ORDER

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

Round Ceiling Diffusers – Models RNR and ARNR

RNR - 12 - AW - –

MODEL

Steel	RNR
Aluminum	ARNR

LISTED NECK SIZE

Imperial (inches)	Metric (mm)
- 06	152
- 08	203
- 10	254
- 12	305
- 14	356
- 16	406
- 18	457
- 20	508
- 24	610

ACCESSORIES

- None (default)	—
- Safety Chain	SC
- Earthquake Tabs	EQT
- Foam Gasket	GK

AIR BALANCING DEVICES

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

FINISH

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

Note:

1. Model RNR is available in sizes 6" - 24" (152 x 610)
   Model ARNR is available in sizes 6" - 16" (152 x 406)
2. If more than one accessory is required, list in order.

Specification Text File

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model** (select one) **RNR** (steel) or **ARNR** (aluminum) **Round Adjustable Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have three round spun cones. The inner core assembly shall be removable and slide up or down to attain infinite horizontal discharge pattern adjustment. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper, without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models RNR and ARNR

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1100	1200
	VP	.010	.016	.022	.031	.040	.050	.062	.075	.090
6" Dia.	TP, Position A	.024	.038	.055	.074	.097	.123	.152	.184	.219
	TP, Position B	.039	.061	.088	.119	.156	.197	.243	.294	.350
	Airflow, CFM	79	98	118	137	157	177	196	216	236
	NC, Position A	—	—	15	20	24	28	31	34	37
	NC, Position B	—	16	21	26	30	34	37	40	43
	T, Position A	2-2-4	2-3-5	2-4-5	3-4-6	3-4-7	3-5-8	4-5-8	4-6-9	4-6-10
	T, Position B	3-3-5	3-4-6	3-5-6	4-5-7	4-5-8	4-6-9	5-6-9	5-7-10	5-7-12
8" Dia.	TP, Position A	.031	.048	.069	.094	.123	.156	.193	.233	.278
	TP, Position B	.049	.077	.111	.151	.198	.250	.309	.374	.445
	Airflow, CFM	140	175	209	244	279	314	349	384	419
	NC, Position A	—	—	18	23	27	31	34	37	40
	NC, Position B	—	19	24	29	33	37	40	43	46
	T, Position A	2-3-6	3-4-7	3-5-8	3-5-9	4-6-10	4-7-11	5-8-12	5-9-13	6-9-14
	T, Position B	3-4-7	4-5-8	4-6-9	4-6-10	5-7-12	5-8-13	6-9-14	6-10-15	7-10-16
10" Dia.	TP, Position A	.026	.040	.058	.079	.103	.130	.161	.194	.231
	TP, Position B	.041	.064	.093	.126	.165	.209	.257	.311	.371
	Airflow, CFM	218	273	327	382	436	491	545	600	654
	NC, Position A	—	—	17	22	26	30	33	36	39
	NC, Position B	—	18	23	28	32	36	39	42	45
	T, Position A	3-4-7	3-5-8	4-5-9	4-6-10	4-7-12	5-8-13	5-9-14	6-10-16	7-11-17
	T, Position B	4-5-9	4-6-10	5-6-11	5-7-12	5-9-14	6-10-15	6-11-16	7-12-18	8-13-19
12" Dia.	TP, Position A	.025	.039	.056	.076	.100	.126	.156	.189	.225
	TP, Position B	.040	.063	.090	.123	.160	.203	.250	.303	.360
	Airflow, CFM	314	393	471	550	628	707	785	864	942
	NC, Position A	—	—	16	21	25	29	32	35	38
	NC, Position B	—	17	22	27	31	35	38	41	44
	T, Position A	3-5-9	4-6-10	4-7-11	5-8-13	5-8-14	6-10-16	7-11-18	8-12-19	9-13-21
	T, Position B	4-6-10	5-7-12	5-8-13	6-9-15	6-10-17	7-12-18	8-13-21	9-14-22	10-15-24
14" Dia.	TP, Position A	.034	.053	.077	.105	.137	.173	.214	.259	.308
	TP, Position B	.055	.086	.123	.168	.219	.278	.343	.415	.494
	Airflow, CFM	428	535	641	748	855	962	1069	1176	1283
	NC, Position A	—	16	22	27	31	35	38	41	44
	NC, Position B	—	22	27	32	36	40	43	46	49
	T, Position A	4-6-10	4-7-12	5-8-14	6-9-16	7-10-18	8-12-20	9-13-22	10-15-24	10-16-26
	T, Position B	5-7-11	5-8-14	6-9-16	7-10-18	8-11-20	9-13-22	10-15-25	11-17-27	12-18-30
16" Dia.	TP, Position A	.031	.049	.071	.096	.125	.159	.196	.237	.282
	TP, Position B	.050	.079	.113	.154	.201	.254	.314	.380	.452
	Airflow, CFM	559	698	838	977	1117	1257	1396	1536	1676
	NC, Position A	—	15	21	25	29	33	36	39	42
	NC, Position B	—	19	24	29	33	37	40	43	46
	T, Position A	4-7-12	5-8-14	6-9-16	7-11-18	8-12-20	9-13-22	10-14-24	11-16-26	12-17-28
	T, Position B	5-7-13	6-9-16	7-10-18	8-12-20	9-13-22	10-14-24	11-15-26	12-18-29	13-19-31
18" Dia.	TP, Position A	.028	.045	.064	.087	.114	.144	.178	.215	.256
	TP, Position B	.046	.071	.103	.140	.183	.231	.286	.346	.411
	Airflow, CFM	707	884	1060	1237	1414	1590	1767	1944	2121
	NC, Position A	—	—	19	24	28	32	35	38	41
	NC, Position B	—	17	22	27	31	35	38	41	44
	T, Position A	5-7-13	6-9-16	7-11-18	8-12-20	9-14-23	10-15-25	12-17-27	13-18-29	14-20-31
	T, Position B	6-8-15	7-10-18	8-12-20	9-13-22	10-15-25	11-17-29	13-19-30	14-20-32	15-21-34
20" Dia.	TP, Position A	.028	.044	.063	.086	.112	.142	.175	.212	.252
	TP, Position B	.045	.070	.101	.138	.180	.228	.281	.340	.405
	Airflow, CFM	873	1091	1309	1527	1745	1963	2182	2400	2618
	NC, Position A	—	—	20	25	29	33	36	39	42
	NC, Position B	—	18	23	28	32	36	39	42	45
	T, Position A	5-9-15	7-10-18	8-12-20	9-14-23	10-15-26	12-17-28	13-19-30	14-21-33	15-23-35
	T, Position B	6-10-17	8-11-20	9-13-22	10-15-25	11-16-28	13-18-30	14-20-32	15-22-35	16-25-38

Performance Data

Models RNR and ARNR

Nominal Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1100	1200
	VP	.010	.016	.022	.031	.040	.050	.062	.075	.090
24" Dia.	TP, Position A	.025	.039	.056	.076	.099	.125	.154	.187	.222
	TP, Position B	.040	.062	.089	.121	.158	.200	.247	.299	.356
	Airflow, CFM	1257	1571	1885	2199	2513	2827	3142	3456	3770
	NC, Position A	—	15	21	26	30	34	37	40	43
	NC, Position B	—	19	24	29	33	37	40	43	46
	T, Position A	6-10-18	8-12-20	9-14-24	10-16-27	11-17-29	13-20-33	15-22-36	17-25-39	18-27-42
	T, Position B	7-11-19	9-13-22	10-16-26	11-18-29	12-19-31	14-22-35	16-24-39	18-27-42	20-30-46

CFM - cubic feet per minute

FPM - feet per minute velocity

TP - total pressure - inches w.g.

VP - velocity pressure - inches w.g.

T - throw in feet

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

Performance Notes:

1. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Performance data as shown is for ceiling mounted diffusers. For exposed duct mounting, multiply the throw values by 0.70.
3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

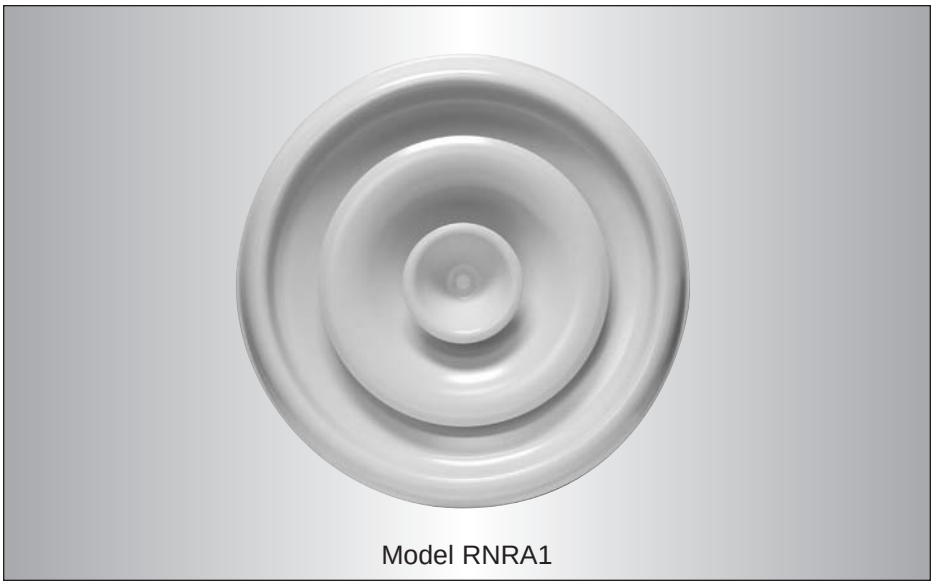
Neck Size Diameter in Inches	Ak Factor	
	Position A (Cones Down)	Position B (Cones Up)
6	0.114	0.097
8	0.163	0.126
10	0.316	0.245
12	0.478	0.323
14	0.536	0.420
16	0.758	0.594
18	0.998	0.761
20	1.254	0.987
24	2.058	1.625

ROUND CEILING DIFFUSERS

- ADJUSTABLE
- HORIZONTAL TO VERTICAL DISCHARGE PATTERN
- LOUVERED FACE

Models:

RNRA1 Steel



Model RNRA1

The **Nailor RNRA1 Round Ceiling Diffuser** features three concentric cones in all sizes to offer a balanced appearance where different sizes are used in the same area. The diffusers deliver the air in a true 360° air diffusion pattern and produce excellent performance in variable air volume systems.

The **Model RNRA1** is designed for both heating and cooling applications. The air discharge pattern is fully adjustable between horizontal and vertical. The discharge pattern is adjusted by sliding the core up or down. In the "down" setting, capacity is maximized and throw is horizontal. In the "up" setting, air projects vertically down from the diffuser.

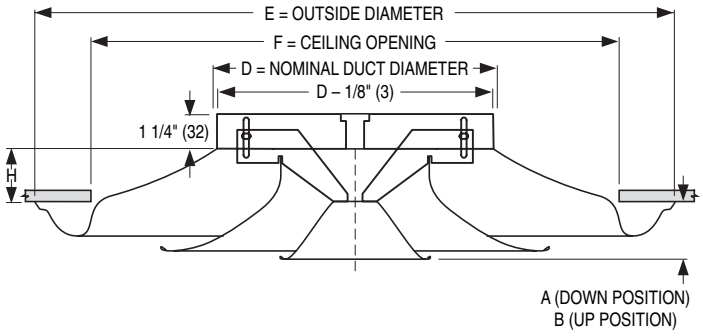
FEATURES:

- Engineered 360° air diffusion pattern.
- High neck collars for solid connection.
- All sizes feature three cones for a uniform and balanced appearance.
- A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
- Discharge settings are easily field set by sliding the inner cone assembly up or down. The core is securely retained by a spring loaded friction arrangement.
- Designed for both heating and cooling applications.
- Screwdriver adjustment of the optional balancing damper through the cones.

Material: Corrosion-resistant steel.

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

Dimensional Data



	Imperial Units (inches)					Metric Units (mm)				
Listed Size	A	B	E	F	H	A	B	E	F	H
6	1 3/4	3/4	14 1/8	12	7/8	44	19	359	305	22
8	2	1	18 3/4	16	1 1/4	51	25	476	406	32
10	2 1/2	1 1/4	22 7/8	20	1 1/2	64	32	581	508	38
12	3 1/4	1 3/4	27 3/8	24	1 7/8	83	44	695	610	48
14	3 3/4	1 3/4	32	28	1 7/8	95	44	813	711	48
16	4	2	36 1/4	32	2 1/8	102	51	921	813	54

HOW TO SPECIFY OR TO ORDER

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

Round Ceiling Diffuser, Horizontal to Vertical Adjustment – Model RNRA1

RNRA1 - 12 - AW - –

MODEL

Steel	RNRA1

LISTED NECK SIZE

Imperial (inches)	Metric (mm)
- 06	152
- 08	203
- 10	254
- 12	305
- 14	356
- 16	406

ACCESSORIES

- None (default)	—
- Safety Chain	SC
- Earthquake Tabs	EQT
- Foam Gasket	GK

AIR BALANCING DEVICES

- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275

FINISH

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

D

CEILING DIFFUSERS

Note:

1. If more than one accessory is required, list in order.

Specification Text File

SUGGESTED SPECIFICATION:

Furnish and install **Nailor Model RNRA1 Round Adjustable Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from corrosion-resistant steel and have three round spun cones. The inner cones shall be removable. The core shall be adjustable to achieve a horizontal or vertical discharge pattern. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

ROUND CEILING DIFFUSERS

- ADJUSTABLE HORIZONTAL / VERTICAL AIRFLOW PATTERN
- ALUMINUM

Model 6300R

Models:

6300
Two Position Adjustment

6300R
Continuous Rotary Adjustment

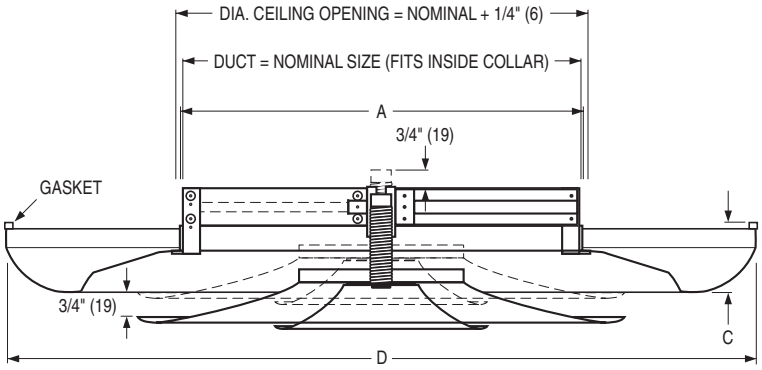
The Nailor 6300 Series Round Ceiling Diffusers are available in a comprehensive range of sizes with a capacity ranging from 50 to 5000 cfm (24 – 2360 l/s). They are suitable for both cooling and heating applications. With three concentric cones in all sizes they offer the same balanced appearance when different sizes are used in the same zone. They feature a 360° air diffusion pattern and provide excellent performance in variable air volume systems.

Model 6300 is fixed in either an "UP" or a "DOWN" position that is easily adjusted by lifting and rotating the center core. An optional round opposed blade damper is screwdriver-operated through the face of the unit. The **Model 6300** has a 2-position core to guide vertical or horizontal projection of the air.

Model 6300R provides 3/4" (19) adjustability through utilization of a threaded mechanism. The "UP" position of the core provides vertical throw, and the "DOWN" position provides horizontal throw. The core is easily adjusted by rotating the center cone. An optional round opposed blade damper is screwdriver-operated through the face of the unit. The **Model 6300R** has a fully adjustable core to guide vertical or horizontal projection of the air.

Material: Spun aluminum.

Finish: AW Appliance White finish (standard).
AL Aluminum (option).



6300R

Notes:
1/4" (6) oversize duct fits outside collar, if desired.
A = Inside diameter of diffuser neck.
C = Projection of diffuser outer cone below ceiling.
D = Overall diameter of diffuser.

Dimensional Data

	Imperial Units (inches)			Metric Units (mm)		
Listed Size	A	C	D	A	C	D
6	6 1/8	3/4	12 1/8	156	19	308
8	8 1/8	1	15 1/2	206	25	394
10	10 1/8	1 1/4	18 7/8	257	32	479
12	12 1/8	1 3/8	22 1/4	308	35	565
14	14 1/8	1 9/16	25 5/8	358	40	651
16	16 1/8	1 3/4	29	410	44	737
18	18 1/8	1 15/16	32 3/8	460	49	822
20	20 1/8	2 1/8	35 3/4	511	54	908
24	24 1/8	2 1/2	42 1/2	613	64	1080

HOW TO SPECIFY OR TO ORDER

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

Aluminum Round Ceiling Diffusers – Model Series 6300

6300R - 12 - AW - –

MODEL

Aluminum:

- Two Position	6300
- Rotating Fully Adjustable	6300R

LISTED NECK SIZE

Imperial (inches)	Metric (mm)
- 06	152
- 08	203
- 10	254
- 12	305
- 14	356
- 16	406
- 18	457
- 20	508
- 24	610

ACCESSORIES

- None (default)	—
- Safety Chain	SC

AIR BALANCING DEVICES

- Radial Opposed Blade Damper	4275
- Equalizing Grid	EGR
- Damper/Equalizing Grid	DEGR

FINISH

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

Note:

1. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION:

Specification Text File

6300 – Two Position

Furnish and install **Nailor Model 6300 Aluminum 2-Position Round Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be all aluminum construction and incorporate three round cones that have been spun. A fixed, two-position core shall be easily adjusted either in an up or down position. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

6300R – Rotating Fully Adjustable

Furnish and install **Nailor Model 6300R Aluminum Adjustable Round Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be all aluminum construction and incorporate three round cones that have been spun. The diffuser shall be easily adjusted by rotating the inner core either in an up or down position. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper without removing the inner core. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 6300 and 6300R

Listed Neck Size	Neck Velocity, FPM / VP	400 .010	500 .016	600 .023	700 .031	800 .040	900 .051	1000 .063	1200 .090	1400 .122	1600 .160
6	TP	.024	.037	.056	.071	.092	.112	.138	.197	.272	.345
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	RD	2-5	3-5	4-6	4-7	5-7	6-8	6-9	6-9	7-10	7-10
	NC	—	—	12	17	21	25	28	34	39	41
8	TP	.033	.049	.068	.095	.122	.155	.192	.270	.362	.470
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	RD	3-7	4-8	5-8	6-9	7-10	8-10	9-11	8-12	9-13	10-14
	NC	—	—	14	19	23	27	30	36	41	44
10	TP	.041	.062	.098	.121	.157	.200	.245	.350	.477	.610
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	RD	4-9	5-10	7-11	8-11	9-12	9-13	10-14	11-15	11-16	12-17
	NC	—	10	16	21	25	29	32	38	43	46
12	TP	.043	.066	.093	.127	.165	.206	.249	.355	.482	.620
	Airflow, CFM	315	390	470	550	630	705	785	940	1100	1255
	RD	5-10	7-12	8-13	9-14	10-15	11-16	12-16	13-18	14-19	15-21
	NC	—	12	18	23	27	31	34	40	45	48
14	TP	.041	.061	.087	.118	.150	.190	.337	.325	.442	.560
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	RD	6-13	8-14	10-15	11-16	12-17	13-19	14-19	15-21	16-22	17-24
	NC	—	15	21	26	30	34	37	43	48	51
16	TP	.043	.060	.093	.127	.153	.206	.252	.350	.482	.580
	Airflow, CFM	560	700	840	980	1120	1260	1400	1680	1960	2240
	RD	6-12	7-13	9-15	10-16	12-17	13-18	13-18	14-20	16-22	18-24
	NC	—	16	22	27	31	35	38	44	49	52
18	TP	.044	.068	.097	.130	.167	.214	.253	.370	.492	.630
	Airflow, CFM	710	885	1060	1240	1420	1590	1770	2120	2480	2830
	RD	7-16	10-18	12-19	14-21	16-22	17-23	18-24	19-27	21-29	22-31
	NC	—	17	23	28	32	36	39	45	50	53
20	TP	.045	.069	.099	.135	.170	.215	.262	.375	.512	.645
	Airflow, CFM	875	1100	1310	1530	1750	1970	2190	2610	3060	3500
	RD	8-18	11-19	14-21	15-23	17-24	18-26	19-27	21-30	23-32	24-34
	NC	10	18	24	29	33	37	40	46	51	54
24	TP	.043	.066	.095	.131	.170	.215	.267	.360	.407	.660
	Airflow, CFM	1260	1570	1880	2200	2510	2820	3140	3770	4400	5020
	RD	10-21	13-23	16-25	18-28	21-29	22-31	25-36	25-36	28-39	29-42
	NC	12	19	25	30	34	38	41	47	52	55

CFM - cubic feet per minute

FPM - feet per minute velocity

TP - total pressure - inches w.g.

VP - velocity pressure - inches w.g.

RD - radius of diffusion in feet, isothermal

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

Performance Notes:

1. Radius of diffusion values are given at 100 and 50 fpm terminal velocities under isothermal conditions.

2. Performance data as shown is for the diffuser only, with the cones in the "down" position. Performance for the cones in the "up" position can be approximated by multiplying the total pressures by 1.6, adding 5 NC to the sound levels, and multiplying the radius of diffusion by .90.

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

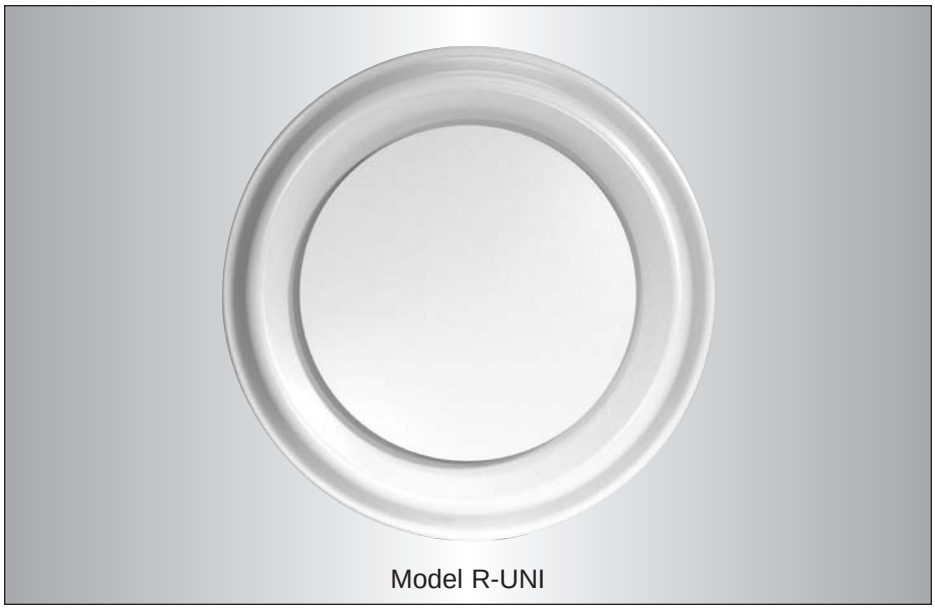
Listed Size	Ak Factor
6	.120
8	.200
10	.310
12	.440
14	.570
16	.785
18	.990
20	1.220
24	1.770

ROUND CEILING DIFFUSERS

- ARCHITECTURAL PLAQUE FACE
- ADJUSTABLE HORIZONTAL PATTERN
- ALUMINUM FACE

Model:

R-UNI



Model R-UNI

The **Nailor Model R-UNI Round Plaque Ceiling Air Diffuser** has been designed to provide both the appearance required for architectural excellence as well as high engineering performance. These diffusers are suitable for both architectural ceilings and exposed duct applications.

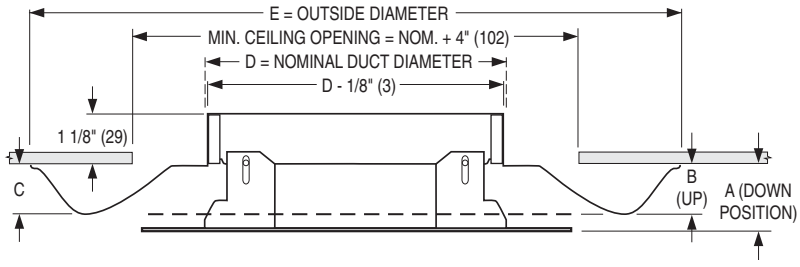
The diffusers deliver the air in a true 360° air pattern and provide excellent performance in variable air volume systems. The discharge setting is simply adjusted by sliding the inner face plaque assembly up or down. The diffuser provides higher induction and more air movement in the higher position while maximum capacity at minimum NC levels can be obtained in the lower position.

FEATURES:

- Smooth heavy duty face plaque is 1/8" (0.125) thick aluminum for strength and lightness.
- A spring clip arrangement permits quick, easy installation and removal of the inner cone assembly.
- The core is retained by a spring loaded friction arrangement. There are no screws to reposition.
- An optional radial opposed blade damper with an operating arm to adjust the damper without removing the core is available.
- Available for duct sizes 6" – 16" (152 – 406) diameter.
- High neck collars for solid connection.

Material: Corrosion-resistant steel outer cone and bracketry with an aluminum face.

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



Dimensional Data

Listed Size	Imperial Units (inches)			Metric Units (mm)		
	A	C	E	A	C	E
6	1 1/4	1	14 3/8	32	25	365
8	1 7/16	1 1/4	17 15/16	37	32	456
10	1 7/8	1 1/2	21 5/8	48	38	549
12	2 1/8	1 11/16	25 1/4	54	43	641
14	2 3/8	2	29	60	51	737
16	2 3/4	2 1/4	33 1/2	70	57	851

HOW TO SPECIFY OR TO ORDER

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

Round Plaque Ceiling Diffusers – Model Series R-UNI

R-UNI - 12 - AW - –

MODEL

Plaque Face Adjustable (Horizontal)	R-UNI

LISTED NECK SIZE

Imperial (inches)	Metric (mm)
- 06	152
- 08	203
- 10	254
- 12	305
- 14	356
- 16	406

ACCESSORIES

- None (default)	—
- Safety Chain	SC
- Earthquake Tabs	EQT
- Foam Gasket	GK

AIR BALANCING DEVICES

- Radial Opposed Blade Damper	4275
- Radial OBD with Operating Arm	4275-OA
- Butterfly Damper	4675
- Equalizing Grid	EGR
- Damper/Equalizing Grid	DEGR

FINISH

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

D

CEILING DIFFUSERS

Note:

1. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model R-UNI Round Architectural Plaque Face Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a round outer cone that is spun from corrosion-resistant steel. The inner core shall have a round plaque face that is heavy gauge aluminum, and shall be smooth and flat in appearance. A removable inner core assembly shall slide up or down to attain infinite horizontal discharge patterns. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model R-UNI

Nominal Neck Size	Neck Velocity, fpm	400	500	600	700	800	900	1000	1200	1400	1600
	Velocity Pressure	**.010**	**.016**	**.022**	**.031**	**.040**	**.050**	**.062**	**.090**	**.122**	**.160**
6" Dia.	**Total Pressure**	.034	.053	.076	.103	.134	.169	.209	.300	.407	.531
	Airflow, cfm	**79**	**98**	**118**	**137**	**157**	**177**	**196**	**236**	**275**	**314**
	Throw	1-2-3	2-2-5	2-3-7	3-4-9	3-5-10	4-6-12	4-7-13	6-9-14	7-11-15	8-13-17
	NC	—	—	—	—	16	21	24	30	36	41
8" Dia.	**Total Pressure**	.033	.052	.075	.104	.136	.174	.216	.315	.432	.569
	Airflow, cfm	**140**	**175**	**209**	**244**	**279**	**314**	**349**	**419**	**489**	**559**
	Throw	1-2-3	2-2-5	2-3-8	3-4-10	3-5-12	4-7-13	4-8-15	6-11-17	7-14-19	9-18-21
	NC	—	—	—	—	17	21	25	33	40	46
10" Dia.	**Total Pressure**	.048	.074	.106	.143	.185	.232	.285	.405	.546	.707
	Airflow, cfm	**218**	**273**	**327**	**382**	**436**	**491**	**545**	**654**	**764**	**873**
	Throw	1-2-5	2-2-6	2-3-8	3-4-10	3-6-13	4-8-13	5-9-14	6-15-20	8-16-21	10-19-22
	NC	—	—	—	—	15	20	23	28	34	37
12" Dia.	**Total Pressure**	.047	.073	.104	.141	.184	.233	.287	.411	.558	.727
	Airflow, cfm	**314**	**393**	**471**	**550**	**628**	**707**	**785**	**942**	**1100**	**1257**
	Throw	2-4-9	2-6-11	3-7-13	4-8-14	5-9-15	6-10-17	7-11-18	9-13-19	12-15-21	14-18-22
	NC	—	—	—	—	17	20	22	28	33	37
14" Dia.	**Total Pressure**	.051	.080	.116	.159	.209	.265	.328	.476	.651	.854
	Airflow, cfm	**428**	**535**	**641**	**748**	**855**	**962**	**1069**	**1283**	**1497**	**1710**
	Throw	4-7-14	5-9-16	6-10-17	7-12-18	9-13-20	10-14-21	11-15-21	14-18-23	17-20-24	20-22-25
	NC	—	—	16	20	24	28	36	43	49	54
16" Dia.	**Total Pressure**	.058	.090	.130	.177	.232	.293	.362	.522	.711	.929
	Airflow, cfm	**559**	**698**	**838**	**977**	**1117**	**1257**	**1396**	**1676**	**1955**	**2234**
	Throw	6-8-12	7-10-16	9-12-18	10-14-21	12-15-23	13-17-25	14-19-26	17-22-29	20-25-31	22-28-33
	NC	—	—	—	—	15	19	25	30	35	41

Performance Notes:

1. All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.

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

3. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (–) in spaces indicates an NC level of less than 15.

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

Balancing:

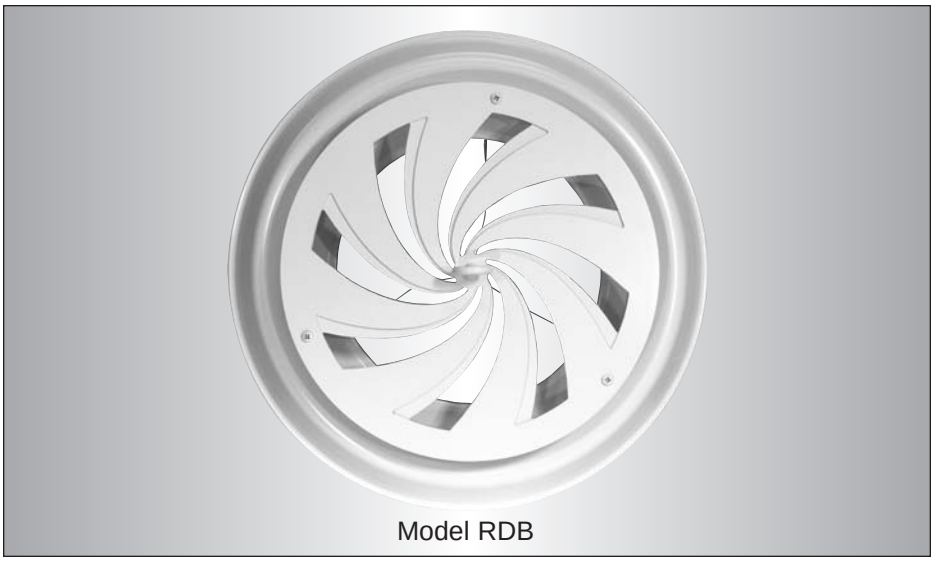
It is recommended that a commercially available 'Flow Hood' is used for field balancing. The airflow meter directly reads average flow rate with great accuracy at all volumes. It is a much faster and more accurate alternative to time consuming multiple velocity readings, eliminating the use of Ak factors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

ROUND DOWNBLAST DIFFUSER

- HEAVY DUTY
- ADJUSTABLE VERTICAL TO HORIZONTAL DISCHARGE PATTERN
- "FIBONACCI SPIRAL"

Model:

RDB Steel



Model RDB

The **Nailor Model RDB Round Downblast Diffusers** have been designed for industrial and commercial applications. The unique contemporary design features a "Fibonacci spiral" adjustable aperture. The discharge pattern can be adjusted from full horizontal to full vertical. At the full vertical setting, the diffuser forces approximately 75% of the air in a long downward projection. This results in effective spot cooling or heating from high mounting locations.

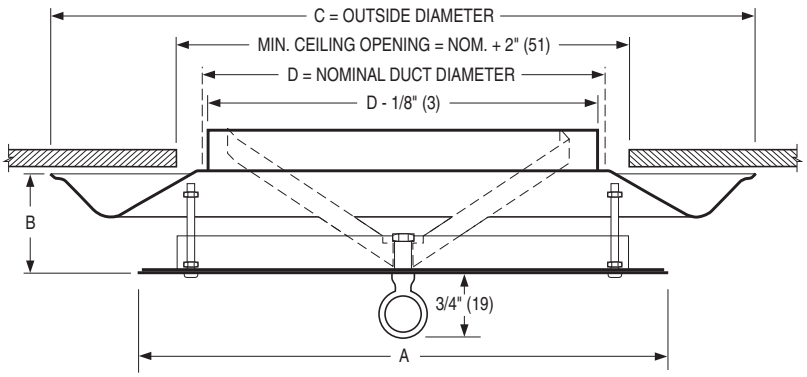
This style of diffuser is suitable for theaters, auditoriums, factories, warehouses, convention halls, coliseums, shopping malls and other applications where ceilings are high and conditions are variable.

FEATURES:

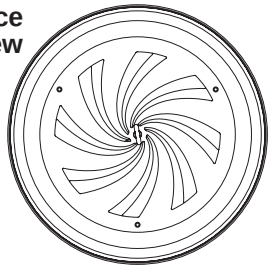
- Unique "Fibonacci spiral" adjustable aperture damper.
- Horizontal mode provides a uniform 360° discharge pattern.
- Vertical setting provides effective spot cooling or heating in high mounting locations.
- Included is an easily adjustable ring operator that allows for pole adjustment.
- High neck collars for solid connection.
- Optional round opposed blade damper is screwdriver operated and adjusted through the aperture.

Material: Heavy gauge corrosion-resistant steel.

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



Face View



Dimensional Data

Listed Size D	Imperial Units (inches) A	B	C	Metric Units (mm) A	B	C
8	11 11/16	2 1/4	14 3/8	297	57	365
10	14	2 9/16	17 15/16	356	65	456
12	16 1/4	3	21 5/8	413	76	549
14	18 5/8	3 3/8	25 1/4	473	86	641
16	20 7/8	4	29	530	102	737
18	23 1/4	4 1/2	33 1/2	591	114	851
20	25 1/2	5 7/16	37 1/4	648	138	946
24	30 3/16	6 1/2	43 7/8	767	165	1114

HOW TO SPECIFY OR TO ORDER

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

Round Downblast Ceiling Diffusers – Model Series RDB

RDB - 12 - AW - –

MODEL

Round Downblast	RDB

LISTED NECK SIZE

Imperial (inches)	Metric (mm)
- 08	203
- 10	254
- 12	305
- 14	356
- 16	406
- 18	457
- 20	508
- 24	610

ACCESSORIES

- None (default)	—
- Earthquake Tabs	EQT
- Foam Gasket	GK

AIR BALANCING DEVICES

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

FINISH

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

Note:

1. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model RDB Round Downblast Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be constructed of heavy gauge corrosion-resistant spun steel and incorporate a round outer cone. A removable flat inner cone assembly shall have a "Fibonacci spiral" aperture damper that is adjusted by a ring (pole) operator, which extends below the face of the diffuser. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model RDB

Nominal Neck	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	Velocity Pressure	0.010	0.016	0.022	0.031	0.040	0.050	0.062	0.090	0.122	0.160
8" Dia.	Airflow, CFM	140	175	209	244	279	314	349	419	489	559
	Total Pressure Horiz.	0.027	0.042	0.062	0.073	0.115	0.140	0.175	0.258	0.335	0.421
	Total Pressure Vert.	0.014	0.024	0.035	0.049	0.053	0.071	0.088	0.122	0.176	0.235
	NC Horiz.	—	—	—	21	23	25	31	33	37	39
	NC Vert.	—	—	—	—	—	—	20	22	28	31
	Throw Horiz.	0-1-2	1-2-4	1-2-5	1-2-7	1-3-9	2-4-10	2-4-11	3-5-12	4-6-13	6-7-15
	Throw Vert.	8	10	16	19	24	31	34	37	43	48
10" Dia.	Airflow, CFM	218	273	327	382	436	491	545	654	764	873
	Total Pressure Horiz.	0.036	0.056	0.082	0.111	0.145	0.185	0.230	0.335	0.462	0.570
	Total Pressure Vert.	0.016	0.026	0.037	0.051	0.066	0.083	0.103	0.149	0.204	0.265
	NC Horiz.	—	—	—	—	21	23	27	33	39	41
	NC Vert.	—	—	—	—	—	—	20	25	32	35
	Throw Horiz.	0-1-3	1-2-5	1-2-7	1-3-8	2-4-10	2-4-11	3-5-12	4-7-13	6-8-15	7-10-16
	Throw Vert.	12	13	22	26	29	34	37	40	48	50
12" Dia.	Airflow, CFM	314	393	471	550	628	707	785	942	1100	1257
	Total Pressure Horiz.	0.047	0.073	0.107	0.149	0.195	0.245	0.307	0.445	0.612	0.800
	Total Pressure Vert.	0.018	0.029	0.042	0.058	0.076	0.095	0.118	0.170	0.232	0.305
	NC Horiz.	—	—	—	33	27	31	35	39	43	46
	NC Vert.	—	—	—	—	—	22	25	28	33	37
	Throw Horiz.	3-6-11	4-7-13	5-8-15	6-10-17	7-11-18	8-12-19	9-13-20	12-16-22	15-18-23	18-20-25
	Throw Vert.	15	17	28	36	46	50	55	60	67	75
14" Dia.	Airflow, CFM	428	535	641	748	855	962	1069	1283	1497	1710
	Total Pressure Horiz.	0.039	0.062	0.090	0.127	0.165	0.209	0.262	0.380	0.542	0.700
	Total Pressure Vert.	0.016	0.027	0.038	0.054	0.070	0.088	0.111	0.162	0.224	0.295
	NC Horiz.	—	—	—	—	22	25	29	37	46	52
	NC Vert.	—	—	—	—	—	—	22	29	35	38
	Throw Horiz.	1-6-12	2-7-14	3-8-16	4-10-17	5-11-18	7-12-19	8-13-20	11-16-22	15-18-23	19-21-25
	Throw Vert.	21	25	31	39	48	53	57	63	70	89
16" Dia.	Airflow, CFM	559	698	838	977	1117	1257	1396	1676	1955	2234
	Total Pressure Horiz.	0.053	0.069	0.110	0.181	0.232	0.292	0.367	0.535	0.737	0.965
	Total Pressure Vert.	0.020	0.032	0.045	0.061	0.083	0.104	0.132	0.189	0.261	0.342
	NC Horiz.	—	—	—	22	25	31	37	42	46	52
	NC Vert.	—	—	—	—	—	22	27	35	39	41
	Throw Horiz.	6-10-18	7-11-20	7-13-21	8-16-22	9-17-24	11-19-25	13-20-26	14-21-27	15-22-28	16-23-29
	Throw Vert.	25	27	34	41	50	55	59	67	85	94
18" Dia.	Airflow, CFM	707	884	1060	1237	1414	1590	1767	2121	2474	2827
	Total Pressure Horiz.	0.071	0.114	0.162	0.226	0.300	0.375	0.472	0.690	0.942	1.230
	Total Pressure Vert.	0.023	0.037	0.053	0.073	0.096	0.120	0.150	0.217	0.298	0.390
	NC Horiz.	—	—	22	34	37	41	44	52	57	62
	NC Vert.	—	—	—	—	—	24	27	33	37	41
	Throw Horiz.	8-13-21	10-14-22	11-16-23	12-17-24	14-18-25	15-19-26	16-20-27	18-22-28	21-23-29	23-25-30
	Throw Vert.	29	34	39	44	55	57	63	74	85	100
20" Dia.	Airflow, CFM	873	1091	1309	1527	1745	1963	2182	2618	3054	3491
	Total Pressure Horiz.	0.074	0.116	0.162	0.221	0.289	0.365	0.442	0.630	0.862	1.120
	Total Pressure Vert.	0.022	0.035	0.050	0.069	0.090	0.115	0.142	0.206	0.284	0.373
	NC Horiz.	—	25	31	34	38	42	45	53	58	62
	NC Vert.	—	—	—	—	23	27	31	36	42	46
	Throw Horiz.	10-14-20	12-16-23	14-19-26	16-21-29	18-23-31	20-25-32	22-27-34	25-30-37	29-34-39	32-37-41
	Throw Vert.	36	42	48	53	58	63	69	81	90	105
24" Dia.	Airflow, CFM	1257	1571	1885	2199	2513	2827	3142	3770	4398	5027
	Total Pressure Horiz.	0.047	0.073	0.104	0.141	0.182	0.229	0.281	0.400	0.540	0.700
	Total Pressure Vert.	0.010	0.016	0.022	0.030	0.040	0.050	0.062	0.090	0.122	0.159
	NC Horiz.	25	30	34	36	42	47	53	62	70	73
	NC Vert.	—	—	—	24	27	33	38	44	47	51
	Throw Horiz.	12-16-22	14-19-26	17-21-30	18-23-32	20-25-33	23-27-36	25-31-37	29-35-40	33-38-42	34-40-47
	Throw Vert.	43	47	50	58	64	69	87	95	99	113

Performance Notes:

1. All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.

2. Horizontal throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions with the face fully closed.

3. Vertical throw (projection) is given at 50 fpm terminal velocity under isothermal conditions with the face fully open. For non-isothermal conditions, use the following correction factors:

ΔT Temp. Differential	Correction Factor
20°F Cooling	x 1.40
Isothermal	x 1.00
10°F Heating	x 0.83
20°F Heating	x 0.58
30°F Heating	x 0.53
40°F Heating	x 0.43

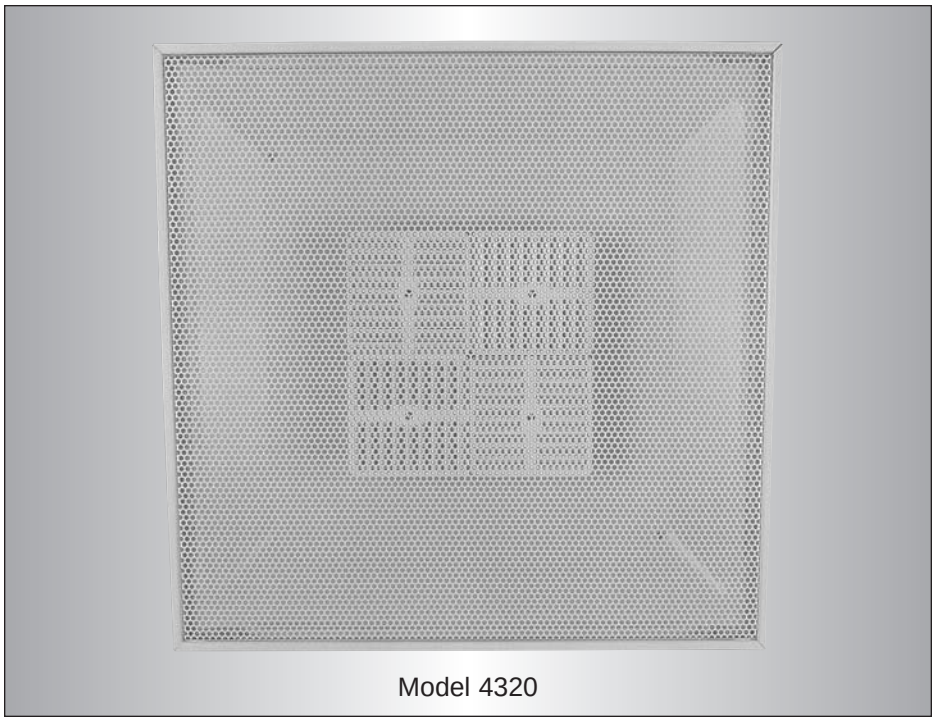
4. NC (Noise Criteria) values are based upon 10 dB room absorption, re 10^{-12} watts. Dash (-) in space indicates an NC of less than 20. Values shown are for the horizontal discharge pattern (center closed) and vertical discharge pattern (center fully open).

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

Nominal Neck Size	Ak Factors
8	0.13
10	0.25
12	0.51
14	0.56
16	1.08
18	1.36
20	1.60

PERFORATED CEILING DIFFUSERS

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



Model 4320

Steel Models:

4320 Flush Face
4325 Drop Face

Aluminum Face Models:

4320A Flush Face
4325A Drop Face

Aluminum Models:

4320AA Flush Face
4325AA Drop Face

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

The **4320 Series** features four individual stamped pattern controllers mounted on the rear of the diffuser face. They are easily field adjustable to suit the desired air pattern. **Model 4325** features a dropped (extended) face panel that is available to compliment tegular tile ceiling systems, so the panel remains flush with the ceiling line. In non-tegular ceilings the throw is reduced slightly and the airflow projection protects the ceiling against smudging.

FEATURES:

- Round or square necks available.
- Hinged, removable face plate with quick-release spring latches.
- Discharge pattern can adjust to vertical or 1, 2, 3 or 4-way horizontal, before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the pattern deflectors.
- Inlet collar has 1 1/4" (35) depth for easy duct connection.
- Dropping the perforated face gives access to the optional damper.
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.
- Return models (**4360 Series**) have the same face and frame construction as the supply models to match the appearance.

Material: Models 4320/4325 have a corrosion-resistant steel perforated face and backpan. **Models 4320A/4325A** have an aluminum perforated face and a corrosion-resistant steel backpan. **Models 4320AA/4325AA** have an aluminum perforated face and backpan.

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

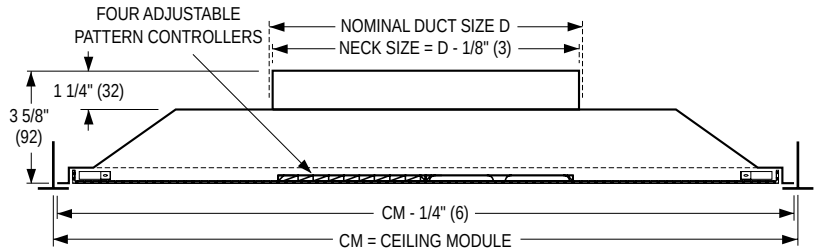
Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D			
Imperial Modules	Metric Modules	Round Neck		Square Neck	
		Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	6, 8	152, 203	6 x 6, 8 x 8	152 x 152, 203 x 203
16 x 16	400 x 400	6, 8, 10, 12 dia.	152, 203, 254, 305 dia.	6 x 6, 8 x 8, 10 x 10, 12 x 12	152 x 152, 203 x 203, 254 x 254, 305 x 305
24 x 12	600 x 300	6, 8 dia.	152, 203 dia.	6 x 6, 8 x 8, 18 x 6	152 x 152, 203 x 203, 457 x 152
20 x 20	500 x 500	6, 8, 10, 12, 14 dia.	152, 203, 254, 305, 356 dia.	6 x 6, 8 x 8, 10 x 10	152 x 152, 203 x 203, 254 x 254
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16 dia.	152, 203, 254, 305, 356, 381, 406 dia.	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356
48 x 24	1200 x 600				

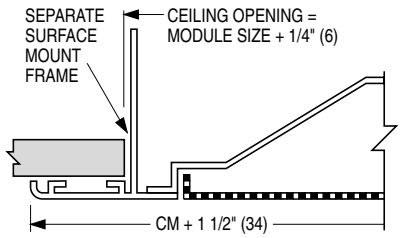
Dimensional Data and Frame Types

Models 4320, 4320A, 4320AA • Supply • Flush Face

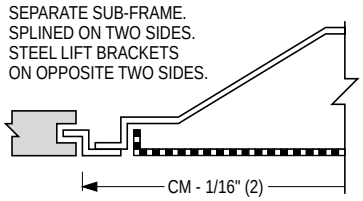
Type L Lay-in T-Bar



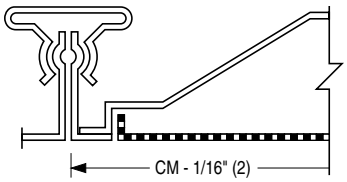
Type S Surface Mount



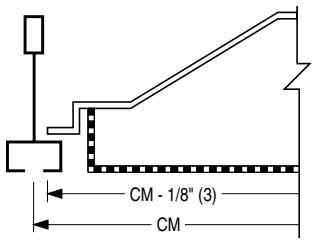
Type SP Spline



Type M Metal Pan (Snap-in)

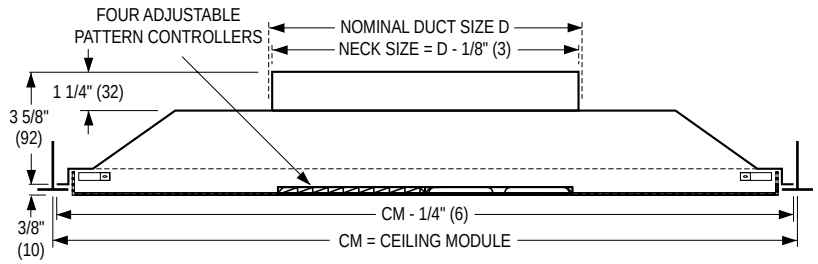


Type F Fineline®

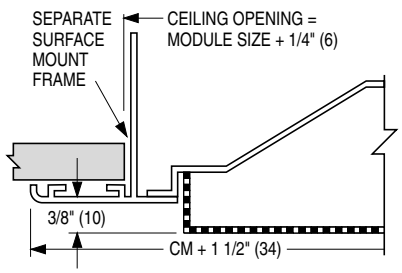


Models 4325, 4325A, 4325AA • Supply • Drop Face

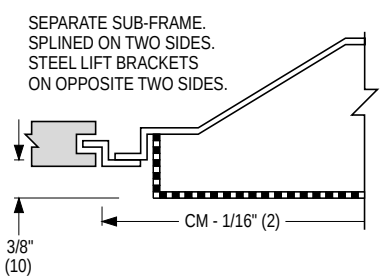
Type L Lay-in T-Bar or Tegular



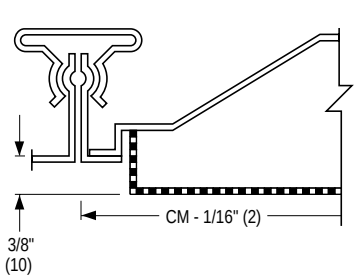
Type S Surface Mount



Type SP Spline



Type M Metal Pan (Snap-in)



D

CEILING DIFFUSERS

HOW TO SPECIFY OR TO ORDER

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

Perforated Supply Ceiling Diffusers – Model Series 4320

4320 - 08 - 24 x 24 - L - AW - –

MODEL

- Steel	Flush Face	4320
	Drop Face	4325
- Aluminum Face	Flush Face	4320A
	Drop Face	4325A
- Aluminum	Flush Face	4320AA
	Drop Face	4325AA

NECK SIZE (inches)

Round

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

Square/Rectangular

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

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 16 x 16	400 x 400
- 20 x 20	500 x 500
- 24 x 12	600 x 300
- 24 x 24	600 x 600
- 48 x 24	1200 x 600

ACCESSORIES

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

AIR BALANCING DEVICES

Round Neck

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

Square/Rectangular Neck

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

FINISH

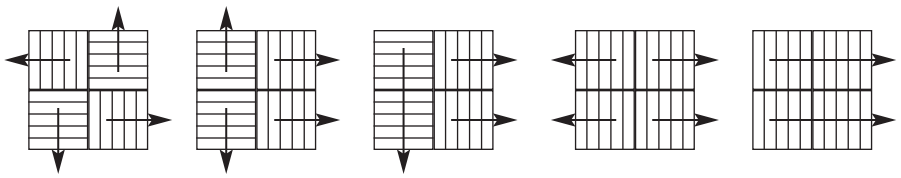
- Appliance White (default)	AW
- Special Custom Color	SP
- AW Face/Black Backpan	BA

FRAME TYPE

- Lay-in T-Bar	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-in	M
- Fineline®	F

Available Air Patterns

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



Note:

1. Consult individual models as to limitations and availability of ceiling module and neck size combinations.

SUGGESTED SPECIFICATION:

Specification Text File

Models 4320, 4325 – Steel

Furnish and install **Nailor Model** (select one) **4320 Flush Face** or **4325 Drop Face, Perforated Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a round or square neck as specified. A corrosion-resistant steel perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the rear of the perforated face shall be four individually stamped square pattern deflectors that are easily field adjusted to provide throws in a 1, 2, 3, or 4-way pattern. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4320A, 4325A – Aluminum Face

Furnish and install **Nailor Model** (select one) **4320A Flush Face** or **4325A Drop Face, Perforated Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a round or square neck as specified. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the rear of the perforated face shall be four individually stamped square pattern deflectors that are easily field adjusted to provide throws in a 1, 2, 3, or 4-way pattern. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4320AA, 4325AA – Aluminum

Furnish and install **Nailor Model** (select one) **4320AA Flush Face** or **4325AA Drop Face, Perforated Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped aluminum backpan with a round or square neck as specified. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the rear of the perforated face shall be four individually stamped square pattern deflectors that are easily field adjusted to provide throws in a 1, 2, 3, or 4-way pattern. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4320, 4320A, 4320AA • Flush Face • 12 x 12 (300 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	VP		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	TP		.012	.020	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	T	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	NC		—	—	—	19	24	28	35	41
8" Dia.	TP		.014	.022	.035	.049	.065	.086	.132	.194
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	T	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	NC		—	—	16	22	27	31	38	44
6 x 6	TP		.013	.022	.036	.052	.074	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	—	16	22	27	31	38	44
8 x 8	TP		.015	.026	.041	.059	.080	.104	.162	.234
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	12	19	25	30	34	41	47

Models 4320, 4320A, 4320AA • Flush Face • 24 x 12 (600 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	VP		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	TP		.012	.020	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	T	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	NC		—	—	—	19	24	28	35	41
8" Dia.	TP		.014	.022	.035	.049	.065	.086	.132	.194
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	T	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	NC		—	—	16	22	27	31	38	44
6 x 6	TP		.013	.022	.036	.052	.074	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	—	16	22	27	31	38	44
8 x 8	TP		.015	.026	.041	.059	.080	.104	.162	.234
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	12	19	25	30	34	41	47

For performance notes, see page D150.

Performance Data

Models 4320, 4320A, 4320AA • Flush Face • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200
	VP	.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	TP	.012	.020	.032	.046	.062	.082	.128	.185
	Flow Rate, CFM	58	78	98	117	137	156	196	235
	T 4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
	T 3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
	T 2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
	T 1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	NC	—	—	10	18	21	25	32	38
8" Dia.	TP	.015	.026	.042	.060	.082	.107	.167	.241
	Flow Rate, CFM	104	139	174	209	244	279	349	418
	T 4-Way	1-1-2	1-1-3	1-1-5	1-2-6	1-2-7	1-3-8	2-5-10	3-6-12
	T 3-Way	1-1-4	1-2-6	1-3-8	2-4-10	2-5-11	3-6-13	5-8-17	6-10-20
	T 2-Way	1-1-6	1-3-9	2-4-11	3-6-13	4-8-16	5-9-18	7-11-22	9-13-24
	T 1-Way	1-2-8	1-4-11	2-6-14	4-8-16	5-9-19	7-11-22	9-14-26	11-16-29
	NC	—	11	16	22	27	31	38	44
10" Dia.	TP	.019	.033	.053	.075	.102	.135	.210	.302
	Flow Rate, CFM	163	218	272	327	381	436	545	654
	T 4-Way	1-1-3	1-1-5	1-2-7	1-3-8	2-4-10	2-5-11	4-7-14	5-8-17
	T 3-Way	1-1-7	1-3-9	2-5-11	3-7-14	4-8-16	5-9-18	7-11-23	9-14-27
	T 2-Way	1-2-9	2-5-12	3-7-15	5-9-19	7-11-22	8-12-26	10-15-32	12-19-34
	T 1-Way	1-3-11	3-7-15	4-9-19	7-11-23	9-13-28	10-15-31	12-19-36	15-23-39
	NC	—	16	21	27	32	36	43	49
12" Dia.	TP	.022	.040	.063	.091	.124	.162	.253	.364
	Flow Rate, CFM	235	314	392	471	549	628	785	942
	T 4-Way	1-1-5	1-2-7	1-3-9	2-5-11	3-6-13	4-7-14	6-9-18	7-11-22
	T 3-Way	1-2-9	2-5-12	3-7-15	5-9-18	6-10-21	8-12-24	10-15-31	12-18-36
	T 2-Way	1-4-12	3-7-16	5-10-20	7-12-24	9-14-29	10-16-33	13-20-41	16-24-44
	T 1-Way	2-6-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-46	19-30-50
	NC	—	19	25	31	36	40	47	53
14" Dia.	TP	.026	.047	.073	.105	.143	.187	.292	.420
	Flow Rate, CFM	318	424	530	636	742	848	1060	1272
	T 4-Way	1-1-6	1-3-9	2-5-11	3-6-13	4-8-16	5-9-18	7-11-23	9-13-28
	T 3-Way	1-4-11	3-7-14	4-9-18	7-11-22	8-13-27	9-14-30	12-18-38	14-22-44
	T 2-Way	2-6-15	4-10-20	7-12-26	10-15-31	11-17-36	13-20-41	16-26-50	20-31-54
	T 1-Way	3-8-18	6-12-24	10-15-31	12-18-38	14-21-44	16-24-50	20-30-57	24-38-62
	NC	13	23	29	35	40	44	51	57
15" Dia.	TP	.029	.052	.081	.117	.159	.208	.324	.467
	Flow Rate, CFM	370	490	615	740	860	985	1225	1475
	T 4-Way	1-1-6	1-3-9	2-5-11	3-6-13	4-8-16	5-9-18	7-11-23	9-13-28
	T 3-Way	1-4-11	3-7-14	4-9-18	7-11-22	8-13-27	9-14-30	12-18-38	14-22-44
	T 2-Way	2-6-15	4-10-20	7-12-26	10-15-31	11-17-36	13-20-41	16-26-50	20-31-54
	T 1-Way	3-8-18	6-12-24	10-15-31	12-18-38	14-21-44	16-24-50	20-30-57	24-38-62
	NC	15	25	31	37	42	46	53	59
16" Dia.	TP	.032	.058	.090	.129	.175	.229	.359	.517
	Flow Rate, CFM	418	558	698	837	977	1116	1396	1675
	T 4-Way	1-3-10	2-5-13	3-8-15	5-10-16	7-12-77	9-13-19	12-15-21	13-16-23
	T 3-Way	3-5-9	5-7-10	6-8-11	7-9-12	8-9-13	8-10-14	9-11-16	10-12-18
	T 2-Way	2-5-11	4-8-13	6-10-14	8-11-16	9-12-17	10-13-18	12-14-20	13-16-22
	T 1-Way	7-12-21	11-17-24	14-29-28	17-21-31	18-23-33	20-24-36	22-28-40	24-31-43
	NC	16	26	32	38	43	47	54	60

For performance notes, see page D150.

Performance Data

Models 4320, 4320A, 4320AA • Flush Face • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	VP		.006	.010	.016	.023	.031	.040	.063	.090
6 x 6	TP		.013	.022	.036	.052	.070	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	—	12	20	23	27	34	40
8 x 8	TP		.018	.030	.048	.069	.094	.123	.191	.276
	Flow Rate, CFM		133	177	222	266	310	355	444	532
	T	4-Way	1-1-2	1-1-4	1-1-6	1-2-7	1-3-8	2-4-9	3-6-12	4-7-14
		3-Way	1-1-5	1-2-8	1-4-10	2-5-12	3-7-14	4-8-16	6-10-20	8-12-24
		2-Way	1-2-8	1-4-10	2-6-13	4-8-16	5-9-19	7-10-21	9-13-27	10-16-30
		1-Way	1-3-9	2-5-13	3-8-16	5-9-19	7-11-23	8-13-27	11-16-31	13-19-34
	NC		—	14	19	25	30	34	41	47
10 x 10	TP		.021	.038	.059	.086	.116	.152	.237	.341
	Flow Rate, CFM		208	277	347	416	485	555	694	832
	T	4-Way	1-1-4	1-2-6	1-3-8	2-4-10	2-5-11	3-6-13	5-8-16	6-10-20
		3-Way	1-2-8	1-4-11	3-6-13	4-8-16	5-9-19	7-11-22	9-13-28	11-16-33
		2-Way	1-3-11	3-6-14	4-9-18	6-11-22	8-13-27	9-14-30	12-18-37	14-22-40
		1-Way	2-5-13	4-9-18	6-11-22	9-13-28	10-16-33	12-18-37	15-22-42	18-28-46
	NC		—	17	24	30	35	39	45	52
12 x 12	TP		.025	.046	.071	.103	.140	.183	.286	.411
	Flow Rate, CFM		300	400	500	600	700	800	1000	1200
	T	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-13-27
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	14-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	19-30-52
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	23-36-59
	NC		12	21	28	34	39	43	49	56
14 x 14	TP		.031	.055	.086	.124	.169	.221	.345	.497
	Flow Rate, CFM		410	545	680	815	955	1090	1360	1635
	T	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-13-27
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	14-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	19-30-52
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	23-36-59
	NC		15	24	31	37	42	46	52	59

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

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Neck Size Square in Inches	Nominal Overall Face Size	Ak Factor
6 x 6	12 x 12	0.2345
8 x 8	12 x 12	0.3461
6 x 6	24 x 24	0.6932
8 x 8	24 x 24	0.7620
10 x 10	24 x 24	0.7995
12 x 12	24 x 24	0.8464
14 x 14	24 x 24	0.8993

Neck Size Diameter in Inches	Nominal Overall Face Size	Ak Factor
6	12 x 12	0.2289
8	12 x 12	0.2418
6	24 x 24	0.6010
8	24 x 24	0.6854
10	24 x 24	0.7283
12	24 x 24	0.7651
14	24 x 24	0.8102
15	24 x 24	0.8389

Performance Data

Models 4325, 4325A, 4325AA • Drop Face • 12 x 12 (300 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	VP		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	TP		.009	.016	.025	.036	.049	.063	.099	.143
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-3	1-2-4	1-2-4	2-3-6	2-3-6
		3-Way	1-1-2	1-1-3	1-2-4	1-2-5	1-3-6	2-3-7	3-4-9	3-5-9
		2-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-11	4-6-12
		1-Way	1-1-4	1-2-6	1-3-7	2-4-9	3-5-10	4-6-12	5-7-15	6-9-16
	NC		—	—	—	16	21	25	32	38
8" Dia.	TP		.010	.017	.026	.037	.051	.067	.104	.150
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	T	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	NC		—	—	14	20	25	29	36	42
6 x 6	TP		.010	.019	.028	.041	.056	.072	.113	.163
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	T	4-Way	1-1-2	1-1-3	1-1-3	1-2-4	1-2-5	2-3-6	2-3-7	3-4-7
		3-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-4-8	3-4-9	3-5-10	4-6-11
		2-Way	1-1-4	1-2-5	1-3-7	2-4-8	3-4-9	3-5-11	4-7-13	5-8-14
		1-Way	1-1-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-15	6-9-17	7-11-19
	NC		—	—	13	19	24	28	35	41
8 x 8	TP		.012	.021	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	10	17	23	28	32	39	45

Models 4325, 4325A, 4325AA • Drop Face • 24 x 12 (600 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	VP		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	TP		.009	.016	.025	.036	.049	.063	.099	.143
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-3	1-2-4	1-2-4	2-3-6	2-3-6
		3-Way	1-1-2	1-1-3	1-2-4	1-2-5	1-3-6	2-3-7	3-4-9	3-5-9
		2-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-11	4-6-12
		1-Way	1-1-4	1-2-6	1-3-7	2-4-9	3-5-10	4-6-12	5-7-15	6-9-16
	NC		—	—	—	16	21	25	32	38
8" Dia.	TP		.010	.017	.026	.037	.051	.067	.104	.150
	Flow Rate, CFM		105	140	175	210	245	280	350	420
	T	4-Way	1-1-1	1-1-1	1-1-3	1-1-4	1-1-4	1-1-5	1-3-6	1-4-8
		3-Way	1-1-2	1-1-4	1-1-5	1-2-6	1-3-7	1-4-8	2-5-11	4-6-13
		2-Way	1-1-3	1-1-6	1-2-7	1-3-9	2-4-10	2-6-12	4-7-15	6-9-16
		1-Way	1-1-4	1-2-7	1-3-9	2-4-11	2-6-13	3-7-14	6-9-17	7-11-19
	NC		—	—	14	20	25	29	36	42
6 x 6	TP		.013	.022	.036	.052	.074	.092	.143	.206
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	—	13	19	24	28	35	41
8 x 8	TP		.012	.021	.032	.046	.063	.082	.128	.185
	Flow Rate, CFM		135	175	220	265	310	355	440	530
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-1-5	1-2-6	1-3-8	2-4-9
		3-Way	1-1-3	1-1-5	1-2-6	1-3-8	1-4-9	2-5-10	3-6-13	5-8-16
		2-Way	1-1-4	1-2-7	1-3-9	2-4-10	2-6-12	3-7-14	5-9-18	7-10-19
		1-Way	1-1-6	1-2-8	2-4-11	2-6-13	3-7-15	5-8-17	7-11-20	8-13-22
	NC		—	10	17	23	28	32	39	45

For performance notes, see page D153.

Performance Data

Models 4325, 4325A, 4325AA • Drop Face • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	VP		.006	.010	.016	.023	.031	.040	.063	.090
6" Dia.	TP		.009	.016	.025	.036	.049	.063	.099	.143
	Flow Rate, CFM		58	78	98	117	137	156	196	235
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-3	1-2-4	1-2-4	2-3-6	2-3-6
		3-Way	1-1-2	1-1-3	1-2-4	1-2-5	1-3-6	2-3-7	3-4-9	3-5-9
		2-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-11	4-6-12
		1-Way	1-1-4	1-2-6	1-3-7	2-4-9	3-5-10	4-6-12	5-7-15	6-9-16
	NC		—	—	—	15	18	22	29	35
8" Dia.	TP		.013	.021	.034	.049	.066	.087	.136	.195
	Flow Rate, CFM		104	139	174	209	244	279	349	418
	T	4-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-3-7	2-4-8	3-5-8	4-6-9
		3-Way	1-1-4	1-2-6	2-3-7	2-4-9	3-5-11	4-6-12	5-7-13	6-9-14
		2-Way	1-2-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-15	6-9-16	7-11-18
		1-Way	1-2-7	2-4-10	3-6-12	4-7-15	6-9-18	6-10-19	8-12-21	10-15-23
	NC		—	—	13	18	24	28	35	41
10" Dia.	TP		.016	.027	.043	.061	.084	.109	.171	.245
	Flow Rate, CFM		163	218	272	327	381	436	545	654
	T	4-Way	1-1-4	1-3-6	2-3-7	3-4-9	3-5-10	4-6-10	5-7-12	6-9-13
		3-Way	1-2-7	2-4-9	3-6-12	4-7-14	5-8-15	6-9-16	8-12-18	9-14-20
		2-Way	1-3-8	2-5-11	4-7-14	5-8-17	6-10-19	7-11-20	9-14-22	11-17-26
		1-Way	2-4-11	3-7-15	6-9-19	7-11-23	9-13-26	10-15-28	13-19-31	15-23-34
	NC		—	13	18	24	29	33	40	46
12" Dia.	TP		.019	.033	.052	.074	.101	.132	.207	.297
	Flow Rate, CFM		235	314	392	471	549	628	785	942
	T	4-Way	1-3-6	2-4-9	3-5-11	4-6-12	5-7-13	6-9-14	7-11-15	9-12-17
		3-Way	2-4-10	3-6-13	5-8-16	6-10-18	7-11-19	9-13-20	11-16-23	13-18-26
		2-Way	2-5-12	4-8-16	6-10-20	8-12-22	9-14-24	11-16-22	13-20-30	16-22-33
		1-Way	3-7-16	6-11-22	9-14-28	11-16-30	13-19-33	14-22-35	18-28-39	22-30-43
	NC		—	17	23	29	34	38	45	51
14" Dia.	TP		.021	.038	.059	.086	.117	.153	.239	.344
	Flow Rate, CFM		318	424	530	636	742	848	1060	1272
	T	4-Way	2-4-8	3-5-11	4-7-13	5-8-14	6-10-16	7-11-17	9-13-19	11-14-21
		3-Way	3-6-13	5-9-18	7-11-20	9-13-22	10-15-24	12-18-26	15-20-29	18-23-32
		2-Way	3-8-16	6-11-22	9-13-26	11-16-28	12-19-31	14-22-33	18-27-36	22-28-40
		1-Way	5-11-22	9-14-30	12-18-35	14-22-38	17-27-41	19-30-44	24-35-49	30-38-51
	NC		10	20	28	32	37	41	48	54
15" Dia.	TP		.022	.040	.062	.091	.127	.171	.265	.366
	Flow Rate, CFM		370	490	615	740	860	985	1225	1475
	T	4-Way	2-4-7	3-5-10	4-7-12	5-8-14	6-9-15	7-10-17	9-12-19	10-13-21
		3-Way	3-6-13	5-9-19	7-10-19	9-12-22	10-15-23	12-18-26	14-19-29	18-22-32
		2-Way	3-8-15	6-11-21	8-12-26	11-15-28	11-19-30	13-21-32	18-27-35	21-27-40
		1-Way	5-10-21	8-14-29	11-17-34	13-21-36	17-26-40	18-29-42	24-34-47	28-36-50
	NC		12	22	28	34	39	43	50	56
16" Dia.	TP		.025	.045	.070	.100	.137	.179	.280	.403
	Flow Rate, CFM		418	558	698	837	977	1116	1396	1675
	T	4-Way	3-5-11	5-7-15	6-9-17	7-11-18	8-13-20	10-15-21	12-17-24	15-18-27
		3-Way	2-6-13	4-9-17	7-11-19	9-13-21	10-16-22	12-17-24	15-19-28	17-21-30
		2-Way	2-6-13	4-9-17	7-11-19	9-13-21	10-16-22	12-17-24	15-19-28	17-21-30
		1-Way	7-12-23	12-17-27	15-21-31	18-23-34	20-26-36	22-27-39	24-31-43	26-34-47
	NC		13	23	29	35	40	44	51	57

For performance notes, see page D153.

Performance Data

Models 4325, 4325A, 4325AA • Drop Face • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000	1200
	VP		.006	.010	.016	.023	.031	.040	.063	.090
6 x 6	TP		.010	.019	.028	.041	.056	.072	.113	.163
	Flow Rate, CFM		75	100	125	150	175	200	250	300
	T	4-Way	1-1-2	1-1-3	1-1-3	1-2-4	1-2-5	2-3-6	2-3-7	3-4-7
		3-Way	1-1-3	1-1-4	1-2-5	1-3-6	2-4-8	3-4-9	3-5-10	4-6-11
		2-Way	1-1-4	1-2-5	1-3-7	2-4-8	3-4-9	3-5-11	4-7-13	5-8-14
		1-Way	1-1-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-15	6-9-17	7-11-19
	NC		—	—	—	17	20	24	31	37
8 x 8	TP		.014	.024	.038	.056	.075	.098	.153	.220
	Flow Rate, CFM		133	177	222	266	310	355	444	532
	T	4-Way	1-1-3	1-2-5	1-3-6	2-3-7	3-4-8	3-5-9	4-6-10	5-7-11
		3-Way	1-2-5	1-3-7	2-4-9	3-5-11	4-6-13	5-7-14	6-9-15	7-11-17
		2-Way	1-2-7	2-4-9	3-6-12	4-7-14	5-8-16	6-9-17	8-12-19	9-14-21
		1-Way	1-3-9	3-6-13	4-8-16	6-9-19	7-11-21	8-13-23	10-16-27	13-19-29
	NC		—	11	16	22	27	31	38	44
10 x 10	TP		.018	.031	.049	.069	.095	.124	.193	.278
	Flow Rate, CFM		208	277	347	416	485	555	694	832
	T	4-Way	1-2-5	2-3-7	3-4-9	3-5-11	4-6-12	5-7-12	6-9-14	7-11-15
		3-Way	1-4-8	3-5-11	4-7-14	5-8-16	6-10-18	7-11-19	9-14-21	11-16-23
		2-Way	2-5-11	4-7-14	6-9-18	7-11-20	8-13-22	9-14-24	12-18-28	14-20-30
		1-Way	3-6-14	5-9-19	8-12-24	9-14-28	11-17-30	13-19-32	16-24-36	19-28-39
	NC		—	14	21	27	32	36	42	49
12 x 12	TP		.020	.037	.058	.084	.114	.149	.233	.335
	Flow Rate, CFM		300	400	500	600	700	800	1000	1200
	T	4-Way	1-4-8	3-5-11	4-7-13	5-8-14	6-9-15	7-11-16	9-13-18	11-14-20
		3-Way	2-6-12	5-8-17	7-10-19	8-12-21	10-15-23	11-17-24	14-19-28	17-21-31
		2-Way	3-7-15-	6-10-21	8-13-24	10-15-27	12-18-29	14-21-32	17-24-35	21-27-38
		1-Way	4-10-21	8-14-29	11-17-33	14-21-36	16-24-39	18-29-42	23-33-46	28-36-51
	NC		—	18	25	31	36	40	46	53
14 x 14	TP		.025	.046	.071	.103	.140	.183	.286	.411
	Flow Rate, CFM		408	544	681	817	953	1089	1361	1633
	T	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-13-27
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	14-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	19-30-52
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	23-36-59
	NC		12	21	28	34	39	43	49	56

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

Performance Notes:

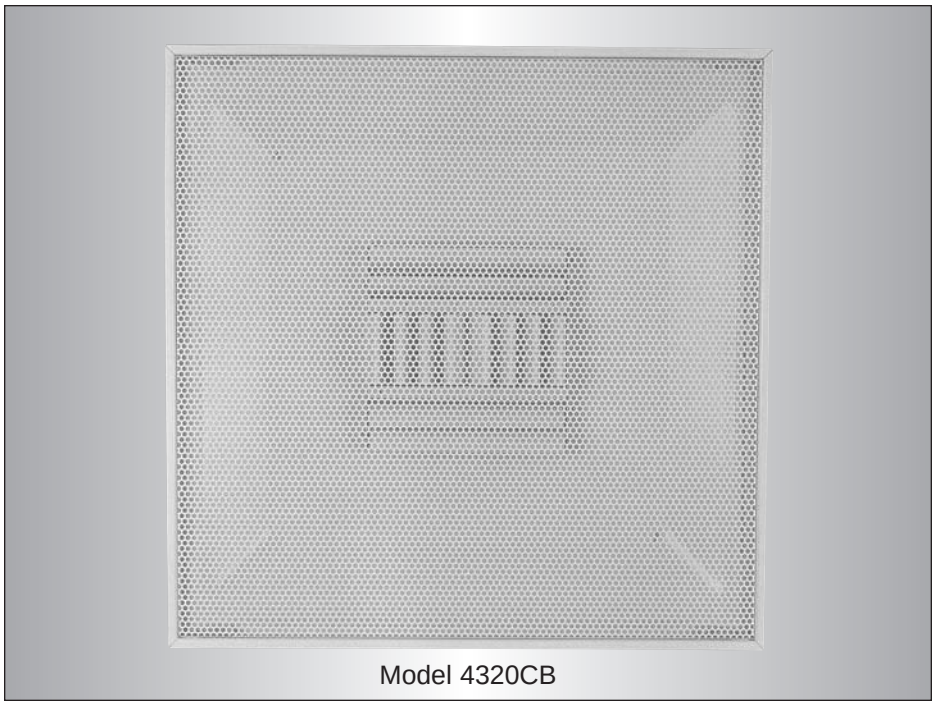
1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

PERFORATED CURVED BLADE DIFFUSERS

- SUPPLY
- 4-WAY ADJUSTABLE DISCHARGE PATTERN (STANDARD)
- 1, 2 OR 3-WAY DISCHARGE PATTERN (OPTIONAL)



Model 4320CB

Steel Models:

4320CB Flush Face
4325CB Drop Face

Aluminum Face Models:

4320CBA Flush Face
4325CBA Drop Face

Aluminum Models:

4320CBAA Flush Face
4325CBAA Drop Face

The **Nailor 4320CB Curved Blade Diffusers** provide the unobtrusive, smooth appearance preferred by many architects with superior features and performance characteristics. Designed to maximize throw, this model features individually adjustable, friction pivoted curved blade deflectors mounted directly under the neck. They project a tight, uniform horizontal blanket of air over a wide range of air volumes and provide excellent performance in variable air volume systems.

The **4320CB Diffuser** features a 4-way adjustable discharge pattern as standard. The deflector blades can be adjusted to control both the angle of discharge and hence throw from full horizontal to vertical in each direction and also damper the air volume. By closing off the deflectors in one or more directions, directional control can also be achieved. The **4320CB** is also available with a factory supplied 1, 2 or 3-way adjustable discharge pattern controller.

The **4325CB** features a dropped (extended) face panel that is available to compliment tegular tile ceiling systems, so that the panel remains flush with the ceiling line.

FEATURES:

- Round or square necks available.
- Hinged, removable face plate with quick-release spring latches.
- Discharge pattern can be adjusted from horizontal to vertical before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and moving the curved blade deflectors.
- Inlet collar has 1 1/4" (35) depth for easy duct connection.
- Dropping the perforated face gives access to the optional damper.
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.
- Return models (**4360 Series**) have the same face and frame construction as the supply models to match their appearance.

Material: Models 4320CB/4325CB have a corrosion-resistant steel perforated face and backpan. **Models 4320CBA/4325CBA** have an aluminum perforated face and a corrosion-resistant steel backpan. **Models 4320CBAA/4325CBAA** have an aluminum perforated face and backpan.
Finish: AW Appliance White baked enamel finish is standard. Other finishes are available.

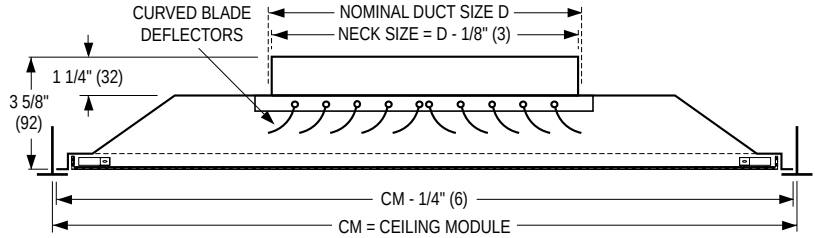
Available Combinations of Ceiling Module vs. Neck Size

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

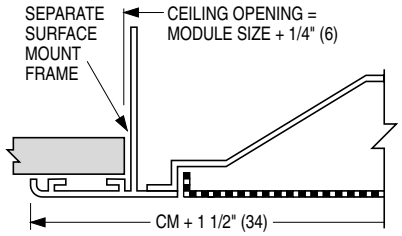
Dimensional Data and Frame Types

Models 4320CB, 4320CBA, 4320CBAA • Supply • Flush Face

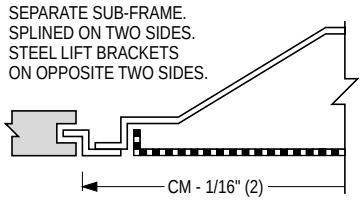
Type L Lay-in T-Bar



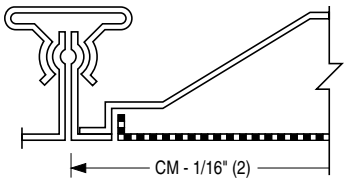
Type S Surface Mount



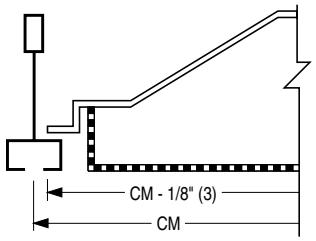
Type SP Spline



Type M Metal Pan (Snap-in)

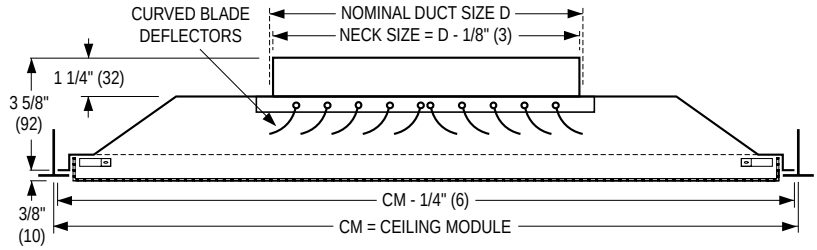


Type F Fineline®

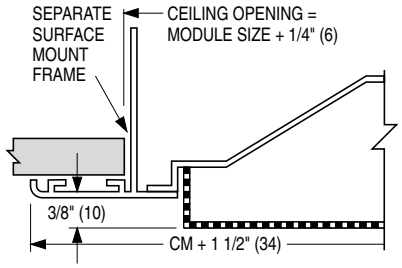


Models 4325CB, 4325CBA, 4325CBAA • Supply • Drop Face

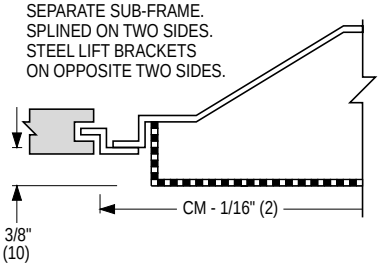
Type L Lay-in T-Bar or Tegular



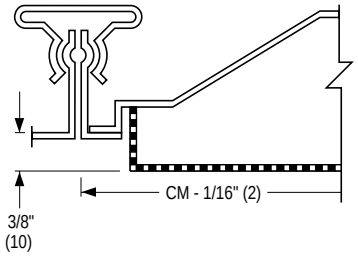
Type S Surface Mount



Type SP Spline



Type M Metal Pan (Snap-in)



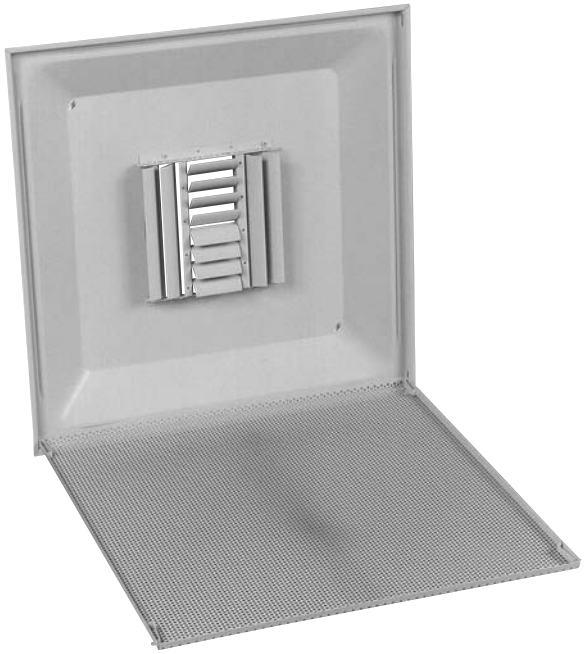
Model Series 4320CB • Adjusting Pattern Controllers

Removing Perforated Face

The **4300 Series** is supplied with a removable face plate that is retained in place by four spring-loaded latches, one located in each corner of the diffuser.

1. Insert a small screwdriver through a perforated hole in the edge of the face plate and push the spring-loaded latch inward from diffuser frame to release face.
2. Repeat procedure on the opposite side.
3. The face plate will now swing down, using the two remaining latches as hinges. The face may be completely removed by depressing in a similar manner, the two remaining latches.
4. To close; lift perforated face, depress spring latches with fingers and snap in place.

The pattern controller in the neck of the diffuser features individually adjustable deflector blades which may be used to vary the discharge pattern from full horizontal to vertical. Each blade is friction pivoted using a tension wire which securely holds its position after adjustment.

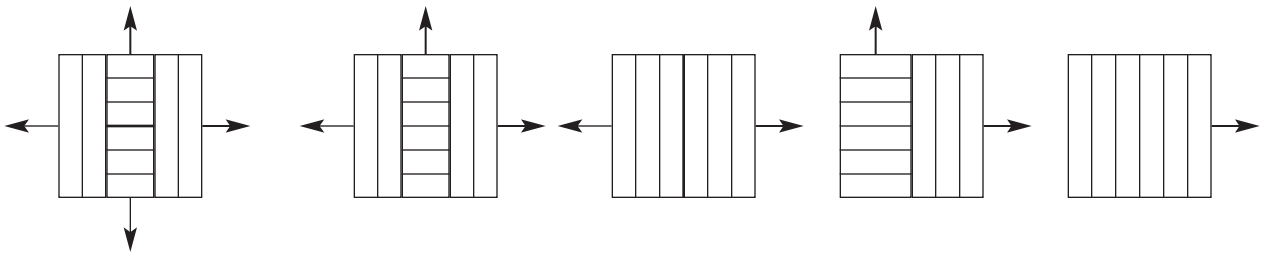


Round or Square Neck • 4-way Pattern

Pattern Controller Options

Standard Model Configuration

Optional Model Configurations



B4, 4-way | **B3, 3-way** | **B2, 2-way opposite** | **C2, 2-way corner** | **B1, 1-way**

The **4320CB Series** is supplied with this style of pattern controller unless specified otherwise.

HOW TO SPECIFY OR TO ORDER

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

Perforated Curved Blade Supply Ceiling Diffusers – Model Series 4320CB

4320CB - 08 - 24 x 24 - L - AW - B4 - –

MODEL

- Steel	Flush Face	4320CB
	Drop Face	4325CB
- Aluminum Face	Flush Face	4320CBA
	Drop Face	4325CBA
- Aluminum	Flush Face	4320CBAA
	Drop Face	4325CBAA

NECK SIZE (inches)

Round

06, 08, 10, 12, 14, 15, 16, 18

Square

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

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 16 x 16	400 x 400
- 24 x 12	600 x 300
- 20 x 20	500 x 500
- 24 x 24	600 x 600

FRAME TYPE

- Lay-in T-Bar	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-in	M
- Fineline®	F

ACCESSORIES

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

AIR BALANCING DEVICES

Round Neck

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

Square Neck

- Opposed Blade Damper	OBD
- Equalizing Grid	EGL
- Damper/Equalizing Grid	DEGL

BLOW PATTERN

- 4-Way (default)	B4
- 3-Way	B3
- 2-Way Opposite	B2
- 2-Way Corner	C2
- 1-Way	B1

FINISH

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

Notes:

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

SUGGESTED SPECIFICATION:

Specification Text File

Models 4320CB, 4325CB – Steel

Furnish and install **Nailor Model** (select one) **4320CB Flush Face** or **4325CB Drop Face, Perforated Supply Curved Blade Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a round or square neck as specified. A corrosion-resistant steel perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the neck of the diffuser shall be a factory installed curved blade pack with individually adjustable blades configured for a 4-way (standard) throw. (Optional) Factory installed 3, 2 or 1-way (select one) pattern to be supplied. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4320CBA, 4325CBA – Aluminum Face

Furnish and install **Nailor Model** (select one) **4320CBA Flush Face** or **4325CBA Drop Face, Perforated Supply Curved Blade Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a round or square neck as specified. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the neck of the diffuser shall be a factory installed curved blade pack with individually adjustable blades configured for a 4-way (standard) throw. (Optional) Factory installed 3, 2 or 1-way (select one) pattern to be supplied. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4320CBAA, 4325CBAA – Aluminum

Furnish and install **Nailor Model** (select one) **4320CBAA Flush Face** or **4325CBAA Drop Face, Perforated Supply Curved Blade Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a stamped aluminum backpan with a round or square neck as specified. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the neck of the diffuser shall be a factory installed curved blade pack with individually adjustable blades configured for a 4-way (standard) throw. (Optional) Factory installed 3, 2 or 1-way (select one) pattern to be supplied. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4320CB, 4320CBA, 4320CBAA • 12 x 12 (300 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900	1100
	VP		.006	.010	.016	.023	.031	.040	.051	.075
6" Dia.	TP		.023	.042	.037	.039	.052	.159	.204	.307
	Flow Rate, CFM		60	80	95	115	135	155	175	215
	T	4-Way	1-2-4	2-3-6	2-4-7	3-5-7	3-5-8	4-6-9	5-6-9	6-6-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		2-Way	2-4-8	3-5-11	4-6-13	5-8-15	6-9-16	7-11-18	8-12-20	9-13-22
		1-Way	3-4-9	4-6-12	5-8-16	6-9-18	7-11-20	8-12-22	9-14-23	10-16-26
	NC		—	—	—	18	23	28	32	40
8" Dia.	TP		.025	.045	.069	.102	.137	.180	.227	.340
	Flow Rate, CFM		105	140	175	210	245	280	315	385
	T	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12	6-9-15
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14	8-11-16
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21	10-16-24
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25	12-19-29
	NC		—	—	15	21	26	31	34	41
6 x 6	TP		.025	.045	.066	.096	.132	.175	.224	.338
	Flow Rate, CFM		75	100	125	150	175	200	225	275
	T	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11	6-8-12
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-17
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22	10-16-25
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26	11-18-29
	NC		—	—	—	19	24	29	33	41
8 x 8	TP		.027	.049	.076	.112	.151	.197	.249	.374
	Flow Rate, CFM		135	175	220	265	310	355	400	490
	T	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14	7-11-16
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16	8-12-18
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24	12-18-27
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28	14-23-32
	NC		—	—	16	22	27	32	35	42

Models 4320CB, 4320CBA, 4320CBAA • 24 x 12 (600 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900	1100
	VP		.006	.010	.016	.023	.031	.040	.051	.075
6" Dia.	TP		.023	.042	.037	.039	.052	.159	.204	.307
	Flow Rate, CFM		60	80	95	115	135	155	175	215
	T	4-Way	1-2-4	2-3-6	2-4-7	3-5-7	3-5-8	4-6-9	5-6-9	6-6-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		2-Way	2-4-8	3-5-11	4-6-13	5-8-15	6-9-16	7-11-18	8-12-20	9-13-22
		1-Way	3-4-9	4-6-12	5-8-16	6-9-18	7-11-20	8-12-22	9-14-23	10-16-26
	NC		—	—	—	18	23	28	32	40
8" Dia.	TP		.025	.045	.069	.102	.137	.180	.227	.340
	Flow Rate, CFM		105	140	175	210	245	280	315	385
	T	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12	6-9-15
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14	8-11-16
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21	10-16-24
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25	12-19-29
	NC		—	—	15	21	26	31	34	41
6 x 6	TP		.025	.045	.066	.096	.132	.175	.224	.338
	Flow Rate, CFM		75	100	125	150	175	200	225	275
	T	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11	6-8-12
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-17
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22	10-16-25
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26	11-18-24
	NC		—	—	—	19	24	29	33	41
8 x 8	TP		.027	.049	.076	.112	.151	.197	.249	.374
	Flow Rate, CFM		135	175	220	265	310	355	400	490
	T	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14	7-11-16
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16	8-12-18
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24	12-18-27
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28	14-23-32
	NC		—	—	16	22	27	32	35	42

For performance notes, see page D161.

Performance Data

Models 4320CB, 4320CBA, 4320CBAA • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	900	1100
	VP	.006	.010	.016	.023	.031	.040	.051	.075
6" Dia.	TP	.014	.025	.036	.052	.071	.094	.120	.181
	Flow Rate, CFM	60	80	95	115	135	155	175	215
	T 4-Way	1-2-4	2-3-6	2-3-7	3-4-7	3-5-8	4-6-9	4-6-9	5-6-11
	T 3-Way	1-2-5	2-3-7	2-4-8	3-5-9	4-6-9	4-7-10	5-7-11	6-8-12
	T 2-Way	2-3-7	3-4-9	4-6-11	4-7-12	5-8-13	6-9-14	7-11-15	8-12-17
	T 1-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-9-16	7-11-17	8-12-18	9-14-21
	NC	—	—	—	17	22	26	28	35
8" Dia.	TP	.015	.027	.041	.060	.081	.106	.134	.200
	Flow Rate, CFM	105	140	175	210	245	280	315	385
	T 4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12	6-9-15
	T 3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14	8-11-16
	T 2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21	10-16-24
	T 1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25	12-19-29
	NC	—	—	17	21	26	30	32	37
10" Dia.	TP	.017	.029	.045	.066	.090	.118	.149	.224
	Flow Rate, CFM	165	215	270	325	380	435	490	600
	T 4-Way	2-3-7	3-5-10	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16	8-12-19
	T 3-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-10-16	7-11-17	8-13-18	9-15-21
	T 2-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-27	14-21-31
	T 1-Way	4-7-14	6-9-18	7-11-23	9-14-26	11-16-28	12-18-29	14-22-31	16-25-35
	NC	—	—	19	23	28	31	34	40
12" Dia.	TP	.018	.032	.050	.072	.099	.127	.162	.394
	Flow Rate, CFM	235	315	390	470	550	625	705	865
	T 4-Way	3-4-9	4-6-12	5-7-14	6-9-15	7-10-17	8-12-18	9-13-20	10-15-22
	T 3-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-20	9-14-22	10-15-23	11-17-26
	T 2-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32	16-26-36
	T 1-Way	5-8-17	7-11-23	9-14-28	11-17-31	13-20-33	15-23-35	17-26-37	19-29-42
	NC	—	16	21	25	29	33	36	42
14" Dia.	TP	.019	.034	.054	.078	.107	.139	.175	.230
	Flow Rate, CFM	320	425	535	640	750	855	960	1175
	T 4-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-21	9-14-22	10-16-23	14-19-26
	T 3-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-24	10-16-25	12-18-27	14-21-31
	T 2-Way	5-8-17	7-11-24	9-14-28	11-17-30	13-21-33	15-24-35	17-26-37	19-29-42
	T 1-Way	6-9-20	8-13-27	11-16-33	13-20-36	15-24-38	17-27-41	20-30-43	23-34-49
	NC	—	17	22	26	30	34	38	45
15" Dia.	TP	.011	.036	.056	.081	.110	.144	.180	.271
	Flow Rate, CFM	370	490	615	740	860	985	1100	1350
	T 4-Way	3-6-10	4-2-14	5-8-17	8-10-19	8-13-21	10-14-23	10-16-24	14-19-26
	T 3-Way	4-6-12	6-8-17	6-11-21	8-13-22	10-14-25	11-16-26	13-18-28	15-21-32
	T 2-Way	4-8-17	7-12-25	9-15-30	11-18-31	13-22-34	16-25-35	17-27-38	19-31-43
	T 1-Way	6-9-20	8-14-28	12-17-34	14-21-37	16-24-39	18-27-42	17-31-43	19-35-49
	NC	—	18	23	27	31	35	39	46
16" Dia.	TP	.021	.038	.059	.084	.114	.149	.189	.283
	Flow Rate, CFM	420	560	700	835	975	1115	1255	1535
	T 4-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-26	16-22-31
	T 3-Way	4-7-14	6-9-18	7-11-23	9-14-25	10-16-27	12-18-29	14-22-30	16-25-34
	T 2-Way	6-9-20	8-13-27	10-16-32	13-20-35	15-24-37	17-27-40	20-30-42	23-34-48
	T 1-Way	7-11-23	10-15-31	12-18-37	15-23-41	17-27-44	21-31-47	23-35-50	26-40-57
	NC	—	19	24	28	32	36	40	47
18" Dia.	TP	.022	.039	.061	.087	.118	.155	.196	.293
	Flow Rate, CFM	530	705	885	1060	1235	1415	1590	1945
	T 4-Way	4-7-14	5-9-18	7-10-20	9-13-24	10-16-26	10-19-28	13-21-29	17-25-33
	T 3-Way	4-7-17	6-10-21	8-12-24	10-15-28	11-20-30	13-22-32	17-24-34	19-27-39
	T 2-Way	7-10-23	10-14-29	11-17-34	15-22-36	18-28-43	20-30-44	24-34-50	27-39-57
	T 1-Way	8-12-26	11-17-33	14-21-40	18-25-45	21-32-50	23-38-53	29-40-56	33-46-64
	NC	—	21	26	30	34	38	42	49

For performance notes, see page D161.

Performance Data

Models 4320CB, 4320CBA, 4320CBAA • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900	1100
	VP		.006	.010	.016	.023	.031	.040	.051	.075
6 x 6	TP		.015	.027	.039	.057	.078	.103	.132	.199
	Flow Rate, CFM		75	100	125	150	175	200	225	275
	T	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11	6-8-12
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22	10-16-25
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26	11-18-29
	NC		—	—	—	18	23	27	29	35
8 x 8	TP		.016	.029	.045	.066	.089	.116	.147	.220
	Flow Rate, CFM		135	175	220	265	310	355	400	490
	T	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14	7-11-16
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16	8-12-18
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24	12-18-27
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28	15-22-32
	NC		—	—	18	22	27	31	33	38
10 x 10	TP		.018	.031	.049	.072	.099	.129	.163	.246
	Flow Rate, CFM		210	275	345	415	485	555	625	765
	T	4-Way	2-4-8	3-5-11	4-7-13	5-8-14	6-10-16	7-11-17	8-12-18	9-13-21
		3-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-22	10-16-25
		2-Way	4-6-13	6-9-18	7-11-22	9-13-25	10-16-26	12-18-28	13-21-30	15-24-34
		1-Way	5-8-16	7-10-22	8-13-26	10-16-29	12-18-31	14-22-33	16-25-35	18-29-40
	NC		—	—	20	24	29	32	35	41
12 x 12	TP		.019	.035	.055	.079	.108	.139	.178	.433
	Flow Rate, CFM		300	400	500	600	700	800	900	1100
	T	4-Way	3-5-10	4-6-13	5-8-16	6-10-17	8-12-20	9-13-21	10-15-22	11-17-25
		3-Way	3-5-11	5-7-15	6-9-18	7-11-21	9-13-23	10-15-24	11-17-26	12-19-29
		2-Way	5-8-16	7-11-23	9-13-27	11-16-29	13-20-32	14-23-34	16-25-36	18-29-41
		1-Way	6-9-20	8-12-26	10-16-31	12-20-34	14-23-37	17-26-40	22-31-44	25-35-50
	NC		—	17	22	26	30	34	37	43
14 x 14	TP		.020	.037	.059	.085	.117	.152	.192	.253
	Flow Rate, CFM		410	545	680	815	955	1090	1225	1500
	T	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22	8-12-25
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-37	12-21-42
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47	18-27-54
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54	22-35-64
	NC		—	18	23	27	31	35	39	46
15 x 15	TP		.012	.039	.061	.089	.121	.158	.198	.298
	Flow Rate, CFM		470	625	780	935	1095	1250	1405	1720
	T	4-Way	4-6-12	5-8-17	7-10-21	8-12-23	10-15-25	11-17-26	12-20-28	13-22-32
		3-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32	16-26-36
		2-Way	6-10-21	9-13-28	11-17-33	13-21-37	16-25-40	18-28-42	21-32-45	24-36-51
		1-Way	8-12-25	10-16-33	13-21-39	16-25-43	18-29-46	22-33-49	25-37-53	29-42-60
	NC		—	19	24	28	32	36	40	47
16 x 16	TP		.023	.041	.064	.092	.125	.163	.207	.311
	Flow Rate, CFM		530	710	890	1065	1245	1420	1600	1955
	T	4-Way	4-7-14	5-9-18	7-10-20	9-13-24	10-16-26	10-19-28	13-21-29	15-24-33
		3-Way	4-7-17	6-10-21	8-12-24	10-15-28	11-20-30	13-22-32	17-24-34	19-27-39
		2-Way	7-10-23	10-14-29	11-17-34	15-22-36	18-28-43	20-30-44	24-34-50	27-39-57
		1-Way	8-12-26	11-17-33	14-21-40	18-25-45	21-32-50	23-38-53	29-40-56	33-46-64
	NC		—	20	25	29	33	37	41	49
18 x 18	TP		.024	.042	.067	.095	.129	.170	.215	.322
	Flow Rate, CFM		675	900	1125	1350	1575	1800	2025	2475
	T	4-Way	5-7-15	6-10-21	8-12-25	10-15-27	12-18-30	13-21-32	15-24-33	17-27-38
		3-Way	5-8-17	7-11-24	9-14-29	11-17-32	13-22-34	15-24-36	17-27-39	19-31-44
		2-Way	8-12-26	11-16-34	13-21-40	16-26-44	20-30-47	23-34-50	26-38-54	29-43-62
		1-Way	9-14-29	12-20-39	16-25-47	20-29-52	23-34-56	26-39-60	29-44-64	33-50-73
	NC		15	22	27	31	35	39	43	51

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

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

D

CEILING DIFFUSERS

PERFORATED CURVED BLADE DIFFUSERS

- SUPPLY
- SURFACE MOUNT
- FULL FACE SQUARE NECK
- 4-WAY ADJUSTABLE DISCHARGE PATTERN (STANDARD)
- 1, 2 OR 3-WAY DISCHARGE PATTERN (OPTIONAL)

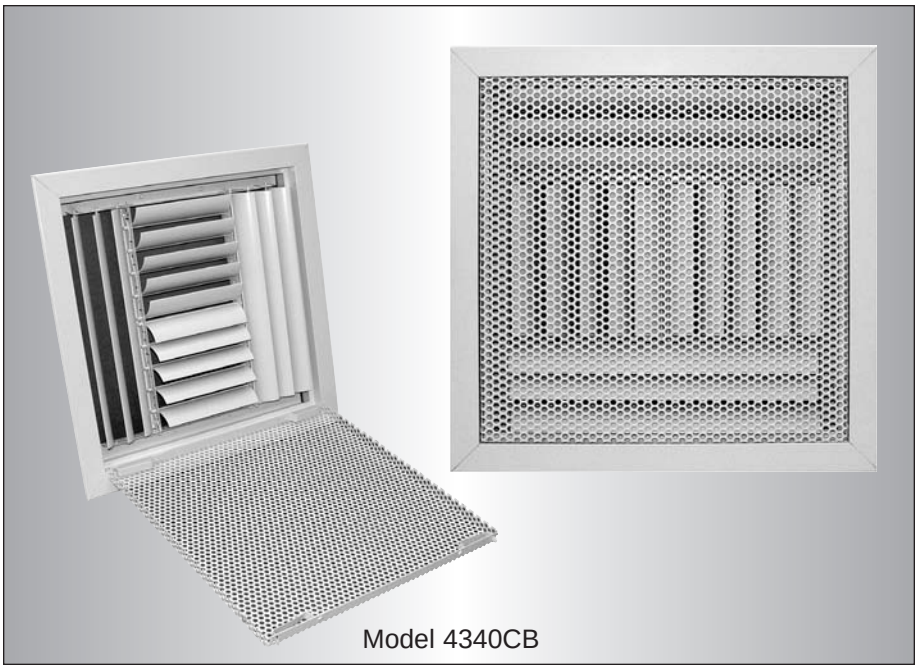
Steel Face Model:

4340CB

Aluminum Model:

4340CBA

- **Suffix '-O' adds a steel opposed blade damper**



Model 4340CB

The **Nailor 4340CB Curved Blade Diffusers** are designed to compliment the Nailor 4320CB curved blade ceiling diffusers and feature the same individually adjustable, friction pivoted curved blade pattern controllers. Designed to maximize throw, they project a tight, uniform horizontal blanket of air over a wide range of air volumes and provide excellent performance in VAV systems.

The **4340CB** is a square neck grille frame style design, featuring full face pattern controllers, for surface mount installation in hard ceilings. A 4-way adjustable discharge pattern is standard. The pattern controllers may also be used to damper the air volume and by closing them off in one or more directions, directional control can also be achieved. Also available with a factory supplied optional 1, 2 or 3-way adjustable discharge pattern controller.

FEATURES:

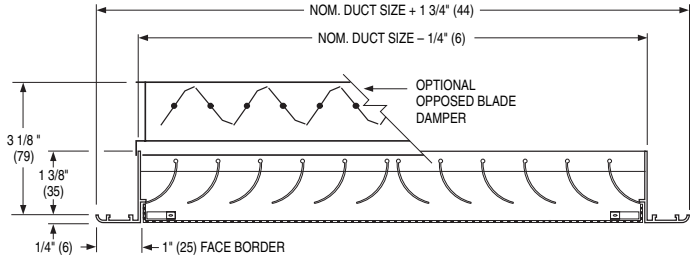
- Available in nominal duct sizes from 6" x 6" (152 x 152) to 24" x 24" (610 x 610) in 2" (51) increments.
- Curved blades on 1" (25) centers are individually adjustable and regulate angle of discharge.
- Frame is mechanically interlocked for strength with hairline mitered corners. Standard diffuser has a 4-way (B4) discharge pattern.
- Removable face has concealed latches for easy access to core.
- Perforated face has 3/16" (5) diameter holes on 1/4" (6) staggered centers, providing 51% free area.
- Type N standard fastening is with sheet metal screws (by others), through the neck of the diffuser outer frame. Optional Type A countersunk screwholes on face of outer frame.
- Dropping the perforated face gives access to the optional opposed blade damper.
- Return models (**4340R Series**) have the same face and frame construction as the supply models to match the appearance.

Material: Extruded aluminum blades and frame. Corrosion-resistant steel or aluminum perforated face depending on model selection.

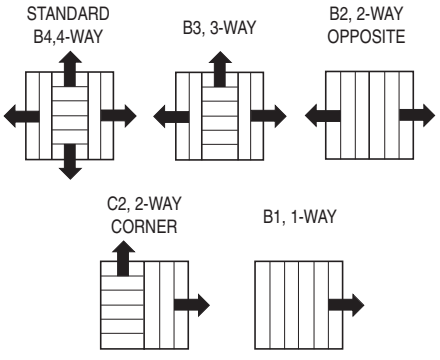
Finish: AW Appliance White baked enamel finish is standard. Other finishes are available.

Dimensional Data

Type S Surface Mount



Pattern Controller Options



HOW TO SPECIFY OR TO ORDER

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

Perforated Full Face Curved Blade Supply Ceiling Diffusers – Model Series 4340CB

4340CB - – - 12 x 12 - S - AW - N - B4 - –

MODEL
- Steel Face 4340CB
- Aluminum 4340CBA

DAMPER
- No Damper (default) –
- Opposed Blade Damper O

NECK SIZE (inches)
6 x 6, 8 x 8, 10 x 10, 12 x 12,
14 x 14, 16 x 16, 18 x 18,
20 x 20, 22 x 22, 24 x 24

FRAME TYPE
- Surface Mount (default) S

ACCESSORIES
- None (default) —
- Foam Gasket GK
- Earthquake Tabs EQT

AIR BALANCING DEVICES
- Equalizing Grid EGL
- Damper/Equalizing Grid DEGL

BLOW PATTERN
- 4-Way (default) B4
- 3-Way B3
- 2-Way Opposite B2
- 2-Way Corner C2
- 1-Way B1

FASTENING
- None (default) (installs through neck of frame) N
- Countersunk holes on outer frame A

FINISH
- Appliance White (default) AW
- Special Custom Color SP

Notes:
1. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION: Specification Text File

Furnish and install **Nailor Model** (select one) **4340CB** (aluminum with corrosion-resistant steel face) or **4340CBA** (aluminum) **Perforated Full Face Curved Blade Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a mechanically interlocked extruded aluminum frame with hairline mitered corners. An extruded aluminum blade pack with individually adjustable curved blades on 1" (25) centers shall be sized according to the square neck size as specified. The diffuser shall have a 4-way (standard), 3-way, 2-way, 1-way (select one) discharge pattern. A perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The diffuser shall be fastened through the neck with sheet metal screws. 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, and operable from the face of the diffuser, 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.

Performance Data

Models 4340CB, 4340CBA • Surface Mount • Square Neck

Nominal Neck Size	Neck Velocity, FPM		200	300	400	500	600	700	800	900
	VP		.003	.006	.010	.016	.022	.031	.040	.050
	TP		.014	.032	.057	.089	.129	.175	.229	.290
6 x 6	Flow Rate, CFM		50	75	100	125	150	175	200	225
	T	4-Way	1-1-3	2-3-4	3-4-5	3-5-6	4-5-7	4-6-8	5-7-9	6-8-10
		3-Way	1-2-3	2-3-4	3-5-6	4-5-7	5-7-9	6-8-10	6-9-12	7-10-13
		2-Way	2-3-4	3-4-5	4-5-7	5-7-9	6-9-12	7-10-13	8-12-15	8-12-16
		1-Way	3-4-5	4-5-7	5-7-9	6-8-11	7-11-14	8-12-16	9-14-18	11-16-21
	NC		-	21	25	28	31	34	36	38
8 x 8	Flow Rate, CFM		89	133	176	222	267	311	356	400
	T	4-Way	2-3-4	3-4-5	3-5-6	4-5-7	4-6-8	5-7-9	5-7-10	6-9-12
		3-Way	2-3-4	3-4-5	4-5-7	4-6-8	5-7-10	6-9-12	7-10-13	7-11-14
		2-Way	3-4-5	3-5-6	4-6-8	5-7-10	7-10-13	7-11-14	8-12-16	9-14-18
		1-Way	3-5-6	4-6-8	5-7-10	6-9-12	8-12-15	9-13-17	10-15-19	11-16-22
	NC		-	23	27	30	33	35	37	39
10 x 10	Flow Rate, CFM		139	208	278	347	417	486	556	625
	T	4-Way	2-3-4	3-5-6	4-6-8	6-8-11	6-9-12	7-11-14	8-12-16	9-14-18
		3-Way	3-5-6	4-6-8	5-7-10	7-10-13	8-12-15	9-14-18	10-15-20	11-16-22
		2-Way	4-6-8	6-8-11	7-10-13	8-12-16	10-15-20	12-17-23	13-19-26	15-20-23
		1-Way	5-7-9	6-9-12	8-12-16	10-15-20	12-18-24	14-21-28	16-24-32	18-27-36
	NC		-	23	28	31	34	36	38	40
12 x 12	Flow Rate, CFM		200	300	400	500	600	700	800	900
	T	4-Way	3-5-6	4-6-8	5-7-10	6-9-12	8-12-15	9-13-17	10-15-20	12-17-23
		3-Way	3-5-6	5-7-9	6-9-12	8-12-15	9-14-18	11-16-22	13-19-25	14-20-27
		2-Way	5-7-9	6-9-12	8-12-16	11-16-21	12-18-24	15-22-29	17-25-33	18-27-36
		1-Way	6-9-12	8-12-16	10-15-20	12-18-24	15-22-29	17-25-33	18-27-36	21-31-42
	NC		-	23	27	31	34	36	39	41
14 x 14	Flow Rate, CFM		272	408	544	681	817	953	1089	1225
	T	4-Way	4-5-7	4-6-9	6-9-12	7-11-14	9-14-18	10-15-20	12-18-24	14-21-28
		3-Way	4-5-9	5-8-11	6-10-13	8-13-16	10-15-20	11-17-23	13-19-27	16-23-31
		2-Way	5-7-10	6-9-13	8-12-18	11-17-22	12-19-26	16-23-31	18-26-36	19-29-39
		1-Way	6-9-12	8-12-18	10-15-22	13-19-26	15-23-30	17-25-35	19-28-39	21-31-43
	NC		-	24	28	32	35	37	40	42
16 x 16	Flow Rate, CFM		355	533	711	889	1067	1244	1422	1600
	T	4-Way	5-7-9	6-8-11	8-10-14	9-13-18	10-15-21	13-18-27	14-20-28	16-22-31
		3-Way	5-7-11	6-9-13	8-13-17	10-15-22	13-19-26	15-22-30	18-25-36	19-29-39
		2-Way	6-10-12	9-14-16	11-17-24	14-21-28	17-25-32	19-26-34	21-34-40	24-34-44
		1-Way	7-10-16	9-15-18	12-18-26	15-22-32	18-27-36	19-28-37	24-35-42	26-36-46
	NC		-	27	31	35	37	40	42	44
18 x 18	Flow Rate, CFM		450	675	900	1125	1350	1575	1800	2025
	T	4-Way	5-7-10	6-9-12	8-12-16	10-15-20	12-18-24	14-21-28	16-24-32	18-27-36
		3-Way	5-7-12	7-11-14	9-14-18	11-16-22	13-19-26	16-24-31	18-27-36	21-31-41
		2-Way	8-12-18	10-15-20	13-19-26	16-24-32	20-29-39	23-34-45	26-39-52	29-43-58
		1-Way	9-14-22	11-16-24	15-23-30	18-27-36	22-32-43	25-37-49	28-42-56	30-45-60
	NC		-	28	32	36	38	41	43	45

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

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

PERFORATED CEILING DIFFUSERS

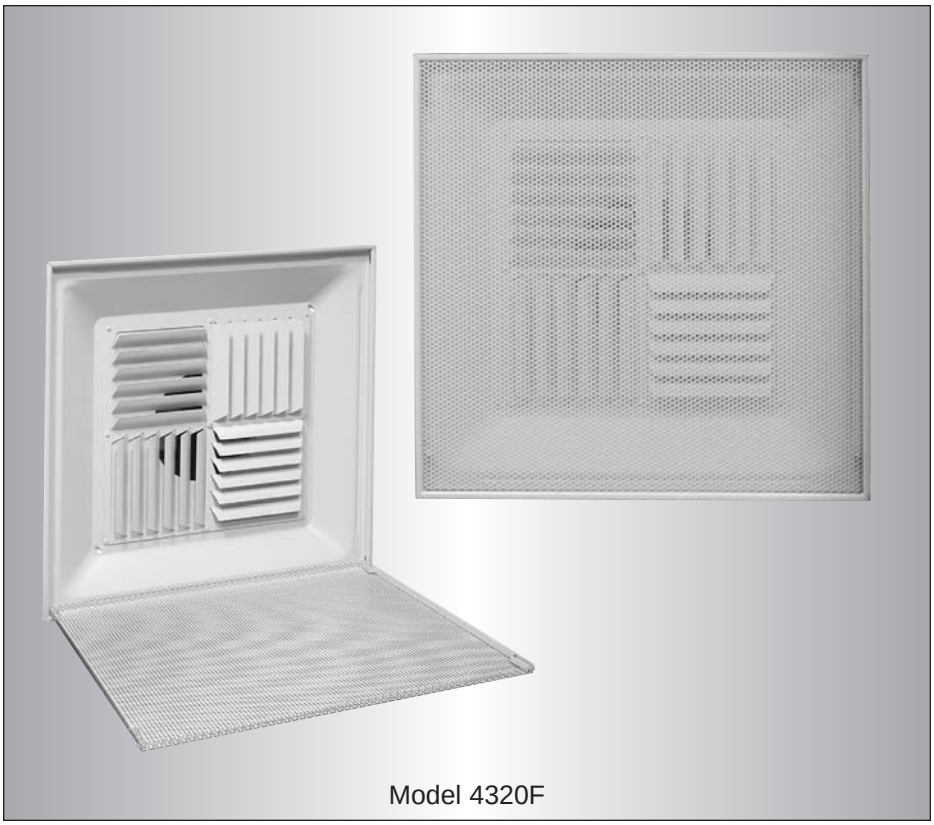
- SUPPLY
- 4-WAY DISCHARGE PATTERN
- FIELD ADJUSTABLE TO 1, 2 or 3 WAY PATTERN

Steel Models:

4320F Flush Face
4325F Drop Face

Aluminum Face Models:

4320FA Flush Face
4325FA Drop Face



Model 4320F

The **Nailor 4320F Series Perforated Diffusers** combine smooth, unobtrusive architectural appearance with the superior performance characteristics required by engineers. Designed to maximize throw, these models feature a single heavy gauge stamped pattern controller that is mounted directly under the neck. The formed louver air pattern controller has curved vanes that optimize airflow projection and provide a superior horizontal air pattern with a strong ceiling coanda effect. An excellent choice for variable air volume systems.

A main benefit of the **4320F Series** design is that the factory set 4-way discharge pattern controllers can be field adjusted to a 1, 2, or 3-way pattern. You can be assured that once installed, be it long or short term, the air pattern projection and performance will remain constant.

The **4325F** features a drop (extended) face panel that is available to compliment tegular tile ceiling systems. This ensures the panel remains flush with the ceiling line.

FEATURES:

- Round or square necks available.
- Hinged, removable face plate with quick-release spring latches.
- Factory set 4-way discharge pattern can be field adjusted to a 1, 2, or 3 way deflection.
- Rugged curved vane air pattern controllers ensure performance is always optimized.
- Inlet collar has 1 1/4" (32) depth for easy duct connection.
- Dropping the perforated face gives access to the optional damper.
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.
- Return models (**4360 Series**) have the same face and frame construction as the supply models to match their appearance.

Material: Corrosion-resistant steel backpan. Corrosion-resistant steel or aluminum perforated face depending on model selection.
Finish: AW Appliance White baked enamel finish is standard. Other finishes are available.

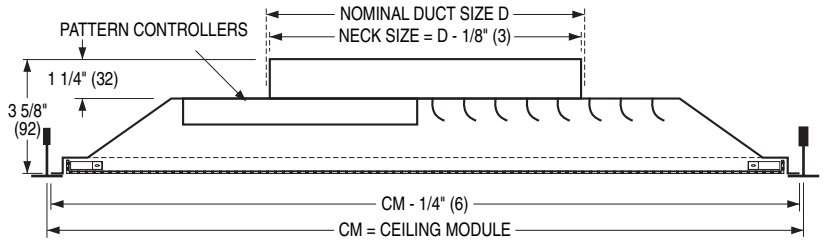
Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D			
Imperial Modules	Metric Modules	Round Neck		Square Neck	
		Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16 dia.	152, 203, 254, 305, 356, 381, 406 dia.	6 x 6, 8 x 8, 10 x 10 12 x 12, 14 x 14, 15 x 15 16 x 16	152 x 152, 203 x 203, 254 x 254 305 x 305, 356 x 356, 381 x 381 406 x 406

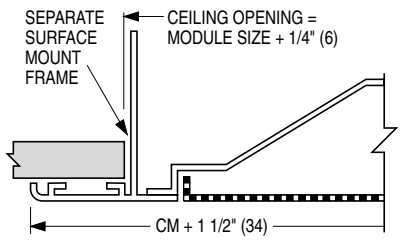
Dimensional Data and Frame Types

Models 4320F, 4320FA • Supply • Flush Face

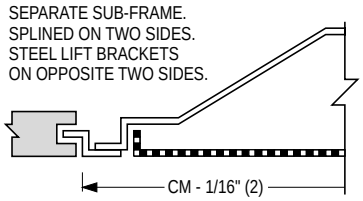
Type L Lay-in T-Bar



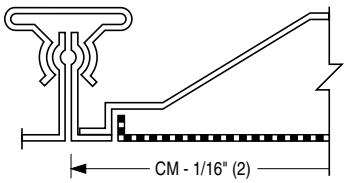
Type S Surface Mount



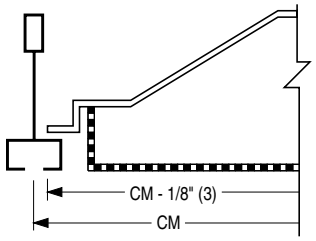
Type SP Spline



Type M Metal Pan (Snap-in)

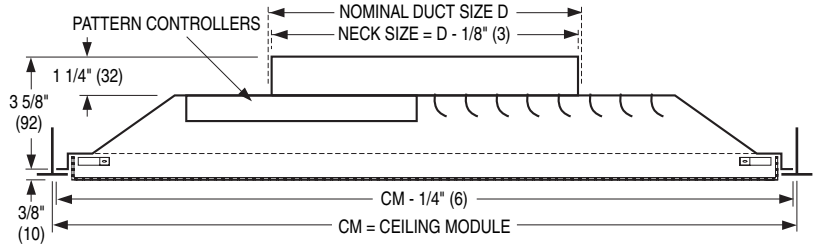


Type F Fineline®

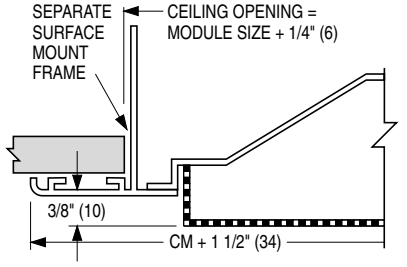


Models 4325F, 4325FA • Supply • Drop Face

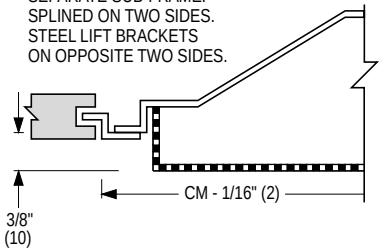
Type L Lay-in T-Bar or Tegular



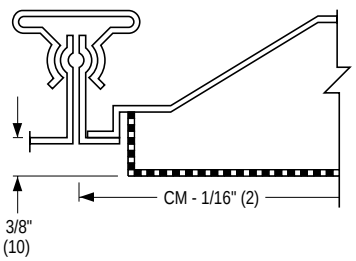
Type S Surface Mount



Type SP Spline



Type M Metal Pan (Snap-in)



HOW TO SPECIFY OR TO ORDER

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

Perforated Adjustable Pattern Ceiling Diffusers – Model Series 4320F

4320F - 08 - 24 x 24 - L - AW - –

MODEL

- Steel	Flush Face	4320F
	Drop Face	4325F
- Aluminum Face	Flush Face	4320FA
	Drop Face	4325FA

NECK SIZE (inches)

Round

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

Square

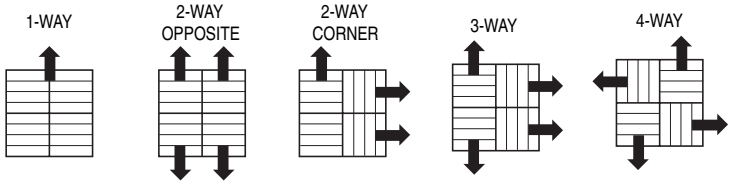
6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 15 x 15, 16 x 16

CEILING MODULE

Imperial (inches)	Metric (mm)
- 24 x 24	600 x 600

PATTERN CONTROLLER ADJUSTMENTS

(THE DIFFUSER IS SHIPPED WITH A 4-WAY DISCHARGE).



ACCESSORIES

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

AIR BALANCING DEVICES

Round Neck

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

Square Neck

- Opposed Blade Damper	OBD
- Equalizing Grid	EGL
- Damper/Equalizing Grid	DEGL

FINISH

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

FRAME TYPE

- T-Bar Lay-in	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-in	M
- Fineline®	F

Notes:

1. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION:

Specification Text File

Models 4320F, 4325F - Steel

Furnish and install Nailor Model (select one) **4320F Flush Face or 4325F Drop Face, Adjustable Pattern Perforated Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a high neck collar that is round or square as specified. A corrosion- resistant steel perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted at the neck of the diffuser shall be factory set 4-way stamped curved vane deflectors that can be field adjusted to a 1, 2, or 3 way discharge pattern (as specified). The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning, adjusting the discharge pattern and adjusting the optional damper if required.

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

Specification Text File

Models 4320FA, 4325FA – Aluminum Face

Furnish and install Nailor Model (select one) **4320FA Flush Face or 4325FA Drop Face, Adjustable Pattern Perforated Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a high neck collar that is round or square as specified. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted at the neck of the diffuser shall be factory set 4-way stamped curved vane deflectors that can be field adjusted to a 1, 2, or 3 way discharge pattern (as specified). The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning, adjusting the discharge pattern and adjusting the optional damper if required.

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

Performance Data

Models 4320F, 4320FA • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
	TP		.026	.047	.073	.105	.143	.186	.236
6" Dia.	Flow Rate, CFM		60	80	95	115	135	155	175
	T	4-Way	1-2-4	2-3-6	2-3-7	3-4-7	3-5-8	4-6-9	4-6-9
		3-Way	1-2-5	2-3-7	2-4-8	3-5-9	4-6-9	4-7-10	5-7-11
		2-Way	2-3-7	3-4-9	4-6-11	4-7-12	5-8-13	6-9-14	7-11-15
		1-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-9-16	7-11-17	8-12-18
	NC		—	—	17	23	28	33	36
8" Dia.	Flow Rate, CFM		105	140	175	210	245	280	315
	T	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25
	NC		—	—	20	26	31	36	39
10" Dia.	Flow Rate, CFM		165	215	270	325	380	435	490
	T	4-Way	2-3-7	3-5-10	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		3-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-10-16	7-11-17	8-13-18
		2-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-27
		1-Way	4-7-14	6-9-18	7-11-23	9-14-26	11-16-28	12-18-29	14-22-31
	NC		—	15	23	29	34	38	40
12" Dia.	Flow Rate, CFM		235	315	390	470	550	625	705
	T	4-Way	3-4-9	4-6-12	5-7-14	6-9-15	7-10-17	8-12-18	9-13-20
		3-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-20	9-14-22	10-15-23
		2-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32
		1-Way	5-8-17	7-11-23	9-14-28	11-17-31	13-20-33	15-23-35	17-26-37
	NC		—	16	24	30	35	39	41
14" Dia.	Flow Rate, CFM		320	425	535	640	750	855	960
	T	4-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-21	9-14-22	10-16-23
		3-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-24	10-16-25	12-18-27
		2-Way	5-8-17	7-11-24	9-14-28	11-17-30	13-21-33	15-24-35	17-26-37
		1-Way	6-9-20	8-13-27	11-16-33	13-20-36	15-24-38	17-27-41	20-30-43
	NC		—	18	26	32	37	41	43
15" Dia.	Flow Rate, CFM		370	490	615	740	860	985	1100
	T	4-Way	3-6-10	4-2-14	5-8-17	8-10-19	8-13-21	10-14-23	10-16-24
		3-Way	4-6-12	6-8-17	6-11-21	8-13-22	10-14-25	11-16-26	13-18-28
		2-Way	4-8-17	7-12-25	9-15-30	11-18-31	13-22-34	16-25-35	17-27-38
		1-Way	6-9-20	8-14-28	12-17-34	14-21-37	16-24-39	18-27-42	17-31-43
	NC		—	19	27	33	38	42	44
16" Dia.	Flow Rate, CFM		420	560	700	835	975	1115	1255
	T	4-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-26
		3-Way	4-7-14	6-9-18	7-11-23	9-14-25	10-16-27	12-18-29	14-22-30
		2-Way	6-9-20	8-13-27	10-16-32	13-20-35	15-24-37	17-27-40	20-30-42
		1-Way	7-11-23	10-15-31	12-18-37	15-23-41	17-27-44	21-31-47	23-35-50
	NC		—	21	28	34	39	43	45

For performance notes, see page D169.

Performance Data

Models 4320F, 4320FA • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
	TP		.025	.045	.070	.100	.137	.179	.226
6 x 6	Flow Rate, CFM		75	100	125	150	175	200	225
	T	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26
	NC		—	—	18	24	29	34	37
8 x 8	Flow Rate, CFM		135	175	220	265	310	355	400
	T	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28
	NC		—	—	21	27	32	37	40
10 x 10	Flow Rate, CFM		210	275	345	415	485	555	625
	T	4-Way	2-4-8	3-5-11	4-7-13	5-8-14	6-10-16	7-11-17	8-12-18
		3-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-22
		2-Way	4-6-13	6-9-18	7-11-22	9-13-25	10-16-26	12-18-28	13-21-30
		1-Way	5-8-16	7-10-22	8-13-26	10-16-29	12-18-31	14-22-33	16-25-35
	NC		—	16	24	30	35	39	41
12 x 12	Flow Rate, CFM		300	400	500	600	700	800	900
	T	4-Way	3-5-10	4-6-13	5-8-16	6-10-17	8-12-20	9-13-21	10-15-22
		3-Way	3-5-11	5-7-15	6-9-18	7-11-21	9-13-23	10-15-24	11-17-26
		2-Way	5-8-16	7-11-23	9-13-27	11-16-29	13-20-32	14-23-34	16-25-36
		1-Way	6-9-20	8-12-26	10-16-31	12-20-34	14-23-37	17-26-40	22-31-44
	NC		—	17	25	31	36	40	42
14 x 14	Flow Rate, CFM		410	545	680	815	955	1090	1360
	T	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-372
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54
	NC		—	19	27	33	38	42	44
15 x 15	Flow Rate, CFM		470	625	780	935	1095	1250	1405
	T	4-Way	4-6-12	5-8-17	7-10-21	8-12-23	10-15-25	11-17-26	12-20-28
		3-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32
		2-Way	6-10-21	9-13-28	11-17-33	13-21-37	16-25-40	18-28-42	21-32-45
		1-Way	8-12-25	10-16-33	13-21-39	16-25-43	18-29-46	22-33-49	25-37-53
	NC		—	20	28	33	39	43	45
16 x 16	Flow Rate, CFM		530	710	890	1065	1245	1420	1600
	T	4-Way	4-7-14	5-9-18	7-10-20	9-13-24	10-16-26	10-19-28	13-21-29
		3-Way	4-7-17	6-10-21	8-12-24	10-15-28	11-20-30	13-22-32	17-24-34
		2-Way	7-10-23	10-14-29	11-17-34	15-22-36	18-28-43	20-30-44	24-34-50
		1-Way	8-12-26	11-17-33	14-21-40	18-25-45	21-32-50	23-38-53	29-40-56
	NC		—	22	29	35	40	44	45

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

Performance Notes:

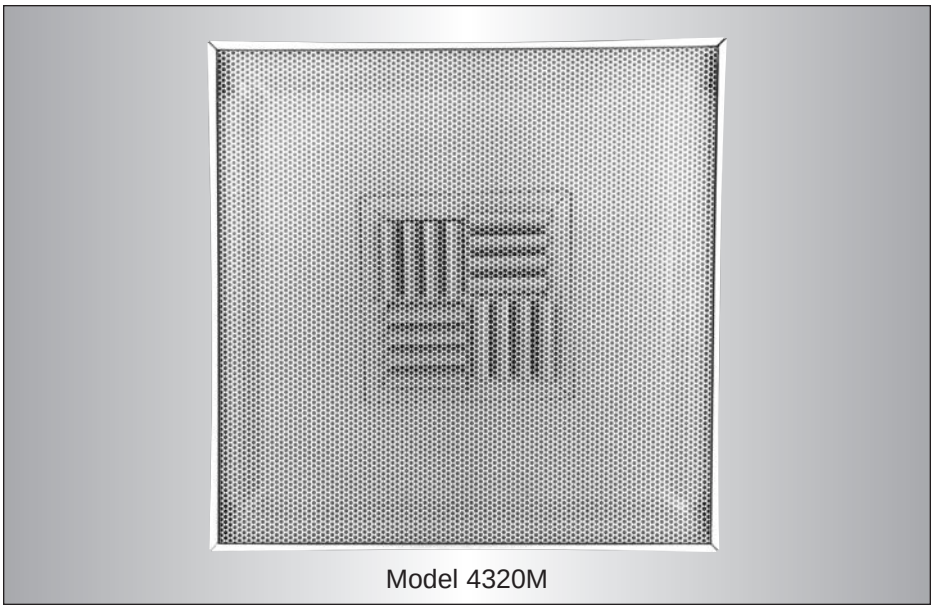
1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

PERFORATED MODULAR CORE DIFFUSERS

- SUPPLY
- SQUARE NECK
- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN



Model 4320M

Steel Models:

4320M Flush Face
4325M Drop Face

Aluminum Face Models:

4320MA Flush Face
4325MA Drop Face

The **Nailor 4320M Perforated Modular Core Diffusers** provide the unobtrusive, smooth appearance preferred by many architects and combines this with the flexible features of a high performance modular core design. This model features four individual, spring-loaded modular pattern controllers mounted in the neck. They can be adjusted before or after installation, to provide a 1, 2, 3 or 4-way discharge pattern by simply dropping the perforated face and rotating one or more of the pattern controllers.

The engineered modular core design maintains a tight, uniform horizontal throw pattern from maximum to minimum cataloged air volumes. It therefore provides excellent performance in variable air volume systems. The diffuser is shipped from the factory with the modular core set for a 4-way discharge pattern.

The **4325M** features a dropped (extended) face panel that is designed to compliment tegular tile ceiling systems. The face panel is suspended flush with the ceiling line, providing both an aesthetically pleasing appearance and ensuring optimal performance is maintained.

FEATURES:

- Square neck is standard.
- Hinged, removable face plate with quick-release spring latches.
- Discharge pattern can be adjusted to a 1, 2, 3 or 4-way horizontal pattern before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the modular sections.
- Inlet collar has approximately 1 1/2" (38) depth for easy duct connection.
- Dropping the perforated face and removing a core module gives access to the optional opposed blade damper.
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.
- Return models (**4360 Series**) have the same face and frame construction as the supply models to match the appearance.

Material: Corrosion-resistant steel backpan and modular core. Corrosion-resistant steel or aluminum perforated face depending on model selection.
Finish: AW Appliance White baked enamel finish is standard. Other finishes are available.

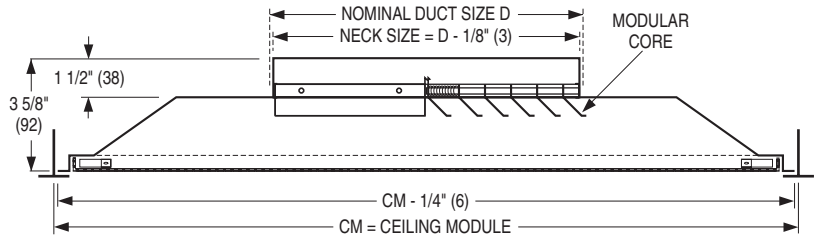
Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D	
Imperial Modules	Metric Modules	Square Neck	
		Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	6 x 6, 8 x 8	152 x 152, 203 x 203
24 x 24	600 x 600	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 15 x 15, 16 x 16, 18 x 18, 20 x 20	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356, 381 x 381 406 x 406, 457 x 457, 508 x 508

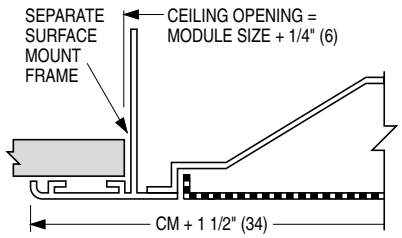
Dimensional Data and Frame Types

Models 4320M, 4320MA • Flush Face • Square Neck

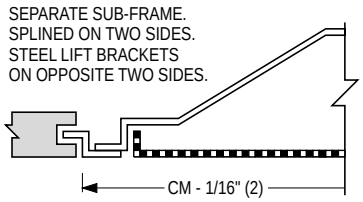
Type L Lay-in T-Bar



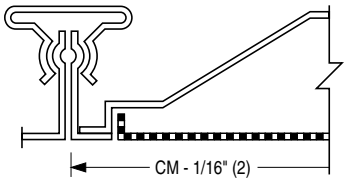
Type S Surface Mount



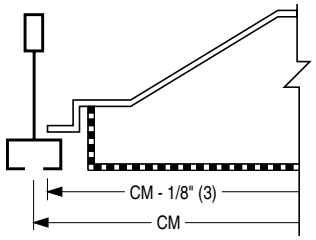
Type SP Spline



Type M Metal Pan (Snap-in)

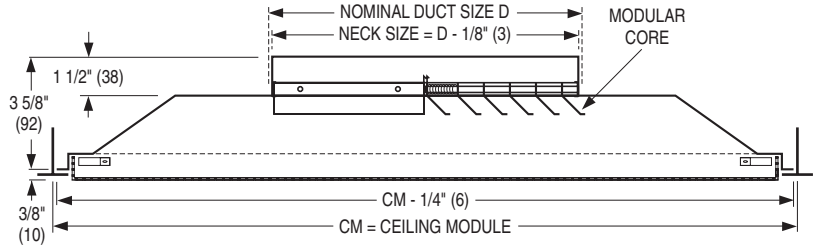


Type F Fineline®



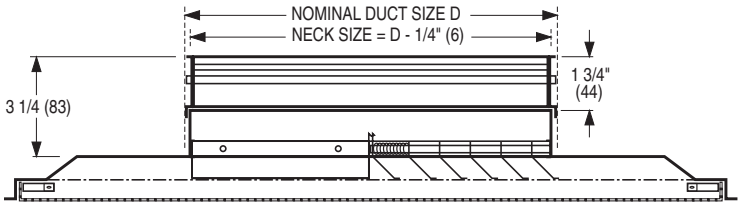
Models 4325M, 4325MA • Drop Face • Square Neck

Type L Lay-in T-Bar or Tegular



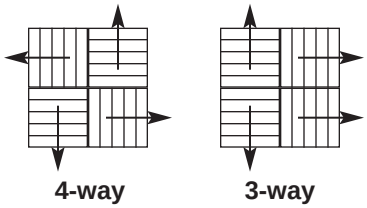
Drop face models are also available with Type S, SP and M frames.

Optional Opposed Blade Damper • Model OBD



Heavy gauge roll-formed steel damper is supplied with a screwdriver slot operator.

Modular Core Adjustments



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

HOW TO SPECIFY OR TO ORDER

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

Perforated Modular Core Square Neck Supply Ceiling Diffusers – Model Series 4320M

4320M - 8 x 8 - 24 x 24 - L - AW - –

MODEL

- Steel	Flush Face	4320M
	Drop Face	4325M
- Aluminum Face	Flush Face	4320MA
	Drop Face	4325MA

NECK SIZE (inches)

6 x 6, 8 x 8, 10 x 10, 12 x 12,
14 x 14, 15 x 15, 16 x 16,
18 x 18, 20 x 20

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 24 x 24	600 x 600

ACCESSORIES

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

AIR BALANCING DEVICES

- Opposed Blade Damper	OBD
- Equalizing Grid	EGL
- Damper/Equalizing Grid	DEGL

FINISH

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

FRAME TYPE

- Lay-in T-Bar	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-in	M
- Fineline®	F

Notes:

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

SUGGESTED SPECIFICATION:

Specification Text File

Models 4320M, 4325M – Steel

Furnish and install **Nailor Model** (select one) **4320M Flush Face** or **4325M Drop Face, Perforated Modular Core Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with an integral square neck collar. A corrosion-resistant steel perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted in the neck of the diffuser shall be four square modular pattern deflectors factory installed in a 4-way pattern, that are easily field rotated to provide throws in 1, 2, or 3-way patterns. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4320MA, 4325MA – Aluminum Face

Furnish and install **Nailor Model** (select one) **4320MA Flush Face** or **4325MA Drop Face, Perforated Modular Core Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with an integral square neck collar. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted in the neck of the diffuser shall be four square modular pattern deflectors factory installed in a 4-way pattern, that are easily field rotated to provide throws in 1, 2, or 3-way patterns. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4320M, 4320MA • 12 x 12 (300 x 300) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
6 x 6	TP		.030	.048	.071	.119	.155	.196	.244
	Flow Rate, CFM		75	100	125	150	175	200	225
	T	4-Way	1-1-2	1-1-3	1-2-4	1-2-5	2-3-6	2-3-6	2-4-7
		3-Way	1-2-4	2-3-6	2-4-8	3-4-9	3-5-10	4-6-11	4-7-11
		2-Way	2-3-6	2-4-8	3-5-10	4-6-12	4-7-13	5-8-14	6-9-15
		1-Way	3-4-9	4-6-12	5-8-16	6-9-19	7-11-20	8-12-22	9-14-2
	NC		—	—	19	24	30	34	39
8 x 8	TP		.028	.042	.064	.110	.141	.186	.240
	Flow Rate, CFM		135	175	220	265	310	355	400
	T	4-Way	1-1-3	1-2-5	2-3-6	2-3-7	2-4-8	3-5-8	3-5-9
		3-Way	2-3-6	2-4-8	3-5-10	4-6-13	5-7-14	5-8-15	6-9-15
		2-Way	2-4-8	3-5-11	4-6-13	5-8-16	6-9-18	7-11-19	8-12-20
		1-Way	4-6-12	5-8-17	7-10-21	8-12-25	10-15-27	11-17-29	12-19-31
	NC		—	16	23	28	34	38	43

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

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

Performance Data

Models 4320M, 4320MA • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
6 x 6	TP		.024	.042	.065	.098	.130	.169	.202
	Flow Rate, CFM		75	100	125	150	175	200	225
	T	4-Way	1-1-2	1-1-3	1-2-4	1-2-5	2-3-6	2-3-6	2-4-7
		3-Way	1-2-4	2-3-6	2-4-8	3-4-9	3-5-10	4-6-11	4-7-11
		2-Way	2-3-6	2-4-8	3-5-10	4-6-12	4-7-13	5-8-14	6-9-15
		1-Way	3-4-9	4-6-12	5-8-16	6-9-19	7-11-20	8-12-22	9-14-2
	NC		—	—	15	19	23	29	31
8 x 8	TP		.024	.042	.065	.098	.130	.169	.202
	Flow Rate, CFM		135	175	220	265	310	355	400
	T	4-Way	1-1-3	1-2-5	2-3-6	2-3-7	2-4-8	3-5-8	3-5-9
		3-Way	2-3-6	2-4-8	3-5-10	4-6-13	5-7-14	5-8-15	6-9-15
		2-Way	2-4-8	3-5-11	4-6-13	5-8-16	6-9-18	7-11-19	8-12-20
		1-Way	4-6-12	5-8-17	7-10-21	8-12-25	10-15-27	11-17-29	12-19-31
	NC		—	—	18	23	27	33	35
10 x 10	TP		.034	.050	.073	.124	.160	.226	.263
	Flow Rate, CFM		210	275	345	415	485	555	625
	T	4-Way	1-2-4	2-3-6	2-3-7	3-4-9	3-5-10	4-6-11	4-7-11
		3-Way	2-4-8	3-5-10	4-6-13	5-8-16	6-9-17	7-10-18	8-12-19
		2-Way	3-5-10	4-6-13	5-8-17	6-10-20	8-12-22	9-13-24	10-15-25
		1-Way	5-8-16	7-10-21	8-13-26	10-16-32	12-18-34	14-21-37	16-24-39
	NC		—	—	21	26	30	36	38
12 x 12	TP		.036	.052	.085	.127	.169	.230	.276
	Flow Rate, CFM		300	400	500	600	700	800	900
	T	4-Way	1-2-5	2-3-7	3-4-9	3-5-11	4-6-12	5-7-13	5-8-14
		3-Way	3-4-9	4-6-13	5-8-16	6-9-19	7-11-21	8-13-22	9-14-23
		2-Way	4-6-12	5-8-16	6-10-20	8-12-25	9-14-27	11-16-28	12-18-30
		1-Way	6-9-19	8-12-25	10-16-32	12-19-38	15-22-41	17-25-44	19-29-47
	NC		—	—	25	30	34	39	42
15 x 15	TP		.039	.058	.096	.129	.177	.236	.291
	Flow Rate, CFM		470	625	780	935	1095	1250	1405
	T	4-Way	2-3-7	3-4-9	4-6-12	4-7-14	5-8-15	6-9-16	7-10-17
		3-Way	4-6-12	5-8-16	6-10-20	8-12-24	9-14-26	10-16-28	12-18-29
		2-Way	5-7-15	6-10-20	8-13-26	10-15-31	12-18-33	13-20-36	15-23-38
		1-Way	8-12-24	10-16-32	13-20-40	16-24-48	18-28-52	21-32-56	24-36-59
	NC		—	19	28	33	37	42	45
18 x 18	TP		.041	.062	.110	.135	.186	.240	.301
	Flow Rate, CFM		675	900	1125	1350	1575	1800	2025
	T	4-Way	2-4-8	3-5-11	4-7-14	5-8-17	6-10-18	7-11-19	8-12-21
		3-Way	4-7-14	6-9-19	8-12-24	9-14-29	11-17-31	13-19-33	14-22-35
		2-Way	6-9-18	8-12-25	10-15-31	12-18-37	14-21-40	16-25-43	18-28-46
		1-Way	9-14-29	12-19-38	16-24-48	19-29-58	24-34-62	25-38-67	29-43-71
	NC		—	22	31	36	41	46	49

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

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

PERFORATED MODULAR CORE DIFFUSERS

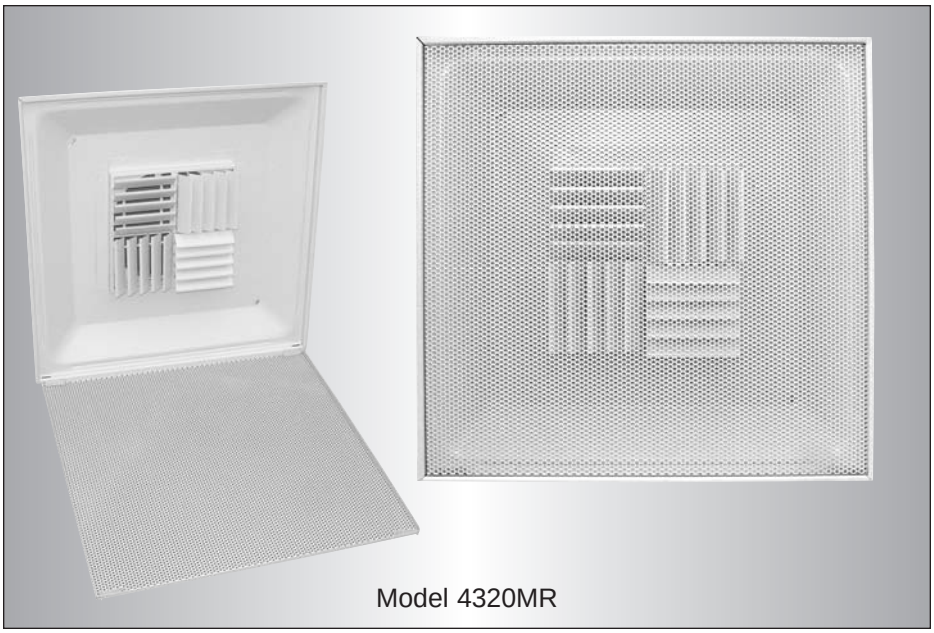
- SUPPLY
- INTEGRAL ROUND NECK
- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN

Steel Models:

4320MR Flush Face
4325MR Drop Face

Aluminum Face Models:

4320MRA Flush Face
4325MRA Drop Face



Model 4320MR

The **Nailor 4320MR Perforated Modular Core Diffusers** provide the unobtrusive, smooth appearance preferred by many architects and combines this with the flexible features of a high performance modular core design. The low profile backpan features an integral round neck which eliminates the need for adapters. Four individual spring-loaded adjustable modular pattern controllers are mounted inside the backpan. This positions the leading edge of the pattern controllers near the perforated face and flush with ceiling for optimum performance. The engineered design maintains a tight, uniform horizontal throw pattern from maximum to minimum cataloged air volumes and therefore provides excellent performance in VAV systems.

Discharge pattern can adjust to 1, 2, 3 or 4-way horizontal, before or after installation.

Discharge pattern is adjusted by dropping the perforated face and rotating the pattern deflectors. Diffusers are shipped from the factory with a 4-way discharge pattern.

The **4325MR** features a dropped (extended) face panel that is designed to compliment tegular tile ceiling systems. The face panel is suspended flush with the ceiling line, providing both an aesthetically pleasing appearance and ensuring optimal performance is maintained.

FEATURES:

- Designed for suspended ceiling systems.
- Round neck is standard.
- Hinged, removable face plate with quick-release spring latches.
- Discharge pattern can be adjusted to a 1, 2, 3 or 4-way horizontal pattern before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the modular sections.
- Inlet collar has approximately 1 1/4" (32) depth for easy duct connection.
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.
- Dropping the perforated face and removing a modular core module gives access to the optional balancing damper.
- Return models (**4360 Series**) have the same face and frame construction as the supply models to match the appearance.

Material: Corrosion-resistant steel backpan and modular core. Corrosion-resistant steel or aluminum perforated face depending on model selection.

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

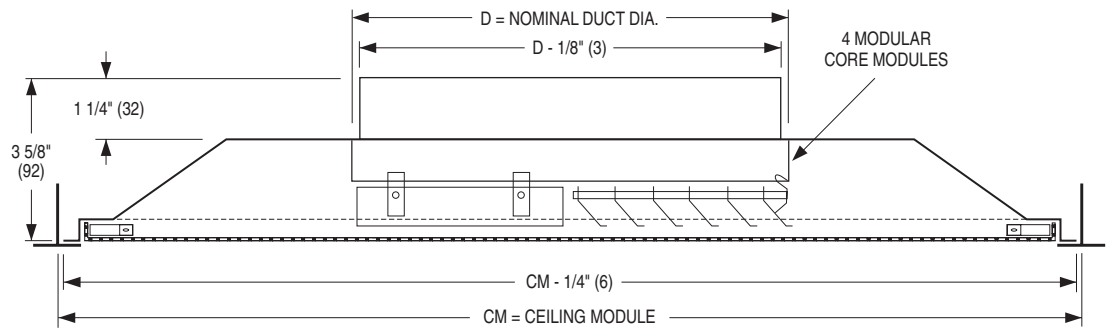
Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D	
Imperial Modules	Metric Modules	Round Neck	
		Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	6, 8 dia.	152, 203 dia.
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16 dia.	152, 203, 254, 305, 356, 381, 406 dia.

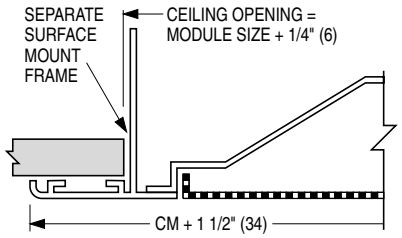
Dimensional Data and Frame Types

Models 4320MR, 4320MRA • Flush Face • Round Neck

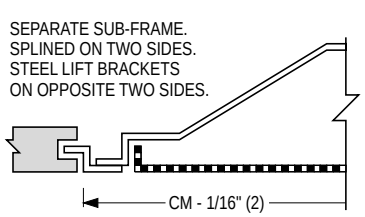
Type L Lay-in T-Bar



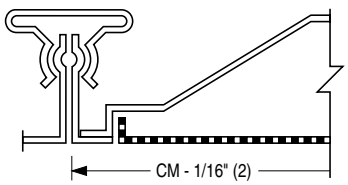
Type S Surface Mount



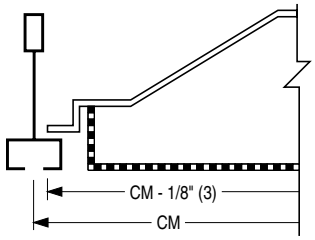
Type SP Spline



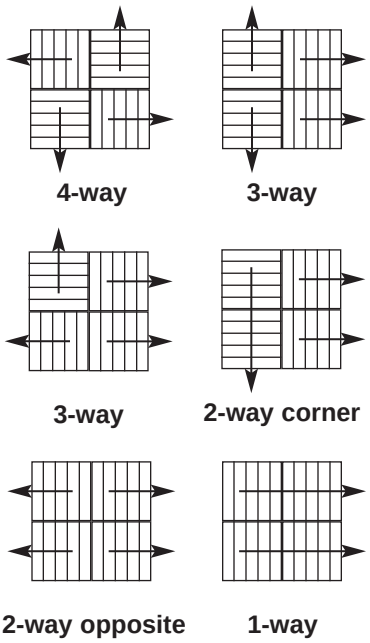
Type M Metal Pan (Snap-in)



Type F Fineline®



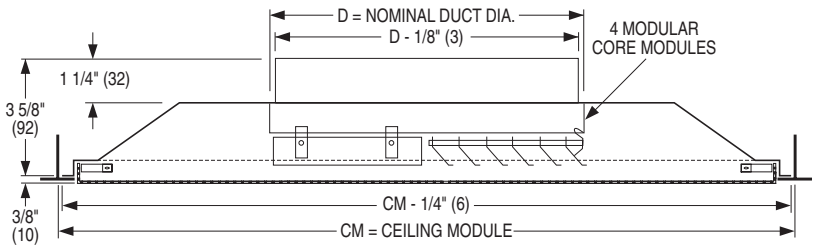
Modular Core Adjustments



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

Models 4325MR, 4325MRA • Drop Face • Round Neck

Type L Lay-in T-Bar or Tegular



Drop face models are also available with Type S, SP and M frames.

HOW TO SPECIFY OR TO ORDER

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

Perforated Modular Core Round Neck Supply Ceiling Diffusers – Model Series 4320MR

4320MR - 08 - 24 x 24 - L - AW - –

MODEL

- Steel	Flush Face	4320MR
	Drop Face	4325MR
- Aluminum Face	Flush Face	4320MRA
	Drop Face	4325MRA

NECK SIZE

06, 08, 10, 12, 14, 15, 16 dia.
(152, 203, 254, 305, 356, 381, 406 dia.)

CEILING MODULE

Imperial (inches)	Metric (mm)
- 24 x 24 (default)	600 x 600
- 12 x 12	300 x 300

ACCESSORIES

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

AIR BALANCING DEVICES

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

FINISH

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

FRAME TYPE

- T-Bar Lay-in	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-in	M
- Fineline®	F

Notes:

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

SUGGESTED SPECIFICATION:

Specification Text File

Models 4320MR, 4325MR – Steel

Furnish and install **Nailor Model** (select one) **4320MR Flush Face** or **4325MR Drop Face, Perforated Modular Core Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped, corrosion-resistant steel, low profile backpan with an integral round neck. A corrosion-resistant steel perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted below the neck of the diffuser shall be four square modular pattern deflectors, factory installed in a 4-way pattern, that are easily field rotated to provide throws in 1, 2, or 3-way patterns. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and rotating the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4320MRA, 4325MRA – Aluminum Face

Furnish and install **Nailor Model** (select one) **4320MRA Flush Face** or **4325MRA Drop Face, Perforated Modular Core Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped, corrosion-resistant steel, low profile backpan with an integral round neck. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted below the neck of the diffuser shall be four square modular pattern deflectors, factory installed in a 4-way pattern, that are easily field rotated to provide throws in 1, 2, or 3-way patterns. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and rotating the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4320MR, 4320MRA • 12 x 12 (300 x 300) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000
	VP		.006	.010	.016	.023	.031	.040	.063
6" Dia.	TP		.016	.031	.041	.065	.092	.124	.163
	Flow Rate, CFM		60	80	100	115	135	155	195
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-2-5	1-2-5	2-3-7
		3-Way	1-1-3	1-2-5	2-3-6	2-3-7	3-4-8	3-5-9	4-6-12
		2-Way	1-1-3	1-1-4	1-2-5	1-3-6	1-4-8	2-4-9	3-5-11
		1-Way	1-1-4	1-1-7	1-2-8	1-4-9	2-5-10	3-7-13	5-8-15
	NC		—	—	18	23	29	33	38
8" Dia.	TP		.015	.027	.043	.062	.084	.110	.171
	Flow Rate, CFM		105	140	175	210	245	280	350
	T	4-Way	1-1-2	1-1-4	1-2-5	1-2-6	1-3-7	2-4-8	3-5-10
		3-Way	1-2-5	1-3-7	2-4-8	3-5-9	4-6-11	4-7-13	5-9-16
		2-Way	1-1-4	1-2-6	1-3-9	2-4-9	3-5-11	3-6-13	5-8-16
		1-Way	1-2-7	1-4-9	2-6-12	4-7-14	5-9-17	6-10-19	8-13-21
	NC		—	15	24	27	33	37	42

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

Performance Notes:

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

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

Balancing:

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

Performance Data

Models 4320MR, 4320MRA • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	1000
	VP		.006	.010	.016	.023	.031	.040	.063
6" Dia.	TP		.016	.031	.041	.065	.092	.124	.163
	Flow Rate, CFM		60	80	100	115	135	155	195
	T	4-Way	1-1-1	1-1-2	1-1-3	1-1-4	1-2-5	1-2-5	2-3-7
		3-Way	1-1-3	1-2-5	2-3-6	2-3-7	3-4-9	3-5-10	4-6-13
		2-Way	1-1-3	1-1-4	1-2-5	1-3-7	1-4-8	2-4-9	3-5-11
		1-Way	1-1-4	1-1-7	1-2-8	1-4-10	2-5-12	3-7-14	5-8-16
	NC		—	—	16	21	26	30	37
8" Dia.	TP		.015	.027	.043	.062	.084	.110	.171
	Flow Rate, CFM		105	140	175	210	245	280	350
	T	4-Way	1-1-2	1-1-4	1-2-5	1-2-6	1-3-7	2-4-8	3-5-10
		3-Way	1-2-5	1-3-7	2-4-8	3-5-10	4-6-12	4-7-14	5-9-17
		2-Way	1-1-4	1-2-6	1-3-8	2-4-9	3-5-11	3-6-13	5-8-16
		1-Way	1-2-7	1-4-10	2-6-13	4-7-15	5-9-17	6-10-19	8-13-21
	NC		—	13	20	25	30	34	41
10" Dia.	TP		.019	.033	.052	.075	.102	.133	.208
	Flow Rate, CFM		165	220	270	325	380	435	545
	T	4-Way	1-1-4	1-1-6	1-3-7	1-4-9	2-5-10	3-6-12	5-7-13
		3-Way	1-3-6	2-4-9	3-5-11	4-6-13	5-7-15	6-9-17	7-11-19
		2-Way	1-1-6	1-3-8	2-5-10	3-6-13	4-7-15	5-8-17	7-10-19
		1-Way	1-4-10	3-7-14	5-9-18	7-10-20	8-12-21	9-14-23	12-18-26
	NC		—	16	23	28	33	37	44
12" Dia.	TP		.023	.040	.063	.091	.124	.162	.253
	Flow Rate, CFM		235	315	390	470	550	630	785
	T	4-Way	1-1-6	1-2-8	2-4-10	2-6-12	3-7-13	5-8-14	6-10-16
		3-Way	1-3-8	3-5-11	4-6-13	5-8-15	6-9-17	7-11-18	9-13-20
		2-Way	1-2-8	2-5-11	3-6-13	5-8-16	6-9-17	7-11-18	9-13-20
		1-Way	3-7-14	5-9-19	8-12-21	9-14-23	11-17-25	13-19-27	16-21-30
	NC		—	19	26	31	36	40	47
14" Dia.	TP		.027	.049	.076	.110	.149	.195	.304
	Flow Rate, CFM		320	425	535	640	750	855	1070
	T	4-Way	1-2-8	1-4-11	2-6-13	4-8-14	5-9-15	7-11-16	9-13-18
		3-Way	2-4-10	3-6-12	5-8-13	6-10-15	7-11-16	8-12-17	11-13-19
		2-Way	1-4-10	3-6-13	5-8-15	6-10-16	7-11-18	9-13-19	11-15-21
		1-Way	4-9-19	8-13-22	10-16-24	13-19-27	15-20-29	17-22-31	20-24-35
	NC		14	23	30	35	40	44	51
16" Dia.	TP		.033	.059	.092	.132	.180	.235	.368
	Flow Rate, CFM		420	560	700	835	975	1115	1295
	T	4-Way	1-3-10	2-5-13	3-8-15	5-10-16	7-12-17	9-13-19	12-15-21
		3-Way	3-5-9	5-7-10	6-8-11	7-9-12	8-9-13	8-10-14	9-11-16
		2-Way	2-5-11	4-8-13	6-10-14	8-11-16	9-12-17	10-13-18	12-14-20
		1-Way	7-12-21	11-17-24	14-19-27	17-21-30	18-23-32	20-24-35	22-27-39
	NC		15	24	31	36	41	45	52

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

Performance Notes:

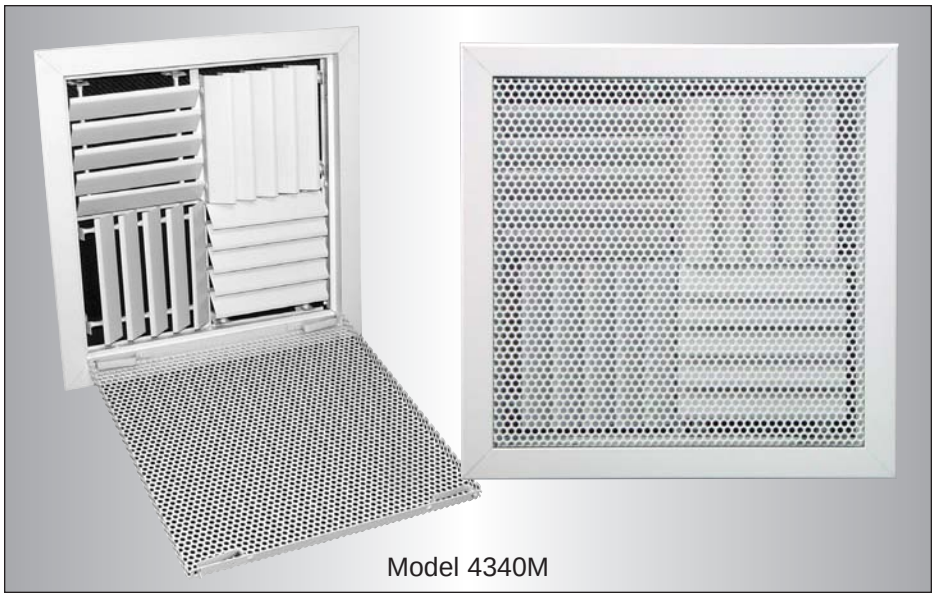
1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

PERFORATED MODULAR CORE DIFFUSERS

- SUPPLY
- SURFACE MOUNT
- FULL FACE SQUARE NECK
- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN


Model 4340M

Steel Face Model:

4340M

Aluminum Face Model:

4340MA

- **Suffix '-O' adds a steel opposed blade damper**

The **Nailor 4340M Modular Core Diffusers** are designed to compliment the Nailor **4320M** and **4320MR** modular ceiling diffusers and feature the same flexible high performance modular core design. The four individual, spring-loaded modular pattern controllers are mounted in the diffuser frame and position the leading edge of the pattern controllers near the perforated face and flush with the ceiling for optimum performance. The engineered design maintains a tight, uniform horizontal throw pattern from maximum to minimum cataloged air volumes, providing excellent performance in VAV systems.

The **4340M** is a square neck grille frame design, featuring full face pattern controllers, for surface mount installation in hard ceilings. Discharge pattern can adjust to 1, 2, 3 or 4-way horizontal, before or after installation. Discharge pattern is adjusted by dropping the perforated face and rotating the pattern deflectors. Diffusers are shipped from the factory with a 4-way discharge pattern.

FEATURES:

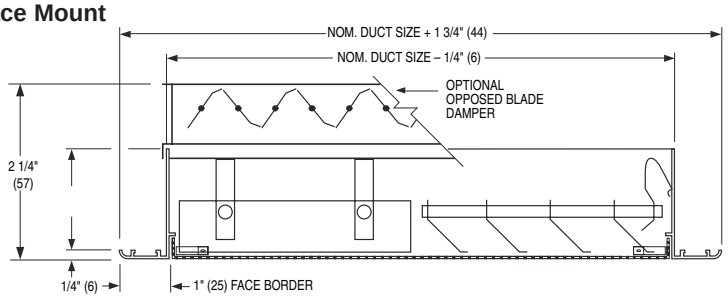
- Hinged removable face plate with quick-release spring latches.
- Discharge pattern can be adjusted to a 1, 2, 3 or 4-way horizontal pattern before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the modular sections.
- Frame is mechanically interlocked for strength with hairline mitered corners.
- Perforated face has 3/16" (5) diameter holes on 1/4" (6) staggered centers, providing 51% free area.
- Type N standard fastening is with sheet metal screws (by others), through the neck of the diffuser outer frame. Optional Type A countersunk screwholes on face of outer frame.
- Dropping the perforated face and removing a modular core gives access to the optional opposed blade damper.
- Return models (**4340R Series**) have the same face and frame construction as the supply models to match the appearance.

Material: Extruded aluminum frame. Corrosion-resistant steel modular core. Corrosion-resistant steel or aluminum perforated face depending on model selection.

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

Dimensional Data

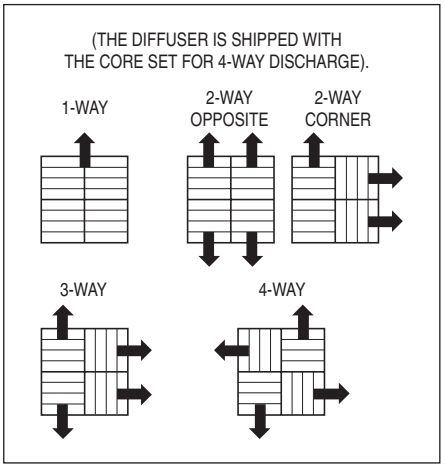
Type S Surface Mount



Available Duct Sizes

6 x 6 (152 x 152)	12 x 12 (305 x 305)	18 x 18 (457 x 457)
8 x 8 (203 x 203)	14 x 14 (356 x 356)	20 x 20 (508 x 508)
9 x 9 (229 x 229)	15 x 15 (381 x 381)	22 x 22 (559 x 559)
10 x 10 (254 x 254)	16 x 16 (406 x 406)	24 x 24 (610 x 610)

Modular Core Adjustments



HOW TO SPECIFY OR TO ORDER

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

Perforated Full Face Modular Core Supply Ceiling Diffusers – Model Series 4340M

4340M - – - 12 x 12 - S - AW - N - –

MODEL
- Steel Face 4340M
- Aluminum Face 4340MA

DAMPER
- No Damper (default) –
- Opposed Blade Damper O

NECK SIZE (inches)
6 x 6, 8 x 8, 10 x 10, 12 x 12,
14 x 14, 16 x 16, 18 x 18,
20 x 20, 22 x 22, 24 x 24

FRAME TYPE
- Surface Mount (default) S

ACCESSORIES
- None (default) —
- Foam Gasket GK
- Earthquake Tabs EQT

AIR BALANCING DEVICES
- Equalizing Grid EGL
- Damper/Equalizing Grid DEGL

FASTENING
- None (default) (installs through neck of frame) N
- Countersunk holes on outer frame A

FINISH
- Appliance White (default) AW
- Special Custom Color SP

D

CEILING DIFFUSERS

Notes:
1. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model** (select one) **4340M** (corrosion-resistant steel with aluminum frame) or **4340MA** (aluminum frame and face) **Full Face Square Neck Perforated Supply Modular Core Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a mechanically interlocked extruded aluminum frame with hairline mitered corners. Mounted in the diffuser shall be four, corrosion-resistant steel, square modular pattern deflectors installed in a 4-way pattern, that are easily field rotated to provide throws in 1, 2, or 3-way patterns. The modular core shall be sized according to the square neck size as specified. The perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning and rotating the deflectors (or optional damper). The diffuser shall be fastened through the neck with sheet metal screws (supplied by the installing contractor). 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, and operable from the face of the diffuser, 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.

Performance Data

Models 4340M, 4340MA • Surface Mount • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800
	VP		.006	.010	.016	.023	.031	.040
	TP		.028	.047	.075	.103	.146	.188
6 x 6	Flow Rate, CFM		75	100	125	150	175	200
	T	4-Way	2-3-7	3-4-8	4-5-8	4-7-9	5-7-10	6-8-11
		3-Way	3-4-8	4-5-9	4-7-10	5-8-11	6-8-12	7-9-13
		2-Way	4-5-10	5-7-12	6-9-13	7-10-15	8-11-16	9-12-17
		1-Way	4-7-13	6-9-15	7-11-17	9-13-18	10-14-20	12-15-21
	NC		-	-	19	25	31	35
8 x 8	Flow Rate, CFM		133	176	222	267	311	356
	T	4-Way	2-4-8	3-5-10	4-6-11	5-8-12	6-9-13	7-10-14
		3-Way	2-5-9	4-6-12	5-8-13	6-9-15	7-11-18	8-12-17
		2-Way	3-6-12	5-8-16	7-10-18	8-12-20	10-14-25	11-16-23
		1-Way	4-8-15	7-10-20	8-13-22	10-15-25	12-18-31	14-20-28
	NC		-	-	22	28	34	38
10 x 10	Flow Rate, CFM		208	278	347	417	486	556
	T	4-Way	2-5-9	4-6-12	5-8-14	6-9-15	7-11-17	8-12-18
		3-Way	3-5-11	5-7-14	6-9-17	7-11-18	8-13-20	10-14-21
		2-Way	3-7-14	6-10-19	8-12-22	10-14-25	11-17-27	13-19-28
		1-Way	4-9-18	8-12-24	10-15-28	12-18-31	14-21-33	16-24-35
	NC		-	16	24	30	36	41
12 x 12	Flow Rate, CFM		300	400	500	600	700	800
	T	4-Way	2-5-11	4-7-14	6-9-17	7-11-18	8-12-20	9-14-21
		3-Way	3-6-13	5-8-17	7-11-20	8-13-22	10-15-24	11-17-26
		2-Way	4-8-17	7-11-22	9-14-27	11-17-29	13-20-32	15-22-34
		1-Way	5-11-21	9-14-28	12-18-34	14-21-37	16-25-40	19-28-43
	NC		-	18	26	32	38	43
14 x 14	Flow Rate, CFM		408	544	681	817	953	1089
	T	4-Way	3-6-12	5-8-16	7-10-20	8-12-21	9-14-23	11-16-25
		3-Way	3-7-15	6-10-19	8-12-24	10-15-26	11-17-28	13-19-30
		2-Way	4-10-19	8-13-26	11-16-31	13-19-34	15-23-37	17-26-40
		1-Way	5-12-24	10-16-32	13-20-39	16-24-43	19-28-46	22-32-50
	NC		-	19	27	34	39	44
15 x 15	Flow Rate, CFM		469	625	781	938	1094	1250
	T	4-Way	3-6-13	5-9-17	7-11-21	9-13-23	10-15-25	11-17-27
		3-Way	3-8-15	6-10-21	9-13-25	10-15-28	12-18-30	14-21-32
		2-Way	5-10-21	8-14-28	11-17-34	14-21-37	16-24-40	18-28-43
		1-Way	6-13-26	10-17-34	14-22-42	17-26-46	20-30-50	23-34-53
	NC		-	20	28	35	40	45
16 x 16	Flow Rate, CFM		533	711	889	1067	1244	1422
	T	4-Way	3-7-14	5-9-18	8-11-22	9-14-25	11-16-27	12-18-28
		3-Way	4-8-16	6-11-22	9-14-27	11-16-29	13-19-32	15-22-34
		2-Way	5-11-22	8-15-29	12-18-36	15-22-39	17-26-42	20-29-45
		1-Way	6-13-27	11-18-37	15-23-45	18-27-49	21-32-53	24-37-57
	NC		-	21	29	35	41	46
18 x 18	Flow Rate, CFM		675	900	1125	1350	1575	1800
	T	4-Way	3-7-15	6-10-20	9-13-25	10-15-28	12-18-30	14-20-32
		3-Way	4-9-18	7-12-25	10-15-30	12-18-33	14-21-36	16-25-38
		2-Way	5-12-25	9-16-33	14-20-40	16-25-44	19-29-48	22-33-51
		1-Way	7-15-31	12-20-41	17-26-50	20-31-55	24-36-60	27-41-64
	NC		-	22	30	37	42	47

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

Performance Notes:
1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

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

PERFORATED CEILING DIFFUSERS

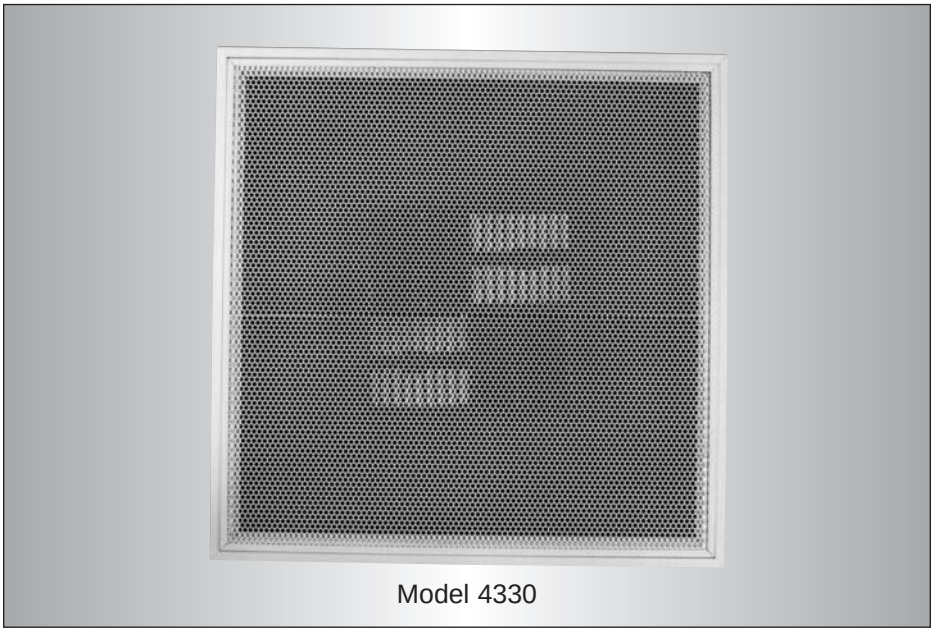
- SUPPLY
- PREMIUM ARCHITECTURAL QUALITY
- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN

Steel Face Model:

4330 Flush Face

Aluminum Face Model:

4330A Flush Face



Model 4330

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

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

FEATURES:

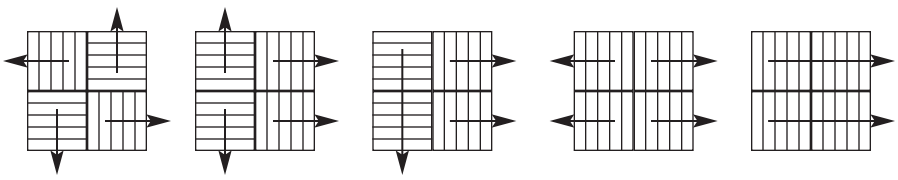
- Round or square necks available.
- Hinged, removable face plate with quick-release spring latches.
- Discharge pattern can adjust to vertical or 1, 2, 3 or 4-way horizontal, before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the pattern deflectors.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

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

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

Available Air Patterns

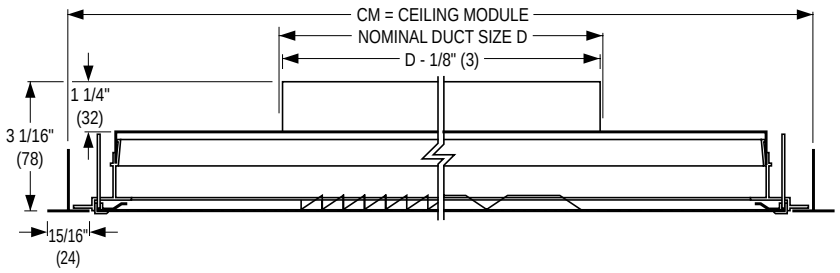
All diffusers are shipped with the standard 4-way pattern, but the air pattern can be simply field adjusted by lowering the hinged face and rotating the spring loaded pattern controllers.



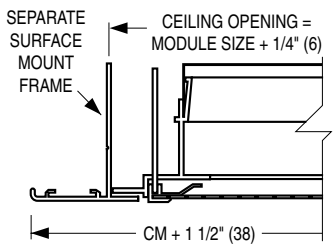
Dimensional Data and Frame Types

Models 4330, 4330A • Supply • Flush Face

Type L Lay-in T-Bar



Type S Surface Mount



Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D			
		Round Neck		Square Neck	
Imperial Modules	Metric Modules	Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	5, 6, 7, 8	127, 152, 178, 203	6 x 6, 8 x 8	152 x 152, 203 x 203
24 x 12	600 x 300	5, 6, 7, 8	127, 152, 178, 203	6 x 6, 8 x 8, 18 x 6	152 x 152, 203 x 203, 457 x 152
16 x 16	400 x 400	5, 6, 7, 8, 10	127, 152, 178, 203, 254	6 x 6, 8 x 8	152 x 152, 203 x 203
20 x 20	500 x 500	5, 6, 7, 8, 10, 12, 14	127, 152, 178, 203, 254, 305, 356	6 x 6, 8 x 8, 10 x 10	152 x 152, 203 x 203, 254 x 254
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16	152, 203, 254, 305, 356, 381, 406	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356
48 x 24	1200 x 600				

HOW TO SPECIFY OR TO ORDER

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

Premium Perforated Supply Ceiling Diffusers – Model Series 4330

4330 - 08 - 24 x 24 - L - AW - –

MODEL

- Steel Face	4330
- Aluminum Face	4330A

NECK SIZE (inches)

Round

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

Square/Rectangular

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

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 16 x 16	400 x 400
- 20 x 20	500 x 500
- 24 x 12	600 x 300
- 24 x 24	600 x 600
- 48 x 24	1200 x 600

ACCESSORIES

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

AIR BALANCING DEVICES

Round Neck

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

Square/Rectangular Neck

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

FINISH

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

FRAME TYPE

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

Note:

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

SUGGESTED SPECIFICATION:

Specification Text File

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

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

Performance Data

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

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

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

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400
	VP	.006	.010	.016	.023	.031	.040	.063	.090	.123
5" Dia.	TP	.010	.018	.028	.040	.054	.070	.110	.157	.215
	Flow Rate, CFM	40	55	70	80	95	110	135	165	190
	T 4-Way	1-2-4	2-2-5	2-3-6	2-4-7	3-5-7	3-6-8	5-6-9	6-7-10	6-7-10
	T 3-Way	1-2-4	2-3-6	2-3-7	2-4-8	3-5-9	4-6-10	5-7-10	6-8-12	6-9-13
	T 2-Way	1-2-5	2-3-6	2-4-8	3-5-10	4-6-10	4-7-12	6-8-13	7-10-14	7-10-15
	T 1-Way	2-3-6	2-4-8	3-5-9	4-6-10	5-7-11	6-8-13	6-9-13	8-10-14	9-10-15
	NC	—	—	14	19	23	27	33	38	42
6" Dia.	TP	.013	.021	.034	.048	.065	.084	.132	.189	.258
	Flow Rate, CFM	60	80	100	120	140	160	195	235	275
	T 4-Way	1-2-4	2-3-5	3-3-7	3-4-8	3-5-8	3-6-9	5-7-10	6-8-10	7-8-11
	T 3-Way	1-2-4	2-3-6	3-3-8	3-4-9	3-5-10	4-6-10	5-8-11	6-9-13	7-10-14
	T 2-Way	1-2-5	2-3-7	3-4-9	3-5-10	4-6-11	4-7-12	6-9-14	7-10-15	8-11-17
	T 1-Way	2-3-6	3-4-9	3-5-11	4-6-11	5-8-12	6-9-13	7-10-15	9-10-16	10-12-17
	NC	—	—	17	22	26	30	36	41	45
7" Dia.	TP	.015	.025	.039	.057	.076	.098	.155	.221	.302
	Flow Rate, CFM	80	105	135	160	190	215	270	320	375
	T 4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
	T 3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
	T 2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
	T 1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
	NC	—	14	20	25	29	33	39	44	48
8" Dia.	TP	.014	.026	.040	.058	.079	.103	.160	.231	.314
	Flow Rate, CFM	105	140	175	210	245	280	350	420	490
	T 4-Way	1-3-6	2-4-8	4-4-10	4-6-11	4-7-12	5-8-12	6-10-13	8-11-14	9-12-16
	T 3-Way	1-3-6	2-4-8	4-5-11	4-6-13	5-7-13	5-9-14	7-11-16	9-13-18	10-13-19
	T 2-Way	1-3-7	2-5-10	4-6-12	4-7-14	5-8-15	6-10-17	8-12-19	10-14-21	12-16-22
	T 1-Way	3-4-9	4-6-12	5-7-13	6-9-14	7-10-15	8-12-17	10-13-19	13-14-21	13-16-22
	NC	—	16	22	27	31	35	41	46	50
6 x 6	TP	.017	.030	.048	.069	.094	.122	.189	.274	.374
	Flow Rate, CFM	75	100	125	150	175	200	250	300	350
	T 4-Way	1-2-5	2-3-6	3-4-8	3-5-9	4-6-9	4-7-10	6-8-11	7-9-12	8-9-13
	T 3-Way	1-2-5	2-4-7	3-4-9	3-5-10	4-6-11	5-7-12	6-9-13	7-10-15	8-11-16
	T 2-Way	1-2-6	2-4-8	3-5-10	4-6-12	5-7-13	5-8-14	7-10-16	8-12-17	9-13-19
	T 1-Way	2-4-7	3-5-10	4-6-11	5-7-12	6-9-13	7-10-14	8-11-16	10-12-17	11-13-19
	NC	—	13	19	24	28	32	38	43	47
18 x 6	TP	.041	.068	.109	.157	.211	.273	.430	.613	.840
	Flow Rate, CFM	225	300	375	450	525	600	750	900	1050
	T 4-Way	5-7-15	6-10-17	8-12-19	10-15-21	11-16-22	13-17-24	16-19-27	17-21-30	19-23-32
	T 3-Way	5-7-15	7-10-17	8-13-19	10-15-21	12-16-22	13-17-24	16-19-27	17-21-30	19-23-32
	T 2-Way	5-8-15	7-11-17	9-13-19	11-15-21	13-16-22	14-17-24	16-19-27	17-21-30	19-23-32
	T 1-Way	8-12-21	10-15-24	13-19-27	15-21-30	18-23-32	20-24-34	22-28-39	24-30-42	27-32-46
	NC	17	25	31	36	40	44	50	55	59

For performance notes, see page D190.

Performance Data

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

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

For performance notes, see page D190.

Performance Data

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

Nominal Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400
	VP	.006	.010	.016	.023	.031	.040	.063	.090	.123
5" Dia.	TP	.010	.018	.028	.040	.054	.070	.110	.157	.215
	Flow Rate, CFM	40	55	70	80	95	110	135	165	190
	T 4-Way	1-2-4	2-2-5	2-3-6	2-4-7	3-5-7	3-6-8	5-6-9	6-7-10	6-7-10
	T 3-Way	1-2-4	2-3-6	2-3-7	2-4-8	3-5-9	4-6-10	5-7-10	6-8-12	6-9-13
	T 2-Way	1-2-5	2-3-6	2-4-8	3-5-10	4-6-10	4-7-12	6-8-13	7-10-14	7-10-15
	T 1-Way	2-3-6	2-4-8	3-5-9	4-6-10	5-7-11	6-8-13	6-9-13	8-10-14	9-10-15
	NC	—	—	14	19	23	27	33	38	42
6" Dia.	TP	.013	.021	.034	.048	.065	.084	.132	.189	.258
	Flow Rate, CFM	60	80	100	120	140	160	200	235	275
	T 4-Way	1-2-4	2-3-5	3-3-7	3-4-8	3-5-8	3-6-9	5-7-10	6-8-10	7-8-11
	T 3-Way	1-2-4	2-3-6	3-3-8	3-4-9	3-5-10	4-6-10	5-8-11	6-9-13	7-10-14
	T 2-Way	1-2-5	2-3-7	3-4-9	3-5-10	4-6-11	4-7-12	6-9-14	7-10-15	8-11-17
	T 1-Way	2-3-6	3-4-9	3-5-11	4-6-11	5-8-12	6-9-13	7-10-15	9-10-16	10-12-17
	NC	—	—	17	22	26	30	36	41	45
7" Dia.	TP	.014	.023	.037	.053	.071	.092	.145	.207	.283
	Flow Rate, CFM	80	105	135	160	190	215	270	320	375
	T 4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
	T 3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
	T 2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
	T 1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
	NC	—	13	19	24	28	32	38	43	47
8" Dia.	TP	.014	.024	.038	.055	.075	.096	.151	.216	.295
	Flow Rate, CFM	105	140	175	210	245	280	350	420	490
	T 4-Way	1-3-6	2-4-8	4-4-10	4-6-11	4-7-12	5-8-12	6-10-13	8-11-14	9-12-16
	T 3-Way	1-3-6	2-4-8	4-5-11	4-6-13	5-7-13	5-9-14	7-11-16	9-13-18	10-13-19
	T 2-Way	1-3-7	2-5-10	4-6-12	4-7-14	5-8-15	6-10-17	8-12-19	10-14-21	12-16-22
	T 1-Way	3-4-9	4-6-12	5-7-13	6-9-14	7-10-15	8-12-17	10-13-19	13-14-21	13-16-22
	NC	—	16	22	27	31	35	41	46	50
10" Dia.	TP	.019	.031	.050	.071	.096	.124	.195	.279	.381
	Flow Rate, CFM	165	220	270	325	380	435	545	655	760
	T 4-Way	1-3-8	2-6-10	4-6-12	4-8-13	6-9-14	7-10-14	8-12-17	10-13-18	11-14-20
	T 3-Way	1-3-8	2-6-10	4-7-13	6-8-15	7-9-17	7-11-18	9-13-20	11-15-22	12-17-23
	T 2-Way	1-3-9	2-7-12	4-8-14	6-9-18	7-10-19	8-12-21	10-14-23	12-18-25	14-20-28
	T 1-Way	3-6-11	4-8-14	7-9-17	8-11-18	9-12-19	10-14-21	12-17-23	15-18-25	15-20-28
	NC	11	19	25	30	34	38	44	49	53
12" Dia.	TP	.023	.038	.060	.087	.117	.150	.237	.338	.462
	Flow Rate, CFM	235	315	390	470	550	630	785	945	1100
	T 4-Way	2-4-8	3-5-12	5-7-14	5-8-16	6-9-17	7-12-18	9-14-20	12-16-21	14-17-23
	T 3-Way	2-4-10	3-6-13	5-7-16	6-9-18	7-11-20	8-13-21	11-16-23	13-18-27	15-20-28
	T 2-Way	2-4-11	3-7-15	5-8-18	7-11-20	8-13-23	9-15-25	12-18-28	15-21-31	17-23-33
	T 1-Way	3-6-14	5-8-18	7-11-20	8-13-21	11-16-23	12-18-25	15-20-28	18-21-31	19-23-33
	NC	14	22	28	33	37	41	47	52	56
14" Dia.	TP	.029	.049	.079	.113	.152	.196	.309	.440	.603
	Flow Rate, CFM	320	425	530	635	740	850	1060	1270	1480
	T 4-Way	2-5-10	4-6-13	6-8-16	6-10-18	7-11-19	8-13-20	11-16-23	13-18-24	16-19-26
	T 3-Way	2-3-11	4-7-14	6-8-18	7-11-20	8-12-23	10-14-24	12-18-26	14-20-30	17-23-31
	T 2-Way	3-5-12	4-8-17	6-10-20	8-12-23	10-14-26	11-17-29	13-20-31	17-24-35	19-26-37
	T 1-Way	4-7-16	6-10-20	8-12-23	10-14-24	12-18-26	13-2029	17-23-31	20-24-35	22-26-37
	NC	19	27	33	38	42	46	52	57	61
6 x 6	TP	.014	.023	.037	.053	.071	.092	.145	.207	.283
	Flow Rate, CFM	75	100	125	150	175	200	250	300	350
	T 4-Way	1-2-5	2-3-6	3-4-9	3-5-10	4-6-10	4-8-11	6-9-12	8-10-13	9-10-14
	T 3-Way	1-2-5	2-4-7	3-4-10	3-5-11	4-6-12	5-8-13	6-10-14	7-11-16	9-12-17
	T 2-Way	1-2-6	2-4-9	3-5-11	4-6-12	5-8-14	5-9-15	7-11-17	9-13-18	10-14-20
	T 1-Way	2-4-8	3-5-11	4-6-12	5-8-13	6-10-14	8-11-15	9-12-17	11-13-18	12-14-20
	NC	—	13	19	24	28	32	38	43	47
8 x 8	TP	.019	.031	.050	.071	.096	.124	.195	.279	.381
	Flow Rate, CFM	135	180	220	265	310	355	445	535	625
	T 4-Way	1-3-8	2-6-10	4-6-12	4-8-13	6-9-14	7-10-14	8-12-17	10-13-18	11-14-20
	T 3-Way	1-3-8	2-6-10	4-7-13	6-8-15	7-9-17	7-11-18	9-13-20	11-15-22	12-17-23
	T 2-Way	1-3-9	2-7-12	4-8-14	6-9-18	7-10-19	8-12-21	10-14-23	12-18-25	14-20-28
	T 1-Way	3-6-11	4-8-14	7-9-17	8-11-18	9-12-19	10-14-21	12-17-23	15-18-25	15-20-28
	NC	11	19	25	30	34	38	44	49	53
10 x 10	TP	.021	.035	.057	.082	.110	.142	.223	.318	.435
	Flow Rate, CFM	210	280	350	415	485	555	695	835	975
	T 4-Way	2-4-8	3-5-11	5-7-13	5-8-15	6-9-16	7-11-17	9-13-19	11-15-20	13-16-22
	T 3-Way	2-4-9	3-6-12	5-7-15	6-9-17	7-10-19	8-12-20	10-15-22	12-17-22	14-19-26
	T 2-Way	2-4-10	3-7-14	5-8-17	7-10-19	8-12-22	9-14-24	11-17-26	14-20-29	16-22-31
	T 1-Way	3-6-13	5-8-17	7-10-19	8-12-20	10-15-22	11-17-24	14-19-26	17-20-29	18-22-31
	NC	13	21	27	32	36	40	46	51	55

For performance notes, see page D190.

Performance Data

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

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

For performance notes, see page D190.

Performance Data

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

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

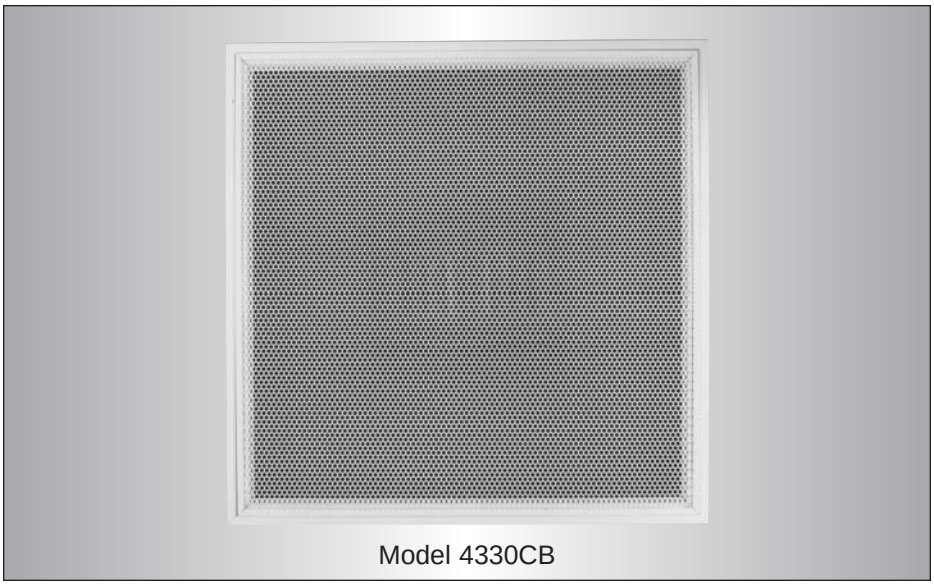
CFM - cubic feet per minute
FPM - feet per minute velocity
TP - total pressure - inches w.g.
VP - velocity pressure - inches w.g.
T - throw in feet
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.

Performance Notes:
1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
Listed throws for the 18" x 6" neck/ 24" x 12" module are for the long side of the diffuser. Throws for the narrow side are approximately x 0.6 listed values.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

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

PERFORATED CURVED BLADE DIFFUSERS

- SUPPLY
- PREMIUM ARCHITECTURAL QUALITY
- 4-WAY ADJUSTABLE DISCHARGE PATTERN (STANDARD)
- 1, 2 OR 3-WAY DISCHARGE PATTERN (OPTIONAL)



Model 4330CB

Steel Face Model:

4330CB Flush Face

Aluminum Face Model:

4330CBA Flush Face

The **Nailor 4330CB Curved Blade Diffusers** provide the unobtrusive, smooth appearance preferred by many architects with superior features and performance characteristics. Designed to maximize throw, this model features individually adjustable, friction pivoted curved blade deflectors mounted directly under the neck. They project a tight, uniform horizontal blanket of air over a wide range of air volumes and provide excellent performance in variable air volume systems.

The **4330CB Diffuser** features an extruded aluminum frame with hairline mitered corners that encapsulates the perforated face providing a narrow, visible border within the T-Bar module. The deflector blades can be adjusted to control both the angle of discharge and hence throw from full horizontal to vertical in each direction and also damper the air volume. By closing off the deflectors in one or more directions, directional control can also be achieved. The **4330CB** is supplied with a 4-way adjustable discharge pattern as standard but is also available with a factory supplied 1, 2 or 3-way adjustable discharge pattern controller.

FEATURES:

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

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

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

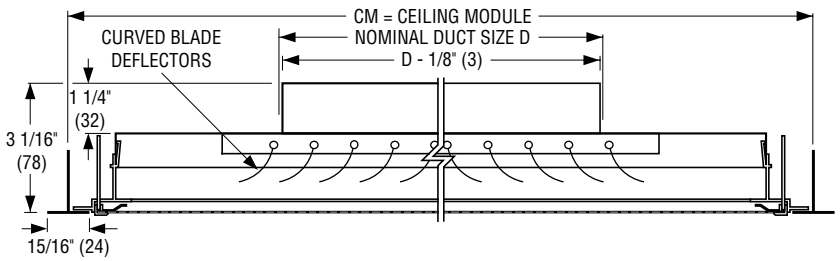
Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D			
		Round Neck		Square Neck	
Imperial Modules	Metric Modules	Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	6, 8	152, 203	6 x 6, 8 x 8	152 x 152, 203 x 203
24 x 12	600 x 300	6, 8	152, 203	6 x 6, 8 x 8, 18 x 6	152 x 152, 203 x 203, 457 x 152
16 x 16	400 x 400	6, 8, 10	152, 203, 254	6 x 6, 8 x 8	152 x 152, 203 x 203
20 x 20	500 x 500	6, 8 10, 12, 14	152, 203, 254, 305, 356	6 x 6, 8 x 8, 10 x 10	152 x 152, 203 x 203, 254 x 254
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16, 18	152, 203, 254, 305, 356, 381, 406, 457	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 15 x 15, 16 x 16, 18 x 18	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356, 381 x 381, 406 x 406, 457 x 457
48 x 24	1200 x 600				

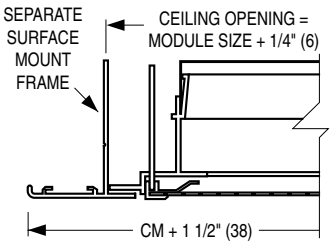
Dimensional Data and Frame Types

Models 4330CB, 4330CBA • Supply • Flush Face

Type L Lay-in T-Bar



Type S Surface Mount



Model Series 4330CB • Adjusting Pattern Controllers

Removing Perforated Face

The **4330 Series** is supplied with a removable face plate that is retained in place with quick-release spring latches, located on the edge of the perforated face border.

1. Carefully insert a small screwdriver or similar object through a perforated hole in the edge of the face plate and pull the diffuser face down slightly. Grasp the face plate by hand and pull down to the extent of the spring latches on all sides.

2. The face plate will now hang by the extended spring latches. Compress the spring latches by hand and remove from the backpan.

3. When the latches are removed from three sides, the face will hinge down from the remaining latches for access to the pattern deflectors. The face can be completely removed by depressing the remaining latches.

4. To close; lift perforated face, depress the spring latches and snap in place.

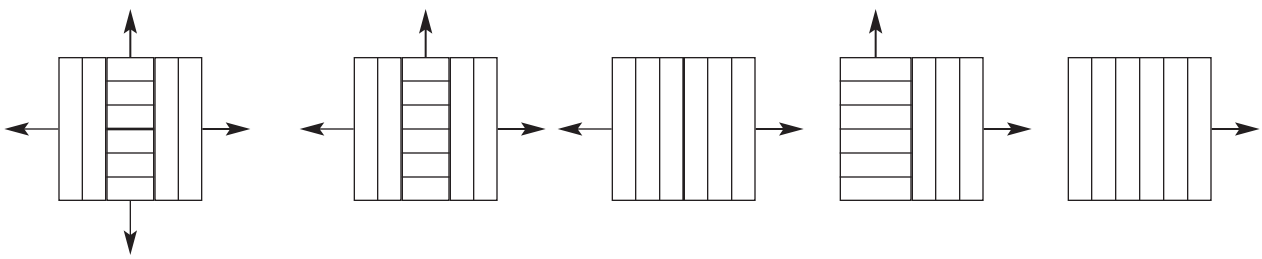
The pattern controller in the neck of the diffuser features individually adjustable deflector blades which may be used to vary the discharge pattern from full horizontal to vertical. Each blade is friction pivoted using a tension wire which securely holds its position after adjustment.

Round or Square Neck • 4-way Pattern

Pattern Controller Options

Standard Model Configuration

Optional Model Configurations



B4, 4-way | **B3, 3-way** | **B2, 2-way opposite** | **C2, 2-way corner** | **B1, 1-way**

The **4330CB Series** is supplied with this style of pattern controller unless specified otherwise.

HOW TO SPECIFY OR TO ORDER

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

Premium Perforated Curved Blade Supply Ceiling Diffusers – Model Series 4330CB

4330CB - 08 - 24 x 24 - L - AW - B4 - –

MODEL

- Steel Face	4330CB
- Aluminum Face	4330CBA

NECK SIZE (inches)

Round

06, 08, 10, 12, 14, 15, 16, 18

Square/Rectangular

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

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 16 x 16	400 x 400
- 20 x 20	500 x 500
- 24 x 12	600 x 300
- 24 x 24	600 x 600
- 48 x 24	1200 x 600

FRAME TYPE

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

ACCESSORIES

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

AIR BALANCING DEVICES

Round Neck

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

Square/Rectangular Neck

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

BLOW PATTERN

- 4-Way (default)	B4
- 3-Way	B3
- 2-Way Opposite	B2
- 2-Way Corner	C2
- 1-Way	B1

FINISH

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

Notes:

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

SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model** (select one) **4330CB** (corrosion-resistant steel face) or **4330CBA** (aluminum face) **Premium Architectural Perforated Supply Curved Blade Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a corrosion-resistant steel backpan with a round or square neck as specified, and an extruded aluminum border/frame that encapsulates the perforated face. The perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. Mounted on the neck of the diffuser shall be a factory installed curved blade pack with individually adjustable blades configured for a 4-way (standard) throw. (Optional) Factory installed 3, 2, or 1-way (select one) pattern to be supplied. The face shall include spring latches allowing easy access for cleaning and adjusting the deflectors (or optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4330CB, 4330CBA • 12 x 12 (300 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
	TP		.030	.052	.082	.118	.162	.211	.267
6" Dia.	Flow Rate, CFM		60	80	95	115	135	155	175
	T	4-Way	1-2-4	2-3-6	2-4-7	3-5-7	3-5-8	4-6-9	5-6-9
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15
		2-Way	2-4-8	3-5-11	4-6-13	5-8-15	6-9-16	7-11-18	8-12-20
		1-Way	3-4-9	4-6-12	5-8-16	6-9-18	7-11-20	8-12-22	9-14-23
	NC		16	22	27	32	37	41	44
8" Dia.	Flow Rate, CFM		105	140	175	210	245	280	315
	T	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25
	NC		17	23	29	35	39	43	46
6 x 6	Flow Rate, CFM		75	100	125	150	175	200	225
	T	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26
	NC		16	22	27	32	36	40	43
8 x 8	Flow Rate, CFM		135	175	220	265	310	355	400
	T	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28
	NC		17	23	30	36	40	44	47

Models 4330CB, 4330CBA • 24 x 12 (600 x 300) Module Size

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
	TP		.030	.052	.082	.118	.162	.211	.267
6" Dia.	Flow Rate, CFM		60	80	95	115	135	155	175
	T	4-Way	1-2-4	2-3-6	2-4-7	3-5-7	3-5-8	4-6-9	5-6-9
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15
		2-Way	2-4-8	3-5-11	4-6-13	5-8-15	6-9-16	7-11-18	8-12-20
		1-Way	3-4-9	4-6-12	5-8-16	6-9-18	7-11-20	8-12-22	9-14-23
	NC		16	22	27	32	37	41	44
8" Dia.	Flow Rate, CFM		105	140	175	210	245	280	315
	T	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25
	NC		17	23	29	35	39	43	46
6 x 6	Flow Rate, CFM		75	100	125	150	175	200	225
	T	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26
	NC		16	22	27	32	36	40	43
8 x 8	Flow Rate, CFM		135	175	220	265	310	355	400
	T	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28
	NC		17	23	30	36	40	44	47

For performance notes, see page D196.

Performance Data

Models 4330CB, 4330CBA • 24 x 24 (600 x 600) Module Size • Round Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
	TP		.030	.052	.082	.118	.162	.211	.267
6" Dia.	Flow Rate, CFM		60	80	95	115	135	155	175
	T	4-Way	1-2-4	2-3-6	2-3-7	3-4-7	3-5-8	4-6-9	4-6-9
		3-Way	1-2-5	2-3-7	2-4-8	3-5-9	4-6-9	4-7-10	5-7-11
		2-Way	2-3-7	3-4-9	4-6-11	4-7-12	5-8-13	6-9-14	7-11-15
		1-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-9-16	7-11-17	8-12-18
	NC		—	19	25	30	34	38	41
8" Dia.	Flow Rate, CFM		105	140	175	210	245	280	315
	T	4-Way	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	4-8-12	5-9-12
		3-Way	2-3-7	3-4-9	3-5-11	4-7-12	5-8-13	6-9-14	7-10-14
		2-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-21
		1-Way	3-5-11	5-7-15	6-9-18	7-11-21	8-13-22	10-15-24	11-17-25
	NC		14	22	28	33	37	41	44
10" Dia.	Flow Rate, CFM		165	215	270	325	380	435	490
	T	4-Way	2-3-7	3-5-10	4-6-12	5-7-13	5-8-14	6-10-15	7-11-16
		3-Way	2-4-8	3-5-11	4-7-13	5-8-15	6-10-16	7-11-17	8-13-18
		2-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-27
		1-Way	4-7-14	6-9-18	7-11-23	9-14-26	11-16-28	12-18-29	14-22-31
	NC		16	24	30	35	39	43	46
12" Dia.	Flow Rate, CFM		235	315	390	470	550	625	705
	T	4-Way	3-4-9	4-6-12	5-7-14	6-9-15	7-10-17	8-12-18	9-13-20
		3-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-20	9-14-22	10-15-23
		2-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32
		1-Way	5-8-17	7-11-23	9-14-28	11-17-31	13-20-33	15-23-35	17-26-37
	NC		18	26	32	37	41	45	48
14" Dia.	Flow Rate, CFM		320	425	535	640	750	855	960
	T	4-Way	3-5-10	4-7-14	5-8-16	7-10-18	8-12-21	9-14-22	10-16-23
		3-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-24	10-16-25	12-18-27
		2-Way	5-8-17	7-11-24	9-14-28	11-17-30	13-21-33	15-24-35	17-26-37
		1-Way	6-9-20	8-13-27	11-16-33	13-20-36	15-24-38	17-27-41	20-30-43
	NC		21	29	35	39	44	48	51
15" Dia.	Flow Rate, CFM		370	490	615	740	860	985	1100
	T	4-Way	3-6-10	4-2-14	5-8-17	8-10-19	8-13-21	10-14-23	10-16-24
		3-Way	4-6-12	6-8-17	6-11-21	8-13-22	10-14-25	11-16-26	13-18-28
		2-Way	4-8-17	7-12-25	9-15-30	11-18-31	13-22-34	16-25-35	17-27-38
		1-Way	6-9-20	8-14-28	12-17-34	14-21-37	16-24-39	18-27-42	17-31-43
	NC		22	30	36	40	45	49	52
16" Dia.	Flow Rate, CFM		420	560	700	835	975	1115	1255
	T	4-Way	4-6-12	5-8-16	6-10-20	8-12-22	9-14-23	10-16-25	12-18-26
		3-Way	4-7-14	6-9-18	7-11-23	9-14-25	10-16-27	12-18-29	14-22-30
		2-Way	6-9-20	8-13-27	10-16-32	13-20-35	15-24-37	17-27-40	20-30-42
		1-Way	7-11-23	10-15-31	12-18-37	15-23-41	17-27-44	21-31-47	23-35-50
	NC		23	31	37	41	46	50	53
18" Dia.	Flow Rate, CFM		530	705	885	1060	1235	1415	1590
	T	4-Way	4-7-14	5-9-18	7-10-20	9-13-24	10-16-26	10-19-28	13-21-29
		3-Way	4-7-17	6-10-21	8-12-24	10-15-28	11-20-30	13-22-32	17-24-34
		2-Way	7-10-23	10-14-29	11-17-34	15-22-36	18-28-43	20-30-44	24-34-50
		1-Way	8-12-26	11-17-33	14-21-40	18-25-45	21-32-50	23-38-53	29-40-56
	NC		25	33	39	43	48	52	55

For performance notes, see page D196.

Performance Data

Models 4330CB, 4330CBA • 24 x 24 (600 x 600) Module Size • Square Neck

Nominal Neck Size	Neck Velocity, FPM		300	400	500	600	700	800	900
	VP		.006	.010	.016	.023	.031	.040	.051
	TP		.028	.050	.079	.113	.155	.202	.256
6 x 6	Flow Rate, CFM		75	100	125	150	175	200	225
	T	4-Way	1-2-5	2-3-7	3-4-8	3-5-8	4-6-9	5-7-10	5-7-11
		3-Way	2-3-6	2-4-8	3-5-11	4-6-12	5-7-13	5-8-14	6-10-15
		2-Way	3-4-9	4-6-12	5-7-15	6-9-17	7-10-20	8-12-21	9-14-22
		1-Way	3-5-10	4-7-14	6-9-18	7-10-21	8-12-23	9-14-24	10-16-26
	NC		—	20	26	31	35	39	42
8 x 8	Flow Rate, CFM		135	175	220	265	310	355	400
	T	4-Way	2-3-6	3-4-9	3-5-10	4-6-11	5-8-12	6-9-13	6-10-14
		3-Way	2-3-7	3-5-10	4-6-12	5-7-13	6-9-14	7-10-15	7-11-16
		2-Way	3-5-11	4-7-14	6-9-17	7-11-20	8-13-21	9-14-23	11-16-24
		1-Way	4-6-12	5-8-17	7-10-21	8-12-23	9-14-25	11-17-27	12-20-28
	NC		15	23	29	34	38	42	45
10 x 10	Flow Rate, CFM		210	275	345	415	485	555	625
	T	4-Way	2-4-8	3-5-11	4-7-13	5-8-14	6-10-16	7-11-17	8-12-18
		3-Way	3-4-9	4-6-13	5-8-15	6-9-17	7-11-18	8-13-20	9-14-22
		2-Way	4-6-13	6-9-18	7-11-22	9-13-25	10-16-26	12-18-28	13-21-30
		1-Way	5-8-16	7-10-22	8-13-26	10-16-29	12-18-31	14-22-33	16-25-35
	NC		17	25	31	36	40	44	47
12 x 12	Flow Rate, CFM		300	400	500	600	700	800	900
	T	4-Way	3-5-10	4-6-13	5-8-16	6-10-17	8-12-20	9-13-21	10-15-22
		3-Way	3-5-11	5-7-15	6-9-18	7-11-21	9-13-23	10-15-24	11-17-26
		2-Way	5-8-16	7-11-23	9-13-27	11-16-29	13-20-32	14-23-34	16-25-36
		1-Way	6-9-20	8-12-26	10-16-31	12-20-34	14-23-37	17-26-40	22-31-44
	NC		19	25	33	38	42	46	49
14 x 14	Flow Rate, CFM		410	545	680	815	955	1090	1360
	T	4-Way	1-1-6	1-3-8	2-4-11	3-6-13	4-7-15	5-8-17	7-11-22
		3-Way	1-3-10	2-6-14	4-9-18	6-10-21	8-12-26	9-14-29	11-18-372
		2-Way	2-5-14	4-9-19	7-12-24	9-14-30	11-17-35	13-19-40	16-24-47
		1-Way	3-8-17	6-11-23	9-14-30	11-17-36	13-20-42	15-23-48	19-30-54
	NC		22	30	36	40	45	49	52
15 x 15	Flow Rate, CFM		470	625	780	935	1095	1250	1405
	T	4-Way	4-6-12	5-8-17	7-10-21	8-12-23	10-15-25	11-17-26	12-20-28
		3-Way	4-7-14	6-9-20	8-12-24	9-14-26	11-17-28	13-20-30	14-23-32
		2-Way	6-10-21	9-13-28	11-17-33	13-21-37	16-25-40	18-28-42	21-32-45
		1-Way	8-12-25	10-16-33	13-21-39	16-25-43	18-29-46	22-33-49	25-37-53
	NC		23	31	37	41	46	50	53
16 x 16	Flow Rate, CFM		530	710	890	1065	1245	1420	1600
	T	4-Way	4-7-14	5-9-18	7-10-20	9-13-24	10-16-26	10-19-28	13-21-29
		3-Way	4-7-17	6-10-21	8-12-24	10-15-28	11-20-30	13-22-32	17-24-34
		2-Way	7-10-23	10-14-29	11-17-34	15-22-36	18-28-43	20-30-44	24-34-50
		1-Way	8-12-26	11-17-33	14-21-40	18-25-45	21-32-50	23-38-53	29-40-56
	NC		24	32	38	42	47	51	54
18 x 18	Flow Rate, CFM		675	900	1125	1350	1575	1800	2025
	T	4-Way	5-7-15	6-10-21	8-12-25	10-15-27	12-18-30	13-21-32	15-24-33
		3-Way	5-8-17	7-11-24	9-14-29	11-17-32	13-22-34	15-24-36	17-27-39
		2-Way	8-12-26	11-16-34	13-21-40	16-26-44	20-30-47	23-34-50	26-38-54
		1-Way	9-14-29	12-20-39	16-25-47	20-29-52	23-34-56	26-39-60	29-44-64
	NC		26	34	40	44	49	53	56

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

Performance Notes:

1. Throws are given at 150, 100 and 50 fpm terminal velocities under isothermal conditions.
2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

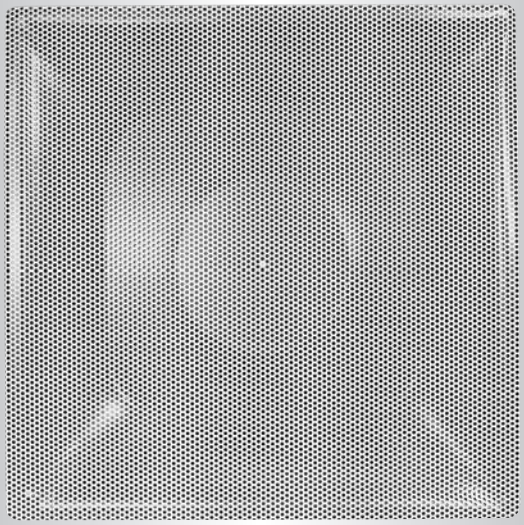
It is recommended that a commercially available 'Flow Hood' is used for field balancing. The airflow meter directly reads average flow rate with great accuracy at all volumes. It is a much faster and more accurate alternative to time consuming multiple velocity readings, eliminating the use of Ak factors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

ALL ALUMINUM PERFORATED CEILING DIFFUSERS

- 100% ALUMINUM CONSTRUCTION
- SUITABLE FOR MRI ROOMS
- SUPPLY AND RETURN

Models:

4310A	**Supply**
4310AR	**Return**



Model 4310A

The **Nailor Model 4310A Perforated Supply Diffusers** have an all aluminum constructed design that combines a smooth unobtrusive architectural appearance with the superior performance characteristics required by engineers. This diffuser is suitable for MRI rooms.

The **4310A** features a smoothly contoured die-formed backpan and wrap-around fixed perforated face. The round disc pattern deflector provides a true 360° radial horizontal air pattern. A tight air pattern protects the ceiling against smudging, providing excellent performance in VAV systems.

The **Nailor Model 4310AR Perforated Return Diffuser** is designed to match the supply model but omits the pattern deflector. It is suitable for ducted return applications.

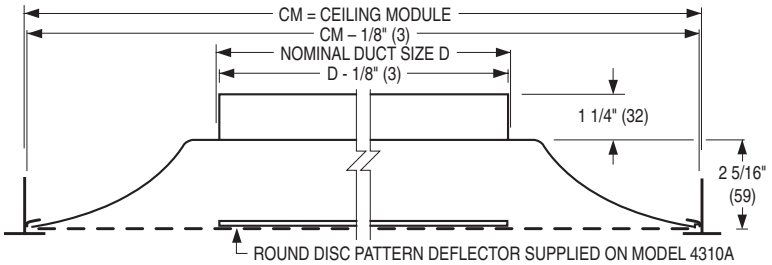
FEATURES:

- Specially designed for MRI Rooms.
- 24" x 24" (600 x 600) module design for suspended ceiling systems.
- Integral round neck is standard.
- Inlet collar has approximately 1 1/4" (32) depth for easy duct connection.
- Supply models incorporate an aluminum fixed round disc pattern deflector that provides a tight air pattern.
- Aluminum perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.
- Return models (**4310AR Series**) have the same face and frame construction as the supply models without the deflector.

Material: 100% all aluminum construction.

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

Type L Lay-in T-Bar



Available Combinations of Ceiling Module vs. Neck Size

Ceiling Module CM		Nominal Duct Size D	
		Round Neck	
Imperial Modules	Metric Modules	Imperial Units (in.)	Metric Units (mm)
24 x 24	600 x 600	6, 8, 10, 12, 14, 15 dia.	152, 203, 254, 305, 356, 381 dia.

HOW TO SPECIFY OR TO ORDER

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

All Aluminum Perforated Supply or Return Ceiling Diffusers – Model Series 4310A

4310A - 10 - 24 x 24 - L - AW - –

MODEL
- Supply 4310A
- Return 4310AR

NECK SIZE (inches)
06, 08, 10, 12, 14, 15 dia.

CEILING MODULE

Imperial (inches)	Metric (mm)
- 24 x 24	600 x 600

FRAME TYPE
- Lay-in T-Bar L

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

ACCESSORIES
- None (default) —

D

CEILING DIFFUSERS

SUGGESTED SPECIFICATION:

Specification Text File

Model 4310A

Furnish and install **Nailor Model 4310A All Aluminum Perforated Supply Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a die-formed aluminum backpan with an integral round neck. An aluminum perforated face with 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area, shall wrap around the backpan. A round stamped aluminum disc deflector shall be mounted on the perforated face. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Model 4310AR

Furnish and install **Nailor Model 4310AR All Aluminum Perforated Return Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a die-formed aluminum backpan with an integral round neck. An aluminum perforated face with 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area, shall wrap around the backpan. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model 4310A • 24 x 24 (600 x 600) Module

Nominal Neck Size	Neck Velocity, fpm	300	400	500	600	700	800	900	1000	1200	1400
	Velocity Pressure	.006	.010	.016	.023	.031	.040	.051	.063	.090	.122
6" Dia.	Total Pressure	.005	.008	.013	.016	.025	.032	.041	.050	.072	.098
	Airflow, cfm	60	80	100	120	140	160	180	195	235	275
	Throw	1-1-2	1-1-2	1-1-3	1-2-3	1-2-4	1-2-4	2-3-5	2-3-6	2-3-7	3-4-8
	NC	—	—	16	18	20	22	24	26	31	37
8" Dia.	Total Pressure	.009	.015	.024	.034	.046	.061	.077	.095	.136	.185
	Airflow, cfm	105	140	175	210	245	280	315	350	420	490
	Throw	1-1-3	1-2-3	1-2-4	2-3-5	2-3-6	2-3-7	3-4-8	3-4-9	3-5-10	4-6-12
	NC	—	—	18	21	24	27	31	34	39	46
10" Dia.	Total Pressure	.013	.023	.037	.053	.072	.094	.119	.147	.211	.288
	Airflow, cfm	165	220	270	325	380	435	490	585	655	765
	Throw	1-2-4	2-2-5	2-3-6	2-4-7	3-4-8	3-5-10	4-5-11	4-6-12	5-7-14	6-8-17
	NC	—	—	19	22	25	28	33	36	41	48
12" Dia.	Total Pressure	.016	.031	.049	.070	.095	.125	.158	.195	.260	.382
	Airflow, cfm	235	315	390	470	550	630	705	785	940	1100
	Throw	2-2-5	2-3-6	3-4-8	3-5-9	4-5-11	4-6-12	5-7-14	6-8-15	6-9-18	7-11-21
	NC	—	16	21	25	29	32	35	38	44	50
14" Dia.	Total Pressure	.021	.038	.059	.085	.115	.151	.191	.235	.339	.461
	Airflow, cfm	320	430	535	640	750	855	960	1070	1285	1495
	Throw	2-3-5	2-4-7	3-5-9	4-5-11	4-6-13	5-7-14	5-8-16	6-9-18	7-11-22	8-13-25
	NC	—	16	22	27	32	35	39	43	49	53
15" Dia.	Total Pressure	.022	.040	.062	.090	.122	.160	.202	.250	.359	.489
	Airflow, cfm	370	490	615	735	860	980	1105	1230	1475	1720
	Throw	2-3-5	3-4-7	3-5-10	4-6-11	5-7-13	5-8-15	6-9-17	7-10-19	8-12-23	9-14-27
	NC	—	17	23	29	34	37	41	45	51	55

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

Performance Notes:

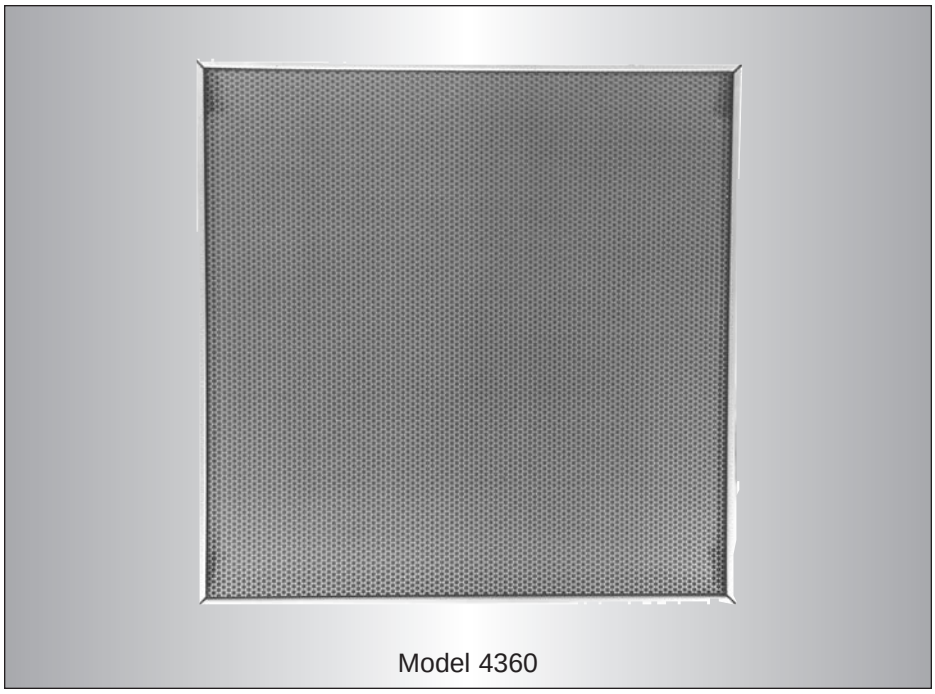
1. All pressures are in inches w.g. To obtain static pressure, subtract the velocity pressure from the total pressure.
2. Throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions.
3. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (–) in spaces indicates an NC level of less than 15.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Balancing:

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

PERFORATED RETURN AIR DIFFUSERS

- MATCH AND COMPLIMENT SUPPLY MODELS
- SUITABLE FOR DUCTED RETURN APPLICATIONS



Model 4360

Steel Models:

4360 Flush Face
4365 Drop Face

Aluminum Face Models:

4360A Flush Face
4365A Drop Face

Aluminum Models:

4360AA Flush Face
4365AA Drop Face

The **Nailor 4360 Series Perforated Face** return air models are designed to match supply air models **4320, 4320CB, 4320F, 4320MR** and **4320M** in appearance and construction detail, less the air pattern controllers which are not required.

The **4360 Series** is offered in two versions. One for ducted return applications which features the same backpan as the supply air models with a neck for connection to flexible or rigid round duct or square duct. The other version features a dedicated frame assembly which has a neck that is 2" (51) less than the ceiling module size. This unit maximizes free area and may be used for ducted or ductless return air applications.

The **4365** model features a drop (extended) face panel that both matches in appearance the drop face supply models and compliments tegular tile ceiling systems, allowing the perforated face panel to remain flush with the ceiling line.

FEATURES:

- Round or square necks available.
- Hinged, removable face plate with quick-release spring latches.
- Inlet collar has minimum 1 1/4" (32) depth for easy duct connection.
- Dropping the perforated face gives access to the optional damper.
- Perforated face with 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.

Material: Models 4360/4365 have a corrosion-resistant steel perforated face and backpan. **Models 4360A/ 4365A** have an aluminum perforated face and a corrosion-resistant steel backpan. **Models 4360AA/4365AA** have an aluminum perforated face and backpan.

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

Available Combinations of Ceiling Module vs. Neck Size

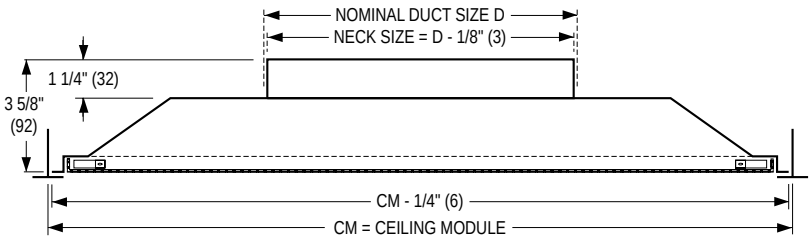
Ceiling Module CM		Nominal Duct Size D			
Imperial Modules	Metric Modules	Round Neck		Square/Rectangular Neck	
		Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	6, 8 dia.	152, 203 dia.	6 x 6, 8 x 8, 10 x 10	152 x 152, 203 x 203, 254 x 254
16 x 16	400 x 400	6, 8, 10, 12 dia.	152, 203, 254, 305 dia.	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356
24 x 12	600 x 300	6, 8 dia.	152, 203 dia.	6 x 6, 8 x 8, 18 x 6, 22 x 10	152 x 152, 203 x 203, 457 x 152, 559 x 254
20 x 20	500 x 500	6, 8, 10, 12, 14 dia.	152, 203, 254, 305, 356 dia.	6 x 6, 8 x 8, 10 x 10, 18 x 18	152 x 152, 203 x 203, 254 x 254, 457 x 457
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16, 18 dia.	152, 203, 254, 305, 356, 381, 406, 457 dia.	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 15 x 15, 16 x 16, 18 x 18, 22 x 22	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356, 381 x 381, 406 x 406, 457 x 457, 559 x 559
48 x 24	1200 x 600	6, 8, 10, 12, 14, 15, 16, 18 dia.	152, 203, 254, 305, 356, 381, 406, 457 dia.	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 15 x 15, 16 x 16, 18 x 18, 46 x 22	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356, 381 x 381, 406 x 406, 457 x 457, 1168 x 559

Dimensional Data and Frame Types

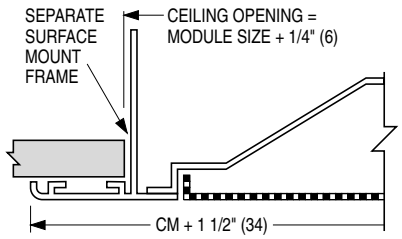
Models 4360, 4360A, 4360AA • Return • Flush Face

All round ducts and square ducts when duct size is less than CM - 2" (51).

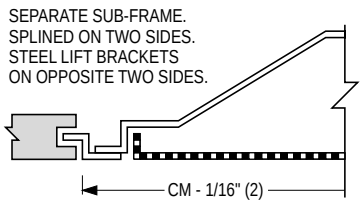
Type L Lay-in T-Bar



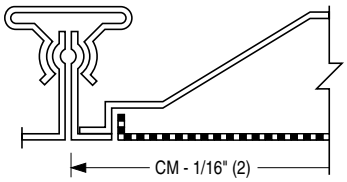
Type S Surface Mount



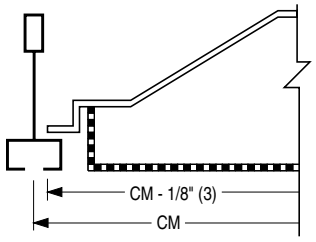
Type SP Spline



Type M Metal Pan (Snap-in)



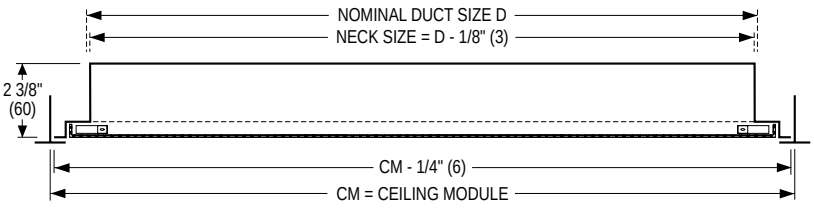
Type F Fineline®



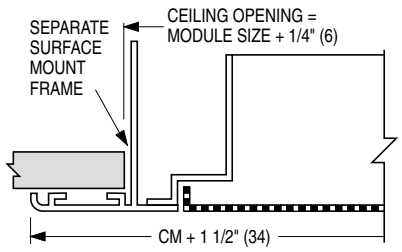
Models 4360, 4360A, 4360AA • Return • Flush Face

When duct size = CM - 2" (51).

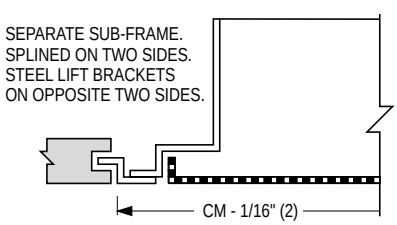
Type L Lay-in T-Bar



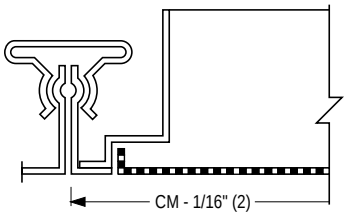
Type S Surface Mount



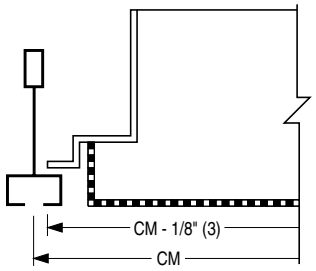
Type SP Spline



Type M Metal Pan (Snap-in)



Type F Fineline®

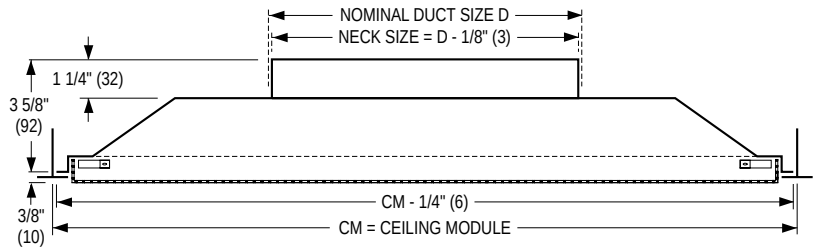


Dimensional Data and Frame Types

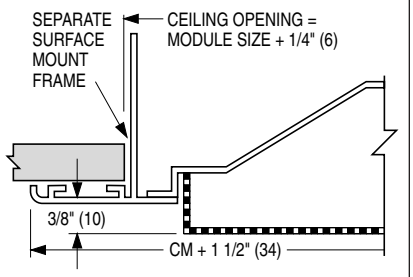
Models 4365, 4365A, 4365AA • Return • Drop Face

All round ducts and square ducts when duct size is less than CM - 2" (51).

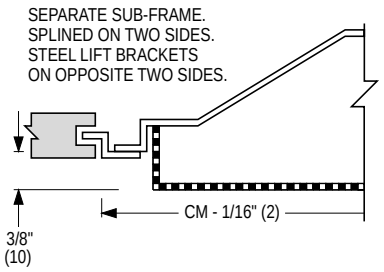
Type L Lay-in T-Bar or Tegular



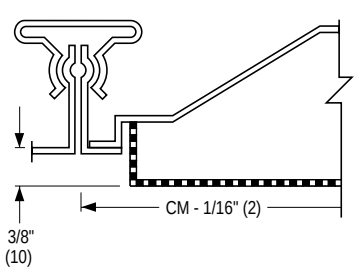
Type S Surface Mount



Type SP Spline



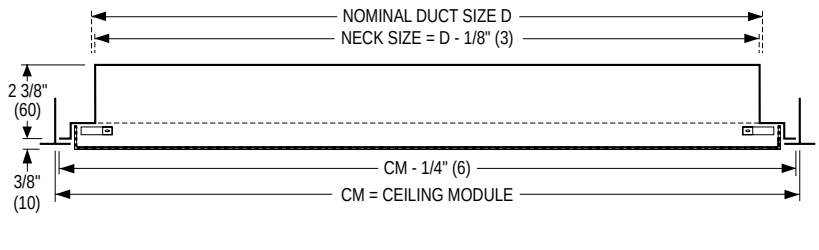
Type M Metal Pan (Snap-in)



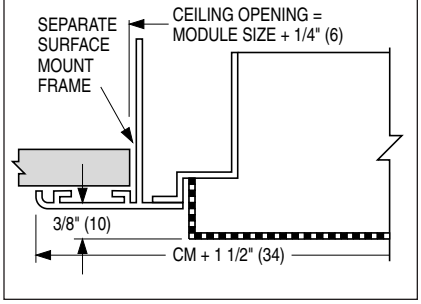
Models 4365, 4365A, 4365AA • Return • Drop Face

When duct size = CM - 2" (51).

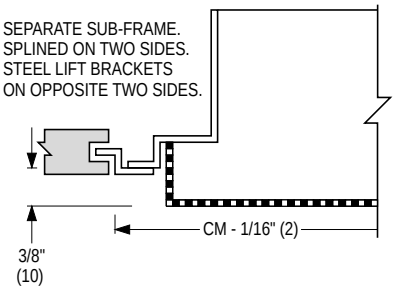
Type L Lay-in T-Bar or Tegular



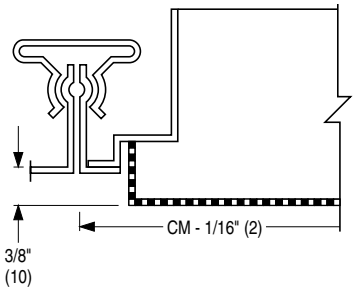
Type S Surface Mount



Type SP Spline



Type M Metal Pan (Snap-in)



HOW TO SPECIFY OR TO ORDER

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

Perforated Return Ceiling Diffusers – Model Series 4360

4360 - 22 x 22 - 24 x 24 - L - AW - –

MODEL

- Steel	Flush Face	4360
	Drop Face	4365
- Aluminum Face	Flush Face	4360A
	Drop Face	4365A
- Aluminum	Flush Face	4360AA
	Drop Face	4365AA

NECK SIZE (inches)

Round

06, 08, 10, 12, 14, 15, 16, 18

Square/Rectangular

6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 18 x 6, 15 x 15, 18 x 6, 18 x 18, 22 x 10, 22 x 22, 46 x 22

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 16 x 16	400 x 400
- 20 x 20	500 x 500
- 24 x 12	600 x 300
- 24 x 24	600 x 600
- 48 x 24	1200 x 600

ACCESSORIES

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

AIR BALANCING DEVICES

Round Neck

- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275
- Butterfly Damper	4675

Square Neck

- Opposed Blade Damper	OBD

FINISH

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

FRAME TYPE

- Lay-in T-Bar	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-in	M
- Fineline®	F

Notes:

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

SUGGESTED SPECIFICATION:

Specification Text File

Models 4360, 4365 – Steel

Furnish and install **Nailor Model** (select one) **4360 Flush Face** or **4365 Drop Face, Perforated Return Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a round or square neck. A steel perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning (and adjusting the optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4360A, 4365A – Aluminum Face

Furnish and install **Nailor Model** (select one) **4360A Flush Face** or **4365A Drop Face, Perforated Return Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, stamped corrosion-resistant steel backpan with a round or square neck. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning (and adjusting the optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Models 4360AA, 4365AA – Aluminum

Furnish and install **Nailor Model** (select one) **4360AA Flush Face** or **4365AA Drop Face, Perforated Return Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have an aluminum backpan with a round or square neck. An aluminum perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face shall be removable, hinged and include quick-release spring latches allowing easy access for cleaning (and adjusting the optional damper). The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4360, 4360A, 4360AA • Flush Face • Return Module
4365, 4365A, 4365AA • Drop Face • Return Module

Ceiling Module	Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400
		Negative SP	.024	.042	.067	.096	.130	.170	.266	.383	.522
		VP	.006	.010	.016	.023	.031	.040	.063	.090	.123
12 x 12	6" dia.	Airflow, CFM	59	78	98	118	137	157	196	235	275
		NC	—	—	—	10	14	18	27	32	38
	6 x 6	Airflow, CFM	75	100	125	150	175	200	280	300	350
		NC	—	—	—	12	17	21	30	35	41
	8" dia.	Airflow, CFM	105	140	175	209	244	279	349	419	489
		NC	—	—	—	14	—	14	23	28	34
	8 x 8	Airflow, CFM	133	178	222	267	311	356	444	533	622
		NC	—	—	—	—	—	15	24	29	35
	10 x 10	Airflow, CFM	208	277	347	416	485	555	694	832	971
		NC	—	15	22	28	33	37	44	51	57
20 x 20	18 x 18	Airflow, CFM	675	900	1125	1350	1575	1800	2250	2700	3150
		NC	—	17	24	30	35	39	46	53	58
24 x 12	22 x 10	Airflow, CFM	459	612	765	918	1071	1224	1530	1836	2142
		NC	—	17	23	29	34	39	46	53	58
24 x 24	6" dia.	Airflow, CFM	59	78	98	118	137	157	196	235	275
		NC	—	—	—	10	15	19	26	33	38
	6 x 6	Airflow, CFM	75	100	125	150	175	200	250	300	350
		NC	—	—	—	12	17	21	28	35	40
	8" dia.	Airflow, CFM	105	140	175	209	244	279	349	419	489
		NC	—	—	—	14	19	23	30	37	42
	8 x 8	Airflow, CFM	133	178	222	267	311	356	444	533	622
		NC	—	—	—	15	20	24	31	38	43
	10" dia.	Airflow, CFM	164	218	273	327	382	436	545	654	764
		NC	—	—	10	16	21	25	32	39	44
	10 x 10	Airflow, CFM	208	278	347	417	486	556	694	833	972
		NC	—	—	11	17	22	26	33	40	45
	12" dia.	Airflow, CFM	236	314	393	471	550	628	785	942	1100
		NC	—	—	13	19	24	28	35	42	47
	12 x 12	Airflow, CFM	300	400	500	600	700	800	900	1200	1400
		NC	—	—	14	20	25	29	36	43	48
	14" dia.	Airflow, CFM	321	428	535	641	748	855	1069	1283	1497
		NC	—	—	15	21	26	30	37	44	49
	14 x 14	Airflow, CFM	408	544	681	817	953	1089	1361	1633	1906
		NC	—	10	17	23	28	32	39	46	51
	15 x 15	Airflow, CFM	469	625	781	938	1094	1250	1563	1875	2188
		NC	—	12	19	25	30	34	41	48	53
	16" dia.	Airflow, CFM	419	559	698	838	977	1117	1396	1676	1955
		NC	—	10	17	23	28	32	39	46	51
	18 x 18	Airflow, CFM	675	900	1125	1350	1575	1800	2250	2700	3150
		NC	—	16	23	29	34	38	45	52	57
	22 x 22	Airflow, CFM	1007	1344	1679	2015	2352	2688	3359	4031	4704
		NC	—	18	25	31	36	40	47	54	59
48 x 24	46 x 22	Airflow, CFM	2108	2811	3514	4217	4919	5622	7028	8433	9839
		NC	11	20	27	34	38	43	50	57	62

CFM - cubic feet per minute
FPM - feet per minute velocity
VP - velocity pressure - inches w.g.
SP - static pressure - inches w.g.
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.

Performance Notes:

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

PERFORATED RETURN AIR DIFFUSERS

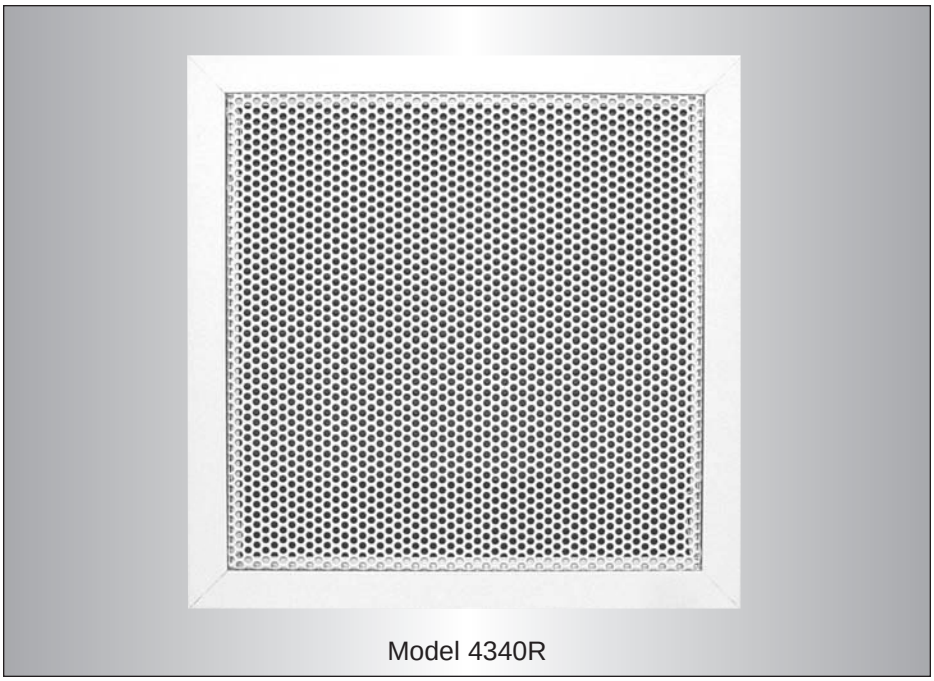
- SURFACE MOUNT
- SQUARE NECK
- MATCH AND COMPLIMENT 4340CB AND 4340M SUPPLY MODELS

Steel Face Model:

4340R

Aluminum Model:

4340RA



Model 4340R

The **Nailor 4340R Series Perforated Face Return Air Diffusers** are designed to match supply air **Models 4340CB** and **4340M** in appearance, except that the air pattern controllers are omitted.

The **4340R** is a square neck grille frame style design, for surface mount installation in hard ceilings. It is suitable for both ducted and ductless return air applications.

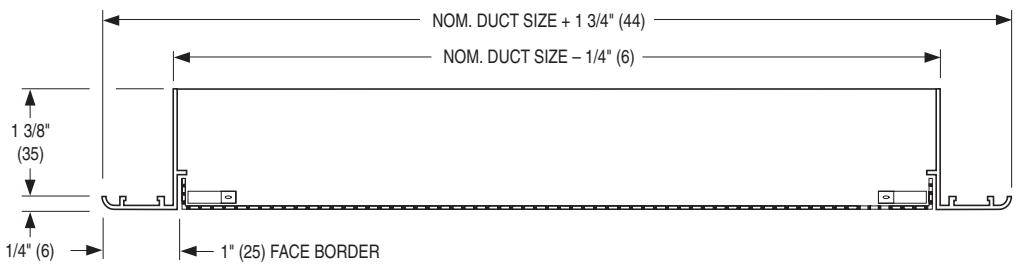
FEATURES:

- Square neck.
- Available in nominal duct sizes from 6" x 6" (152 x 152) to 24" x 24" (610 x 610) in 2" (51) increments.
- Frame is mechanically interlocked for strength with hairline mitered corners.
- Hinged, removable face plate with concealed quick release spring latches.
- Perforated face has 3/16" (5) diameter holes on 1/4" (6) staggered centers, providing 51% free area.
- Type N standard fastening is with sheet metal screws (by others), through the neck of the diffuser outer frame. Optional Type A countersunk screwholes on face of outer frame.
- Dropping the perforated face gives access to the optional opposed blade damper.

Material: Extruded aluminum frame. Corrosion-resistant steel or aluminum perforated face depending on model selection.

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

Type S Surface Mount



HOW TO SPECIFY OR TO ORDER

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

Full Face Square Neck Perforated Return Diffusers – Model Series 4340R

4340R - 12 x 12 - S - AW - N - –

MODEL
- Steel Face 4340R
- Aluminum 4340RA

NECK SIZE (inches)

Square

6 x 6, 8 x 8, 10 x 10, 12 x 12,
14 x 14, 16 x 16, 18 x 18,
20 x 20, 22 x 22, 24 x 24

FRAME TYPE
- Surface Mount (default) S

ACCESSORIES
- None (default) —
- Foam Gasket GK
- Earthquake Tabs EQT

FASTENING
- None (default) (installs through neck of frame) N
- Countersunk holes on outer frame A

FINISH
- Appliance White (default) AW
- Special Custom Color SP

D

CEILING DIFFUSERS

Notes:

1. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION: Specification Text File

Furnish and install **Nailor Model** (select one) **4340R** (corrosion-resistant steel face with aluminum frame) or **4340RA** (aluminum) **Full Face Square Neck Perforated Return Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a mechanically interlocked extruded aluminum frame with hairline mitered corners. The perforated face shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face shall also be removable, hinged and include quick-release spring latches allowing easy access for cleaning. The diffuser shall be surface mounted and fastened through the neck with sheet metal screws. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model 4340R, 4340RA • Surface Mount • Square Neck

Listed Duct Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP Neg. SP	300 .006 .024	400 .010 .042	500 .016 .067	600 .022 .095	700 .031 .130	800 .040 .170	900 .051 .215	1000 .062 .265	1200 .090 .382
6 x 6	0.20	0.20	CFM	60	80	100	120	140	160	180	200	240
			NC	–	–	–	15	21	26	32	37	44
8 x 8	0.38	0.36	CFM	114	152	190	228	266	304	342	380	456
			NC	–	–	11	18	25	29	35	40	47
10 x 10	0.61	0.56	CFM	183	244	305	366	427	488	549	610	732
			NC	–	–	13	20	27	31	37	42	49
12 x 12	0.90	0.80	CFM	270	360	450	540	630	720	810	900	1080
			NC	–	–	15	22	28	33	38	44	51
14 x 14	1.24	1.09	CFM	372	496	620	744	868	992	1116	1240	1488
			NC	–	–	16	23	29	34	39	45	52
16 x 16	1.64	1.42	CFM	492	656	820	984	1148	1312	1476	1640	1968
			NC	–	–	17	24	30	35	40	46	53
18 x 18	2.10	1.80	CFM	630	840	1050	1260	1470	1680	1890	2100	2520
			NC	–	–	17	24	30	36	40	46	53
20 x 20	2.61	2.22	CFM	783	1044	1305	1566	1827	2088	2349	2610	3132
			NC	–	11	18	25	30	37	41	47	54
22 x 22	3.17	2.69	CFM	951	1268	1585	1902	2219	2536	2853	3170	3804
			NC	–	11	18	26	31	37	42	48	55
24 x 24	3.79	3.20	CFM	1137	1516	1895	2274	2653	3032	3411	3790	4548
			NC	–	12	19	27	33	38	43	49	56

CFM - cubic feet per minute

VP - velocity pressure - inches w.g.

Neg. SP - negative static pressure - inches w.g.

NC - Noise Criteria values are based on 10 dB room absorption, re 10^{-12} watts.

Core Velocity is in feet per minute.

Performance Notes:

1. Diffuser tested without damper. Apply the following corrections for addition of opposed blade damper to diffuser:

Neg. SP Listed Value x 1.10.

NC Add 5 dB to listed value.

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

Airflow Measurements

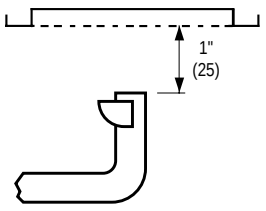
1. Balancing factors are applicable with or without dampers, providing uniform airflow exists into diffuser.

2. Take velocity readings at a number of locations on the inlet face (a minimum of 4), while positioning probe as shown above, one inch out from the face.

3. Total the various velocity readings and divide by the number of readings taken to arrive at an average inlet velocity (Vk in FPM).

4. Calculate the airflow (CFM) by multiplying the average velocity by the appropriate Ak factor.
Airflow (CFM) = Average velocity (Vk) x Ak.

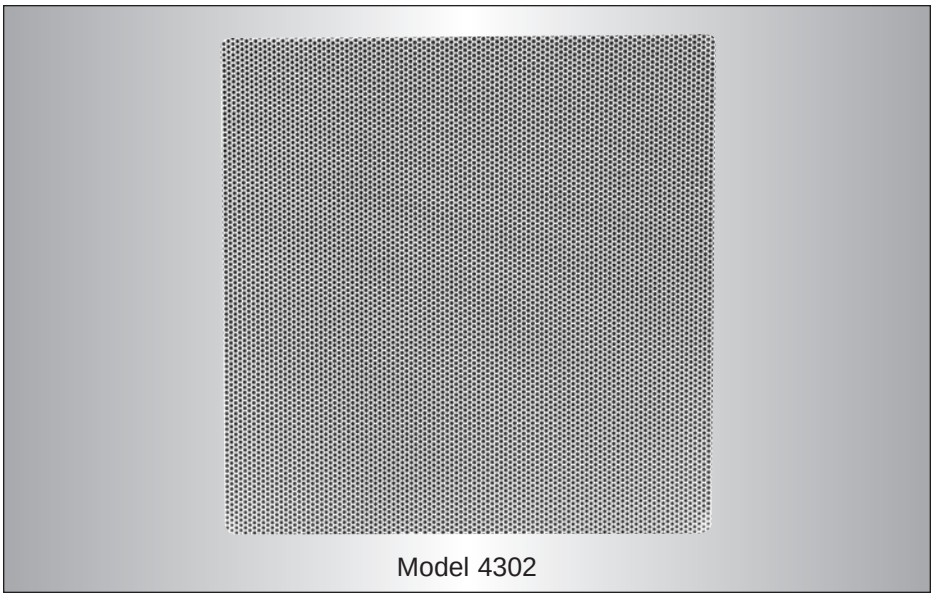
Air Measurement



Alnor Velometer with 2220A or 6070P Jet Probe

PERFORATED RETURN AIR PANELS

- SUITABLE FOR DUCTLESS (PLENUM) RETURN AIR APPLICATIONS



Model 4302

Steel Models:

4302 Flush Face
4302-DF Drop Face
4302-F Fineline®

Aluminum Model:

4302A Flush Face

The **Nailor 4302 Perforated Return Panels** are for use as an economical ductless return or exhaust grille in exposed grid T-Bar ceiling systems. Once installed, the appearance matches that of the **4320/4325 (CB, F and M) Series Supply Diffusers.**

FEATURES:

- Perforated face has 3/16" (5) dia. holes on staggered 1/4" (6) centers.
- 51% free area.
- Edges of panel are turned up for strength.

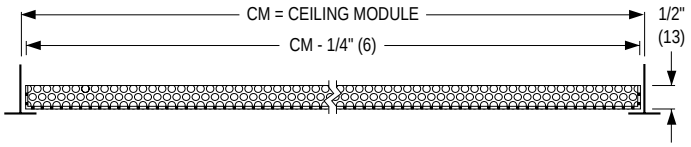
Material: Heavy gauge corrosion-resistant steel or aluminum.

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

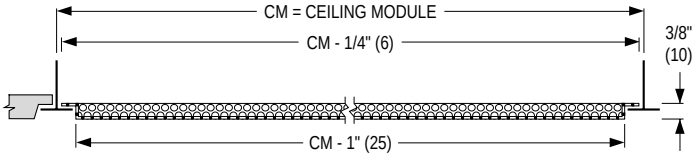
Available Ceiling Module Sizes

Ceiling Module CM	
Imperial Modules (inches)	Metric Modules (mm)
12 x 12	300 x 300
16 x 16	400 x 400
20 x 20	500 x 500
24 x 12	600 x 300
24 x 24	600 x 600
48 x 24	1200 x 600

Model 4302 and 4302A Lay-in T-Bar



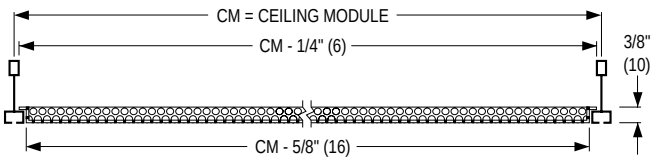
Model 4302-DF Drop Face or TL Tegular Lay-in T-Bar



Available Ceiling Module Sizes

Ceiling Module CM	
Imperial Modules (inches)	Metric Modules (mm)
20 x 20	500 x 500
24 x 24	600 x 600

Model 4302-F Fineline® Type Ceilings



D

CEILING DIFFUSERS

HOW TO SPECIFY OR TO ORDER

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

Perforated Return Panels – Model 4302

4302 - 24 x 24 - AW

MODEL

- Steel	Lay-in T-Bar	4302
	Drop Face	4302-DF
	Fineline®	4302-F
- Aluminum	Lay-in T-Bar	4302A

FINISH

- Appliance White (default)	AW
- Special	SP

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 16 x 16	400 x 400
- 20 x 20	500 x 500
- 24 x 12	600 x 300
- 24 x 24	600 x 600
- 48 x 24	1200 x 600

Note:

1. Consult individual models as to limitations and availability of ceiling module size combinations.

SUGGESTED SPECIFICATION:

Specification Text File

Model 4302, 4302A – Flush Face

Furnish and install **Nailor Model** (select one) **4302** (corrosion-resistant steel) or **4302A** (aluminum) **Perforated Return Air Panels** of the sizes and capacities as shown on the plans and air distribution schedules. The perforated panel shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The edge of the panel shall be turned up a 1/2" (13) for strength. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Model 4302-DF – Drop Face

Furnish and install **Nailor Model 4302-DF Perforated Drop Face Return Air Panels** of the sizes and capacities as shown on the plans and air distribution schedules. The corrosion-resistant steel perforated panel shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face of the panel shall extend below the ceiling line. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Specification Text File

Model 4302-F – Fineline®

Furnish and install **Nailor Model 4302-F Perforated Fineline® Return Air Panels** of the sizes and capacities as shown on the plans and air distribution schedules. The corrosion-resistant steel perforated panel shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The panel shall incorporate a corrosion-resistant steel frame to suit Fineline® type ceilings. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Model 4302, 4302-DF, 4302-F, 4302A • Return Panel

Ceiling Module	Neck Size	Neck Velocity, FPM	200	300	400	500	600	700	800	900	1000
		Negative SP	.013	.029	.051	.080	.115	.157	.205	.259	.320
		VP	.002	.006	.010	.016	.023	.031	.040	.050	.063
12 x 12	N/A	Airflow, CFM	200	300	400	500	600	700	800	900	1000
		NC	—	—	27	34	40	45	49	52	57
20 x 20	N/A	Airflow, CFM	556	833	1111	1389	1667	1944	2222	2500	2778
		NC	—	—	24	30	37	42	46	49	54
24 x 12	N/A	Airflow, CFM	400	600	800	1000	1200	1400	1600	1800	2000
		NC	—	17	27	32	39	44	48	52	56
24 x 24	N/A	Airflow, CFM	800	1200	1600	2000	2400	2800	3200	3600	4000
		NC	—	16	24	31	37	41	45	48	53
48 x 24	N/A	Airflow, CFM	1600	2400	3200	4000	4800	5600	6400	7200	8000
		NC	—	18	27	33	39	44	48	51	56

CFM - cubic feet per minute
FPM - feet per minute velocity
VP - velocity pressure - inches w.g.
SP - static pressure - inches w.g.
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.

Performance Notes:

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

PERFORATED RETURN AIR DIFFUSERS

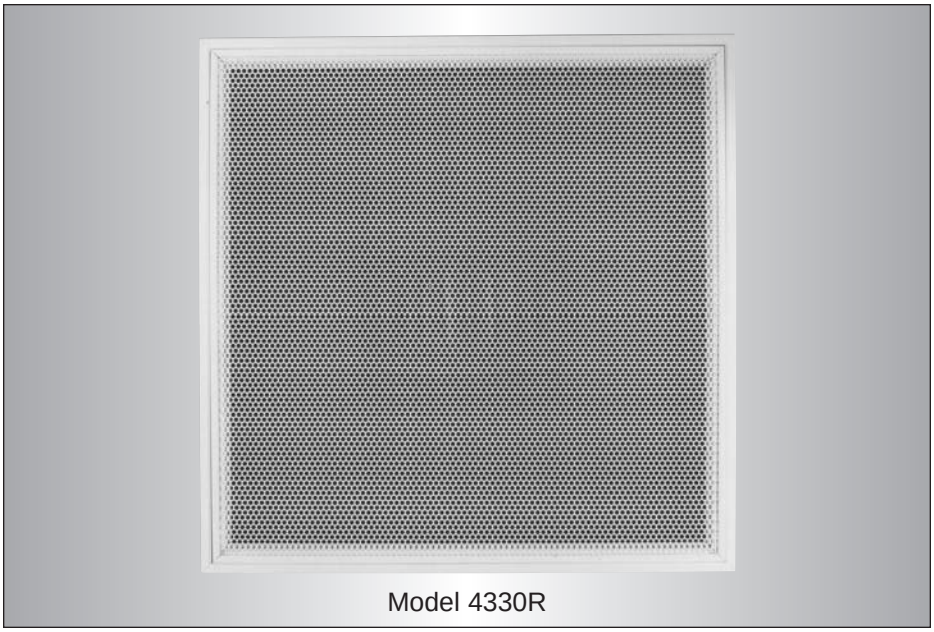
- MATCH AND COMPLIMENT SUPPLY MODELS
- PREMIUM ARCHITECTURAL QUALITY

Steel Face Model:

4330R Flush Face

Aluminum Face Model:

4330RA Flush Face



Model 4330R

The **Nailor 4330R Series Perforated Face** return air models are designed to match supply air models **4330** and **4330CB** in appearance and construction detail, except that the air pattern controllers are not required and are omitted.

The **4330R Series** is offered in two versions. One for ducted return applications which features the same backpan as the supply air models with a neck for connection to flexible or rigid round duct or square duct. The other version features a dedicated frame assembly which has a neck that is 2" (51) less than the ceiling module size. This unit maximizes free area and may be used for ducted or ductless return air applications.

FEATURES:

- Round or square necks available.
- Hinged, removable face plate with quick-release spring latches.
- Inlet collar has minimum 1 1/4" (32) depth for easy duct connection.
- Dropping the perforated face gives access to the optional damper.
- Perforated face has 3/16" (5) diameter holes on staggered 1/4" (6) centers, providing 51% free area.

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

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

Available Combinations of Ceiling Module vs. Neck Size

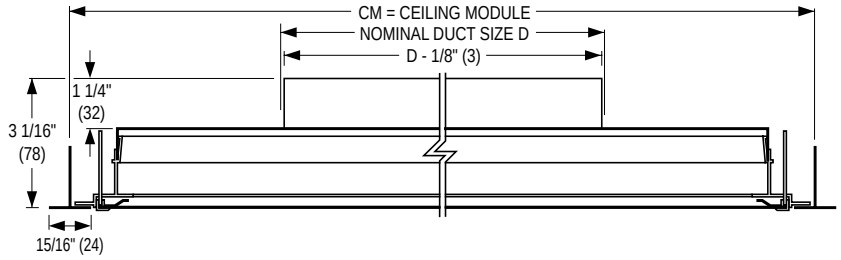
Ceiling Module CM		Nominal Duct Size D			
		Round Neck		Square Neck	
Imperial Modules	Metric Modules	Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	5, 6, 7, 8	127, 152, 178, 203	6 x 6, 8 x 8, 10 x 10	152 x 152, 203 x 203, 254 x 254
24 x 12	600 x 300	5, 6, 7, 8	127, 152, 178, 203	6 x 6, 8 x 8, 18 x 6, 22 x 10	152 x 152, 203 x 203, 457 x 152, 559 x 254
16 x 16	400 x 400	5, 6, 7, 8, 10	127, 152, 178, 203, 254	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356
20 x 20	500 x 500	5, 6, 7, 8, 10, 12, 14	127, 152, 178, 203, 254, 305, 356	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 15 x 15, 16 x 16, 18 x 18	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356, 381 x 381, 406 x 406, 457 x 457
24 x 24	600 x 600	6, 8, 10, 12, 14, 15, 16	152, 203, 254, 305, 356, 381, 406	6 x 6, 8 x 8, 10 x 10, 12 x 12, 14 x 14, 16 x 16, 18 x 18, 20 x 20, 22 x 22, 46 x 22	152 x 152, 203 x 203, 254 x 254, 305 x 305, 356 x 356, 406 x 406, 457 x 457, 508 x 508, 559 x 559, 1168 x 559
48 x 24	1200 x 600				

Dimensional Data and Frame Types

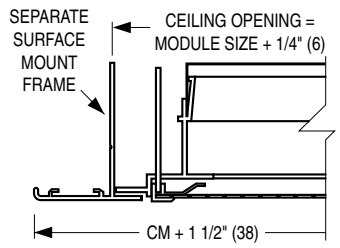
Models 4330R, 4330RA • Return • Flush Face

All round ducts and square ducts when duct size is less than CM - 2" (51).

Type L Lay-in T-Bar



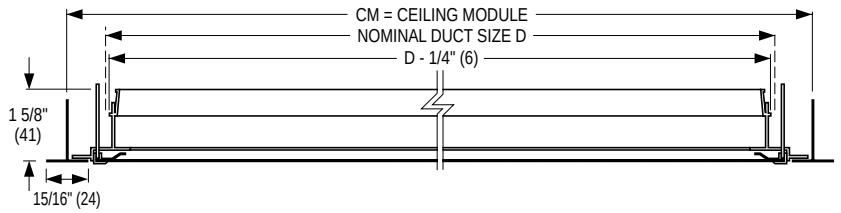
Type S Surface Mount



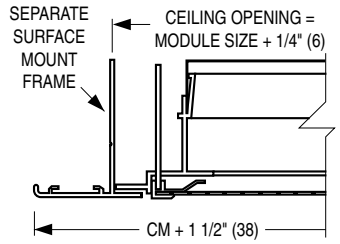
Models 4330R, 4330RA • Return • Flush Face

When duct size = CM - 2" (51).

Type L Lay-in T-Bar



Type S Surface Mount



HOW TO SPECIFY OR TO ORDER

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

Premium Perforated Return Ceiling Diffusers – Model Series 4330R

4330R - 22 x 22 - 24 x 24 - L - AW - –

MODEL

- Steel Face	4330R
- Aluminum Face	4330RA

NECK SIZE (inches)

Round

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

Square/Rectangular

6 x 6, 8 x 8, 10 x 10, 12 x 12,
14 x 14, 18 x 6, 15 x 15, 16 x 16,
18 x 18, 20 x 20, 22 x 10, 22 x 22, 46 x 22

CEILING MODULE

Imperial (inches)	Metric (mm)
- 12 x 12	300 x 300
- 16 x 16	250 x 250
- 20 x 20	500 x 500
- 24 x 12	600 x 300
- 24 x 24	600 x 600
- 48 x 24	1200 x 600

ACCESSORIES

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

AIR BALANCING DEVICES

Round Neck

- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275
- Butterfly Damper	4675

Square Neck

- Opposed Blade Damper	OBD

FINISH

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

FRAME TYPE

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

Note:

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

SUGGESTED SPECIFICATION: Specification Text File

Furnish and install **Nailor Model** (select one) **4330R** (corrosion-resistant steel face) or **4330RA** (aluminum face) **Premium Architectural Perforated Return Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a corrosion-resistant steel backpan with a round or square neck, and an extruded aluminum border/frame that encapsulates the perforated face. The perforated panel shall have 3/16" (5) dia. holes on 1/4" (6) staggered centers, providing 51% free area. The face shall include spring latches allowing easy access for cleaning. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4330R, 4330RA • Flush Face • Return Module

Ceiling Module	Neck Size	Neck Velocity, FPM	300	400	500	600	700	800	1000	1200	1400
		Negative SP	.024	.042	.067	.096	.130	.170	.266	.383	.522
		VP	.006	.010	.016	.023	.031	.040	.063	.090	.123
12 x 12	10 x 10	Airflow, CFM	208	277	347	416	485	555	694	832	971
		NC	—	15	22	28	33	37	44	51	57
20 x 20	18 x 18	Airflow, CFM	675	900	1125	1350	1575	1800	2250	2700	3150
		NC	—	17	24	30	35	39	46	53	58
24 x 12	22 x 10	Airflow, CFM	459	612	765	918	1071	1224	1530	1836	2142
		NC	—	17	23	29	34	39	46	53	58
24 x 24	6" dia.	Airflow, CFM	59	78	98	118	137	157	196	235	275
		NC	—	—	—	10	15	19	26	33	38
	6 x 6	Airflow, CFM	75	100	125	150	175	200	250	300	350
		NC	—	—	—	12	17	21	28	35	40
	8" dia.	Airflow, CFM	105	140	175	209	244	279	349	419	489
		NC	—	—	—	14	19	23	30	37	42
	8 x 8	Airflow, CFM	133	178	222	267	311	356	444	533	622
		NC	—	—	—	15	20	24	31	38	43
	10" dia.	Airflow, CFM	164	218	273	327	382	436	545	654	764
		NC	—	—	10	16	21	25	32	39	44
	10 x 10	Airflow, CFM	208	278	347	417	486	556	694	833	972
		NC	—	—	11	17	22	26	33	40	45
	12" dia.	Airflow, CFM	236	314	393	471	550	628	785	942	1100
		NC	—	—	13	19	24	28	35	42	47
	12 x 12	Airflow, CFM	300	400	500	600	700	800	900	1200	1400
		NC	—	—	14	20	25	29	36	43	48
	14" dia.	Airflow, CFM	321	428	535	641	748	855	1069	1283	1497
		NC	—	—	15	21	26	30	37	44	49
	14 x 14	Airflow, CFM	408	544	681	817	953	1089	1361	1633	1906
		NC	—	10	17	23	28	32	39	46	51
	15 x 15	Airflow, CFM	469	625	781	938	1094	1250	1563	1875	2188
		NC	—	12	19	25	30	34	41	48	53
	16" dia.	Airflow, CFM	419	559	698	838	977	1117	1396	1676	1955
		NC	—	10	17	23	28	32	39	46	51
	18 x 18	Airflow, CFM	675	900	1125	1350	1575	1800	2250	2700	3150
		NC	—	16	23	29	34	38	45	52	57
	22 x 22	Airflow, CFM	1007	1344	1679	2015	2352	2688	3359	4031	4704
		NC	—	18	25	31	36	40	47	54	59
48 x 24	46 x 22	Airflow, CFM	2108	2811	3514	4217	4919	5622	7028	8433	9839
		NC	11	20	27	34	38	43	50	57	62

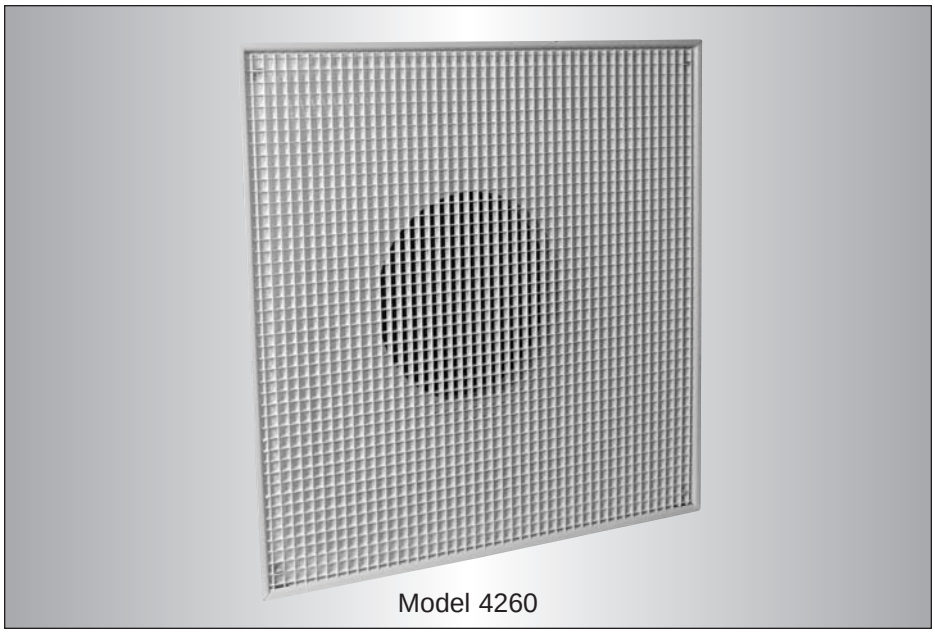
CFM - cubic feet per minute
FPM - feet per minute velocity
VP - velocity pressure - inches w.g.
SP - static pressure - inches w.g.
NC - Noise Criteria (values) based on 10 dB room absorption, re 10^{-12} watts.

Performance Notes:

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

EGGCRATE CEILING RETURN DIFFUSERS

- HIGH CAPACITY
- SUITABLE FOR FLEXIBLE DUCT CONNECTIONS
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) ALUMINUM GRID CORE



Model 4260

Models:

4260 Steel Frame/Backpan
4260AA Aluminum Frame

The **Nailor 4260 Series Eggcrate Return Ceiling Diffuser** has a high free area for high volume capacity with low sound levels and pressure drops. It has an architecturally pleasing design that matches in appearance the grid louvers on parabolic light fixtures.

The **4260 Series** is offered in two versions. One for ducted return applications, for connection to flexible or rigid round duct or square duct. The other version has a dedicated frame assembly which has a neck that is 2" (51) less than the ceiling module size. This unit maximizes free area and may be used for ducted or ductless return air applications.

FEATURES:

- Full face design for ducted return air applications.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum eggcrate.
- Removable core.
- Round or square necks available.
- Inlet collar has 1 1/4" (35) depth for easy duct connection.

Material: Corrosion-resistant steel frame/backpan with aluminum grid core or extruded aluminum frame/backpan with aluminum grid core depending on model selection.

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

Available Combinations of Ceiling Module vs. Neck Size

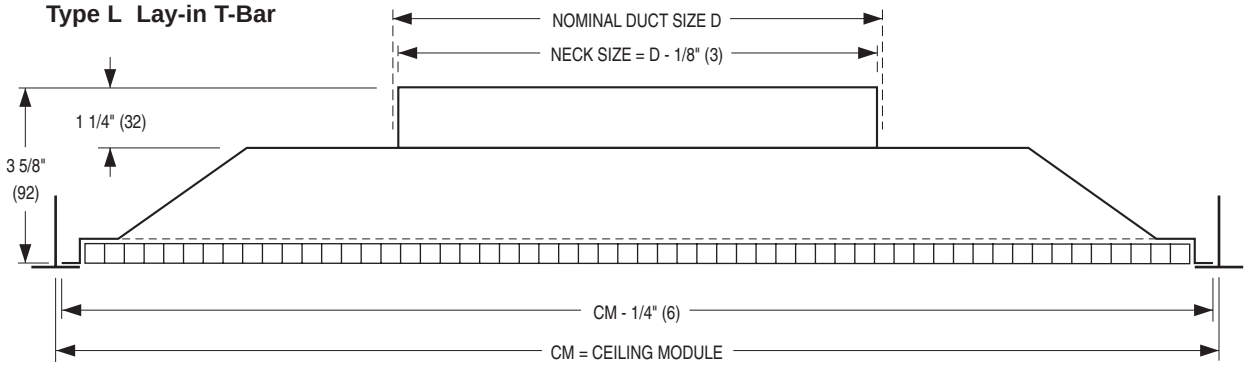
Ceiling Module CM		Nominal Duct Size D			
		Round Neck		Square Neck	
Imperial Modules	Metric Modules	Imperial Units (in.)	Metric Units (mm)	Imperial Units (in.)	Metric Units (mm)
12 x 12	300 x 300	6, 8	152, 203	6 x 6, 8 x 8, 10 x 10	152 x 152, 203 x 203, 254 x 254
24 x 12	600 x 300	6, 8	152, 203	6 x 6, 8 x 8, 18 x 6, 22 x 10	152 x 152, 203 x 203, 457 x 152, 550 x 254
20 x 20	500 x 500	6, 8, 10, 12, 14	152, 203, 254, 305, 356	6 x 6, 8 x 8, 10 x 10, 18 x 18	152 x 152, 203 x 203, 254 x 254, 450 x 450
24 x 24	600 x 600	6, 8, 10, 12 14, 15 16, 18	152, 203, 254, 305, 356, 381 406, 457	6 x 6, 8 x 8, 10 x 10, 12 x 12 14 x 14, 15 x 15 16 x 16, 18 x 18 22 x 22	152 x 152, 203 x 203, 254 x 254, 305 x 305 356 x 356, 381 x 381 406 x 406, 457 x 457 559 x 559
48 x 24	1200 x 600	–	–	46 x 22	1150 x 550

Dimensional Data and Frame Types

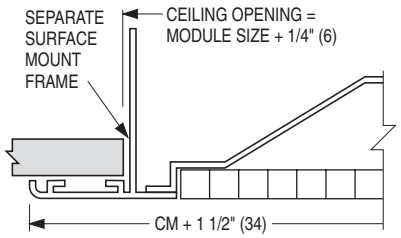
Models 4260, 4260AA

All round ducts and square ducts when duct size is less than CM - 2" (51).

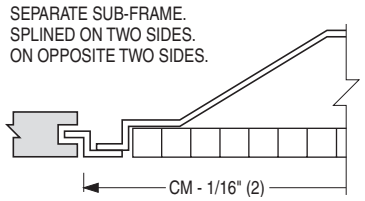
Type L Lay-in T-Bar



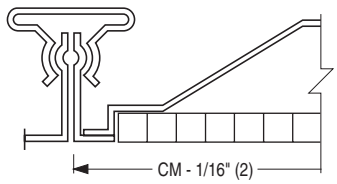
Type S Surface Mount



Type SP Spline



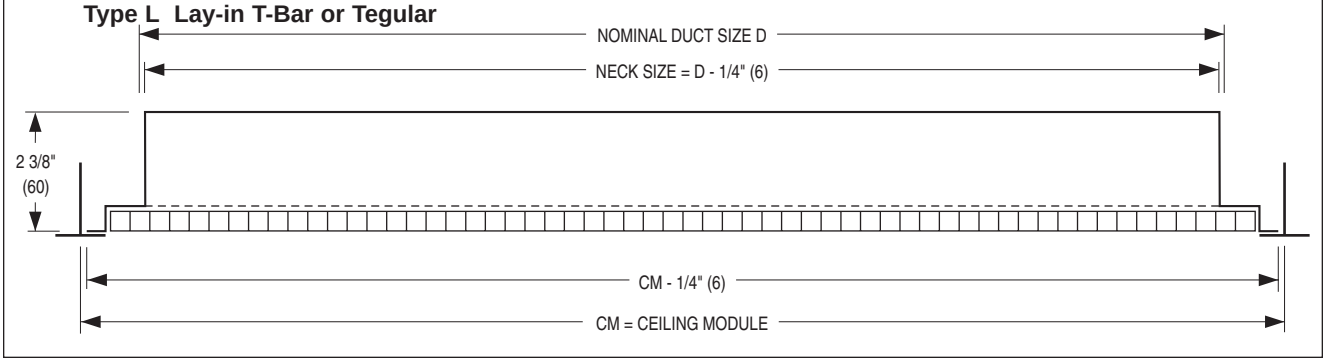
Type M Metal Pan (Snap-in)



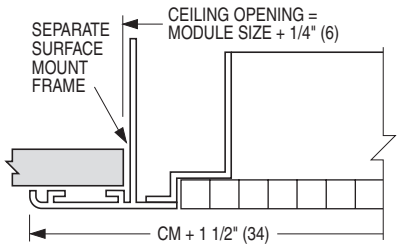
Models 4260, 4260AA

When duct size = CM - 2" (51).

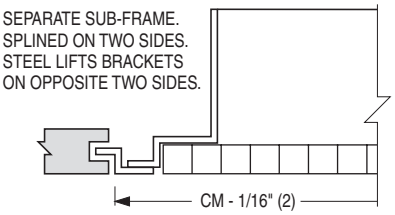
Type L Lay-in T-Bar or Tegular



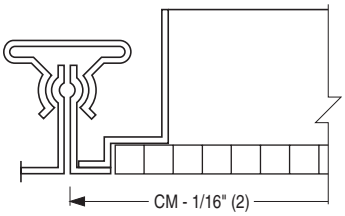
Type S Surface Mount



Type SP Spline



Type M Metal Pan (Snap-in)



HOW TO SPECIFY OR TO ORDER

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

Eggcrate Return Ceiling Diffusers – Models 4260 and 4260AA

4260 - 08 - 24 x 24 - L - AW - –

MODEL

- Steel Frame/Backpan	4260
- Aluminum	4260AA

NECK SIZE (inches)

Round

06, 08, 10, 12, 14, 15, 16, 18

Square

6 x 6, 8 x 8, 10 x 10, 12 x 12,
14 x 14, 15 x 15, 16 x 16, 18 x 6,
18 x 18, 22 x 22, 46 x 22

CEILING MODULE

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

ACCESSORIES

- None (default)	—
- Earthquake Tabs	EQT

AIR BALANCING DEVICES

Round Neck

- Radial Sliding Blade Damper	4250
- Radial Opposed Blade Damper	4275
- Butterfly Damper	4675

Square Neck

- Opposed Blade Damper	OBD

FINISH

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

FRAME TYPE

- Lay-in T-Bar	L
- Surface Mount	S
- Spline	SP
- Metal Pan Snap-in	M

Note:

1. Consult individual models as to limitations and availability of ceiling module and neck size combinations.

SUGGESTED SPECIFICATION: Specification Text File

Furnish and install **Nailor Model** (select one) **4260** (corrosion-resistant steel frame/backpan) or **4260AA** (aluminum frame/backpan) **Eggcrate Return Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a removable aluminum grid core that is 1/2" x 1/2" x 1/2" (13 x 13 x 13) and extends the full face of the diffuser. The finish shall be AW Appliance White baked enamel (optional finishes are available).

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

Performance Data

Models 4260, 4260AA • Full Face • Round and Square Neck

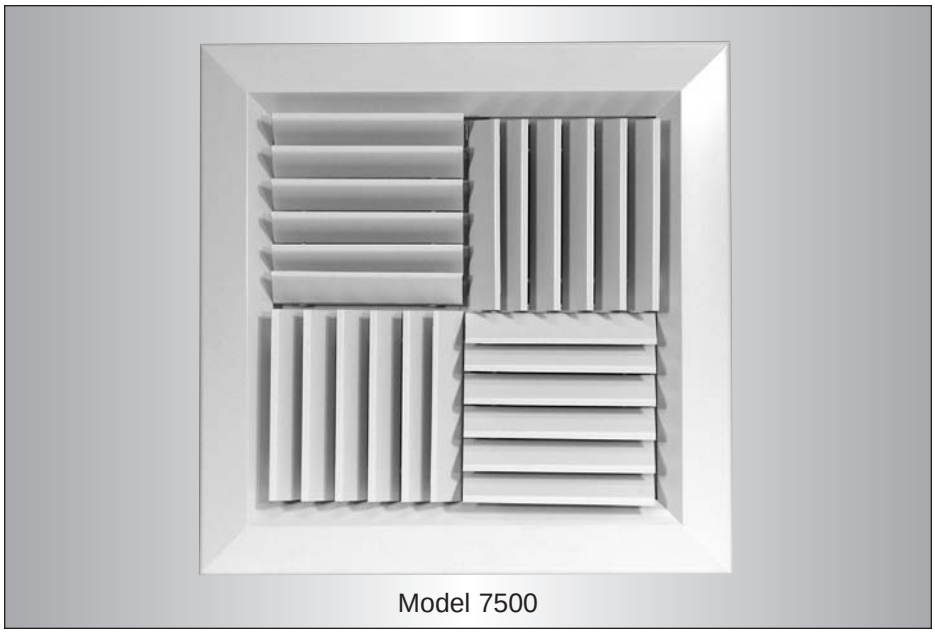
Nominal Neck Size	Neck Velocity, fpm	300	400	500	600	700	800	900	1000	1200	1400
	Velocity Pressure	.006	.010	.016	.023	.031	.040	.051	.063	.090	.122
6" Dia.	Airflow, cfm	59	78	98	118	137	157	176	196	235	274
	Neg. Static Pressure	.011	.019	.029	.042	.056	.073	.092	.113	.162	.218
	NC	—	—	—	—	—	—	—	16	20	29
6" x 6"	Airflow, cfm	75	100	125	150	175	200	225	250	300	350
	Neg. Static Pressure	.011	.018	.029	.041	.055	.072	.091	.111	.160	.217
	NC	—	—	—	—	—	—	16	19	23	32
8" Dia.	Airflow, cfm	105	140	175	209	244	279	314	349	419	489
	Neg. Static Pressure	.011	.019	.030	.042	.057	.074	.092	.113	.163	.218
	NC	—	—	—	—	—	15	18	21	25	34
8" x 8"	Airflow, cfm	133	178	222	267	311	356	400	444	533	622
	Neg. Static Pressure	.011	.018	.029	.042	.057	.074	.093	.115	.164	.223
	NC	—	—	—	—	—	16	19	22	26	35
10" Dia.	Airflow, cfm	164	218	273	327	382	436	491	545	654	763
	Neg. Static Pressure	.011	.020	.031	.044	.058	.076	.095	.118	.165	.226
	NC	—	—	—	—	15	19	22	26	32	38
10" x 10"	Airflow, cfm	208	278	347	416	486	555	625	694	833	972
	Neg. Static Pressure	.011	.019	.030	.043	.058	.076	.094	.119	.169	.228
	NC	—	—	—	—	16	20	23	27	33	39
12" Dia.	Airflow, cfm	236	314	393	471	550	628	707	785	942	1100
	Neg. Static Pressure	.011	.019	.030	.043	.058	.076	.096	.118	.170	.232
	NC	—	—	—	—	18	22	25	28	34	41
12" x 12"	Airflow, cfm	300	400	500	600	700	800	900	1000	1200	1400
	Neg. Static Pressure	.011	.020	.031	.045	.062	.080	.100	.124	.174	.239
	NC	—	—	—	15	19	23	26	29	35	42
14" Dia.	Airflow, cfm	321	428	535	641	748	855	962	1069	1282	1497
	Neg. Static Pressure	.011	.020	.031	.044	.060	.079	.100	.123	.177	.241
	NC	—	—	—	16	20	24	27	30	36	43
14" x 14"	Airflow, cfm	408	544	681	817	953	1089	1225	1361	1633	1905
	Neg. Static Pressure	.011	.020	.032	.046	.063	.082	.103	.128	.184	.250
	NC	—	—	—	17	21	26	29	32	38	45
16" Dia.	Airflow, cfm	419	558	698	838	977	1117	1256	1396	1675	1954
	Neg. Static Pressure	.012	.021	.032	.046	.063	.082	.104	.129	.185	.252
	NC	—	—	—	17	21	25	29	32	38	45
16" x 16"	Airflow, cfm	533	711	889	1067	1245	1422	1600	1778	2134	2489
	Neg. Static Pressure	.012	.021	.034	.048	.066	.086	.109	.134	.193	.263
	NC	—	—	15	20	24	28	31	34	40	47
18" Dia.	Airflow, cfm	530	707	884	1060	1237	1414	1590	1767	2120	2474
	Neg. Static Pressure	.012	.021	.033	.048	.066	.086	.108	.134	.193	.262
	NC	—	—	15	20	24	28	31	34	40	47
18" x 18"	Airflow, cfm	675	900	1125	1350	1575	1800	2025	2250	2700	3150
	Neg. Static Pressure	.013	.023	.035	.051	.070	.091	.115	.142	.204	.278
	NC	—	—	17	22	27	32	35	38	45	51
22" x 22"	Airflow, cfm	1008	1344	1681	2017	2353	2689	3025	3361	4033	4706
	Neg. Static Pressure	.014	.025	.040	.057	.078	.102	.129	.159	.229	.312
	NC	—	—	19	24	29	34	37	40	47	53

Performance Notes:

1. All pressures are in inches w.g..
2. Neck Velocity is given in feet per minute (fpm). Airflow is given in cubic feet per minute (cfm).
3. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (-) in spaces indicates an NC level of less than 15.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

SQUARE MODULAR CORE DIFFUSERS

- 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN



Model 7500

Steel Model:

7500

- **Suffix '-O' adds a steel opposed blade damper**

The **Nailor 7500 Series Diffusers** have been specially designed to provide a versatile 'modular core' product which is available in a comprehensive range of sizes and air capacities, providing optimum simplicity and flexibility for field adjustment of the discharge air pattern. They maintain a horizontal ceiling pattern from maximum to minimum flow and make an excellent choice for use in variable air volume systems.

The **7500 Series** features four individual spring-loaded 'modular' pattern controllers mounted in the neck. They can be adjusted before or after installation, to provide a 1, 2, 3 or 4-way discharge pattern by simply rotating one or more of the pattern controllers which takes only a few seconds.

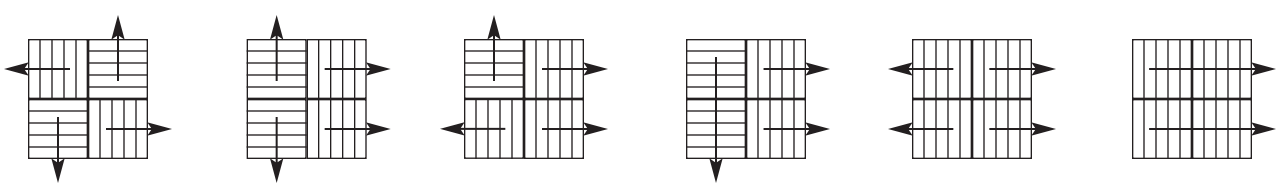
FEATURES:

- Square neck is standard.
- Round transition adaptors are available (SR option).
- Each diffuser features four individually adjustable 'spring-loaded' modular cores.
- Simple adjustment for a 1, 2, 3 or 4-way horizontal discharge pattern without the use of tools.
- Inlet collar has 1 1/2" (38) depth for easy duct connection.
- A wide variety of frame styles to suit most ceiling applications.
- Optional extended panels to suit modular T-Bar ceiling systems.
- Optional opposed blade damper with screwdriver slot operator is adjustable from the diffuser face by removing a modular core.

Material: Corrosion-resistant steel blades and frame.

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

Modular Core Adjustments

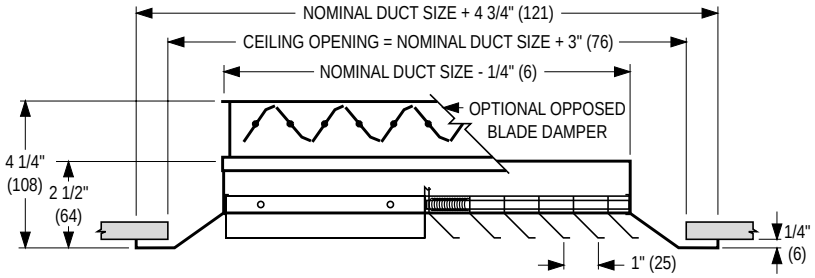


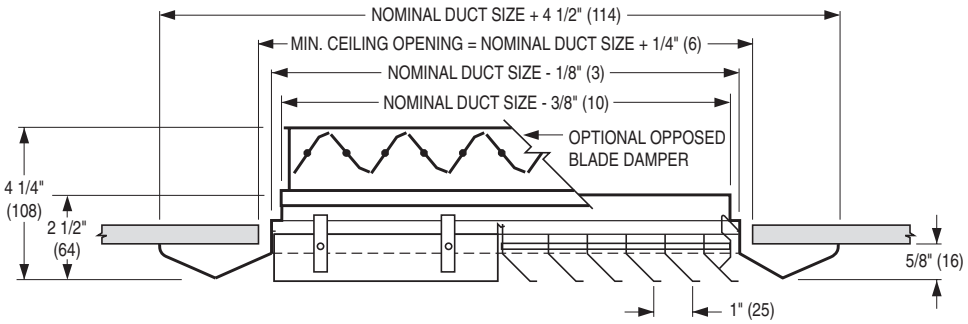
4-way **3-way** **3-way** **2-way corner** **2-way opposite** **1-way**

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

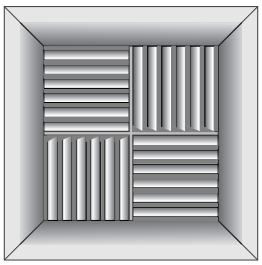
Dimensional Data and Frame Types

Model Series 7500

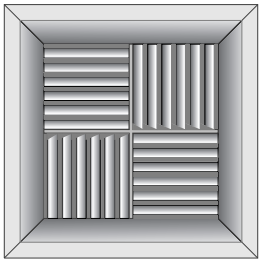




Type S - Surface Mount Frame



Type BS - Beveled Surface Mount Frame (Low Profile)

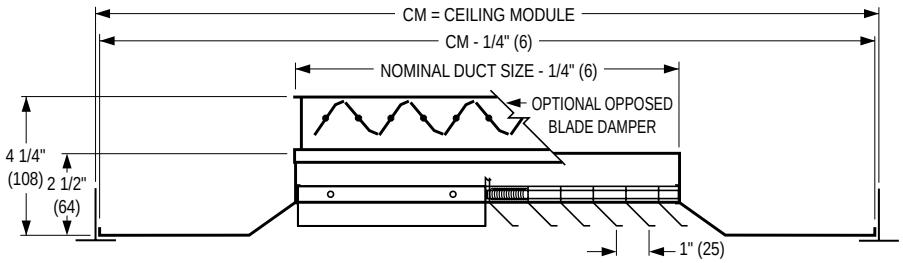


Available Duct Sizes

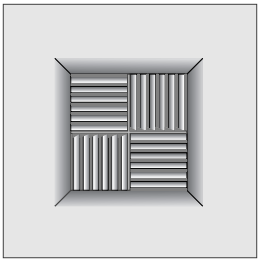
Frame Types S and BS		
6 x 6 (152 x 152)	12 x 12 (305 x 305)	18 x 18 (457 x 457)
8 x 8 (203 x 203)	14 x 14 (356 x 356)	20 x 20 (508 x 508)
9 x 9 (229 x 229)	15 x 15 (381 x 381)	22 x 22 (559 x 559)
10 x 10 (254 x 254)	16 x 16 (406 x 406)	24 x 24 (610 x 610)

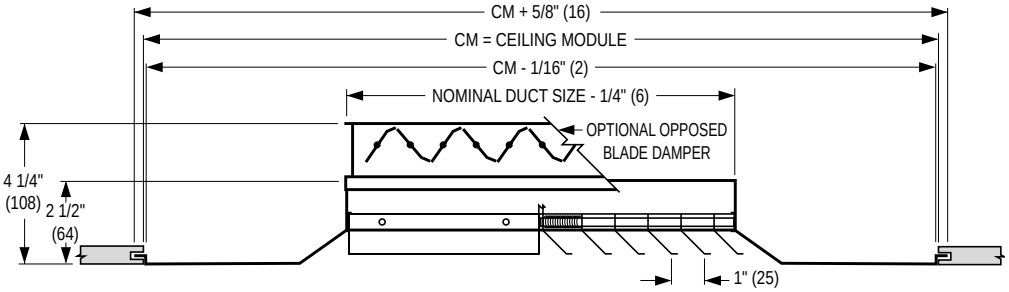
Dimensional Data and Frame Types

Model Series 7500

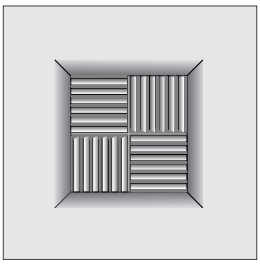


Type L - Lay-In T-Bar Frame



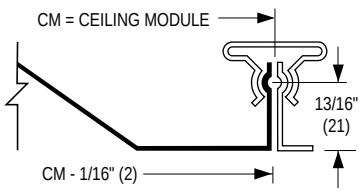


Type SP - Spline Frame

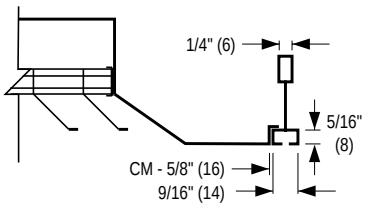


SPLINE TYPE DIFFUSER FOR ONE-DIRECTIONAL EXPOSED T-BAR LAY-IN GRID OR FOR CONCEALED T-BAR GRID.
(SPLINES ON TWO OPPOSITE SIDES. STEEL LIFT BRACKETS ON THE OTHER TWO SIDES).

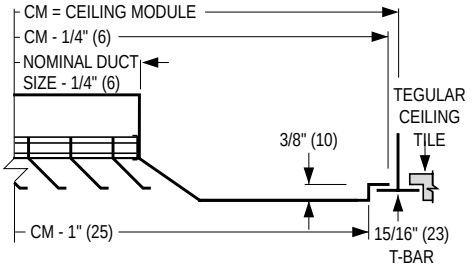
Type M Metal Pan (Snap-in)



Type F Fineline®



Type TL Tegular



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

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 (below) for the maximum duct size for each module size.

Ceiling Module Size CM – Frame Types L, SP, M, TL and F		
Imperial Modules (inches)	**Metric Modules (mm)**	**Available Duct Sizes**
12 x 12, 24 x 12	300 x 300, 600 x 300	6 x 6 (152 x 152) 8 x 8 (203 x 203) 9 x 9 (229 x 229)
20 x 20	500 x 500	6 x 6 (152 x 152) 10 x 10 (254 x 254) 15 x 15 (381 x 381) 8 x 8 (203 x 203) 12 x 12 (305 x 305) 9 x 9 (229 x 229) 14 x 14 (356 x 356)
24 x 24	600 x 600	6 x 6 (152 x 152) 10 x 10 (254 x 254) 15 x 15 (381 x 381) 8 x 8 (203 x 203) 12 x 12 (305 x 305) 16 x 16 (406 x 406) 9 x 9 (229 x 229) 14 x 14 (356 x 356) 18 x 18 (457 x 457)

HOW TO SPECIFY OR TO ORDER

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

Modular Core Ceiling Diffusers – Model Series 7500

7500 - O - 9 x 9 - 24 x 24 - L - AW - –

MODEL

- Steel	7500

DAMPER

- No Damper (default)	—
- Opposed Blade (steel)	O

NECK SIZE (inches)

6 x 6, 8 x 8, 9 x 9, 10 x 10
12 x 12, 14 x 14, 15 x 15,
16 x 16, 18 x 18, 20 x 20,
22 x 22, 24 x 24

CEILING MODULE SIZE

(Frame Types L, SP, M, TL and F)

Imperial (in.)	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

ACCESSORIES

- None (default)	—
- Earthquake Tabs	EQT
- Square to Round Transition Collar (04 thru 16 specify)	SR

AIR BALANCING DEVICES

Square Neck

- Equalizing Grid	EGL
- Damper/Equalizing Grid	DEGL

Round Neck

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

FINISH

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

FRAME TYPE

- Surface Mount	S
- Bevelled Surface Mount	BS
- Lay-in T-Bar	L
- Spline	SP
- Metal Pan Snap-in	M
- Fineline®	F
- Tegular (Drop Face)	TL

Notes:

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

SUGGESTED SPECIFICATION:

Specification Text File

Furnish and install **Nailor Model Series 7500 Modular Core Ceiling Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a heavy gauge, corrosion-resistant steel frame and core. The modular deflectors shall consist of four square, individually adjustable pattern deflectors, factory installed in a 4-way pattern, that are easily field rotated to provide throws in a 1, 2, or 3-way pattern. The diffuser shall have a square duct connection collar that is an integral part of the frame assembly and not be less than 1 1/2" (38) high. 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 and operable from the face of the diffuser, 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.

Performance Data

Models 7500 and 7200 • Square Neck

Nominal Neck Size	Neck Velocity, FPM		200	300	400	500	600	700	800	900	1000
	Velocity Pressure		.003	.006	.010	.016	.022	.031	.040	.051	.062
6 x 6	Total Pressure		.008	.018	.033	.051	.073	.100	.131	.165	.204
	Airflow, CFM		50	75	100	125	150	175	200	225	250
	Throw	4-Way (1 core)	1-2-3	2-2-5	2-3-6	2-4-7	3-4-8	3-5-8	4-6-8	5-6-9	5-6-10
		2-Way (2 cores)	2-2-5	3-4-8	4-6-9	4-7-10	5-8-11	6-9-12	7-10-13	8-11-14	9-11-15
		2-Way (3 cores)	2-3-6	3-5-10	4-7-11	5-8-12	6-9-13	7-10-14	8-11-16	9-12-17	11-13-18
		1-Way (4 cores)	2-4-8	4-6-11	5-8-13	7-10-15	8-11-16	9-12-18	10-13-19	11-14-20	12-15-22
	NC		—	—	—	16	22	26	29	32	35
8 x 8	Total Pressure		.006	.013	.022	.035	.050	.069	.090	.113	.140
	Airflow, CFM		88	133	177	222	266	310	355	399	444
	Throw	4-Way (1 core)	1-2-4	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	5-8-11	6-8-12	6-9-13
		2-Way (2 cores)	2-3-7	3-5-11	5-7-13	6-9-14	7-11-15	8-12-17	10-13-18	11-14-19	12-14-20
		2-Way (3 cores)	3-4-9	4-7-13	6-9-16	8-11-17	9-13-19	10-14-21	12-16-22	13-17-23	14-17-25
		1-Way (4 cores)	3-5-11	5-8-15	7-11-18	9-13-20	11-15-22	12-16-24	14-18-26	15-19-27	16-20-29
	NC		—	—	—	17	25	29	32	35	38
10 x 10	Total Pressure		.007	.015	.027	.042	.060	.082	.108	.136	.168
	Airflow, CFM		138	208	277	347	416	485	555	624	694
	Throw	4-Way (1 core)	2-3-7	3-5-9	4-7-10	6-8-11	7-9-12	8-9-14	8-10-14	9-11-14	9-11-17
		2-Way (2 cores)	4-6-12	6-10-14	9-12-16	11-13-18	12-14-20	13-15-22	14-16-23	14-19-25	14-20-26
		2-Way (3 cores)	5-8-14	8-12-17	11-14-20	13-16-22	14-17-24	15-18-27	16-20-28	17-22-30	18-23-32
		1-Way (4 cores)	6-9-16	9-14-20	13-16-23	14-18-26	16-20-28	17-21-31	18-23-33	20-24-35	21-26-37
	NC		—	—	15	18	24	30	34	37	40
12 x 12	Total Pressure		.007	.016	.029	.046	.066	.089	.116	.147	.182
	Airflow, CFM		200	300	400	500	600	700	800	900	1000
	Throw	4-Way (1 core)	2-4-8	4-6-11	5-8-12	7-10-14	8-11-14	9-11-15	10-12-17	11-13-18	11-14-19
		2-Way (2 cores)	5-8-14	8-12-17	10-14-20	13-15-22	14-17-24	15-18-26	16-20-28	17-21-30	18-22-32
		2-Way (3 cores)	6-10-17	10-14-21	12-17-24	15-19-27	17-21-29	18-22-32	19-24-34	21-26-36	22-27-39
		1-Way (4 cores)	7-11-19	11-16-24	14-19-28	17-22-31	19-24-34	21-26-37	22-28-40	24-30-42	25-31-45
	NC		—	—	17	21	27	32	36	40	43
14 x 14	Total Pressure		.009	.020	.035	.055	.080	.108	.141	.179	.221
	Airflow, CFM		272	408	544	680	816	952	1088	1224	1361
	Throw	4-Way (1 core)	3-5-10	5-7-12	6-10-14	8-11-15	10-12-19	11-13-18	12-14-19	12-14-21	13-15-22
		2-Way (2 cores)	6-9-16	9-14-20	12-16-23	14-18-26	16-20-29	17-21-31	19-23-33	20-25-35	21-26-37
		2-Way (3 cores)	8-11-20	11-17-24	15-20-28	18-22-32	20-24-35	21-26-38	23-28-40	24-30-42	26-32-44
		1-Way (4 cores)	9-13-23	13-19-28	17-23-33	21-25-37	23-28-40	25-30-44	26-33-47	28-35-49	30-37-51
	NC		—	—	19	23	29	34	38	42	45
16 x 16	Total Pressure		.011	.024	.043	.067	.096	.131	.172	.217	.268
	Airflow, CFM		355	533	711	889	1066	1244	1422	1600	1778
	Throw	4-Way (1 core)	3-5-11	5-8-14	7-11-15	9-13-17	11-14-19	12-14-21	13-15-23	14-17-24	14-17-25
		2-Way (2 cores)	7-10-18	10-15-23	14-18-27	17-21-30	18-23-33	20-25-36	21-27-38	23-28-41	24-30-43
		2-Way (3 cores)	9-12-22	12-19-29	17-22-33	21-25-36	22-28-40	24-30-43	26-33-46	28-34-49	29-36-51
		1-Way (4 cores)	10-14-26	14-22-32	20-26-38	24-29-42	26-32-46	28-35-49	30-38-53	32-40-56	34-42-59
	NC		—	—	21	25	31	36	40	44	47

Performance Notes:

1. All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
2. Throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions.
3. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (-) in spaces indicates an NC level of less 15.
4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Neck Size Square in Inches	Ak Factor
6 x 6	0.1134
8 x 8	0.1932
9 x 9	0.2551
10 x 10	0.3024
12 x 12	0.4526
14 x 14	0.5883
15 x 15	0.6804
16 x 16	0.7728

Performance Data

Models 7500 and 7200 • Square Neck

Nominal Neck Size	Neck Velocity FPM	200	300	400	500	600	700	800	900	1000
	Velocity Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062
18 x 18	Total Pressure	.013	0.029	.051	.080	.115	.157	.205	.259	.320
	Airflow, CFM	450	675	900	1125	1350	1575	1800	2025	2250
	Throw 4-Way (1 core)	4-6-13	6-10-15	8-13-18	11-14-20	13-15-22	14-16-24	14-18-26	15-19-27	16-20-29
	Throw 2-Way (2 cores)	8-12-21	12-17-26	15-21-30	19-23-34	21-26-37	23-28-40	24-30-43	26-32-46	27-34-48
	Throw 2-Way (3 cores)	10-14-26	14-21-32	19-26-36	23-28-41	26-32-44	28-34-48	29-36-52	31-39-55	33-41-58
	Throw 1-Way (4 cores)	11-16-30	16-25-37	22-30-42	27-33-48	30-37-51	32-40-56	34-42-60	36-45-63	39-48-67
	NC	—	15	22	26	32	37	42	45	48
20 x 20	Total Pressure	.015	.034	.061	.095	.136	.186	.243	.307	.379
	Airflow, CFM	555	835	1110	1390	1665	1945	2220	2500	2775
	Throw 4-Way (1 core)	4-7-14	7-11-17	9-14-20	12-15-22	14-17-24	15-18-27	16-20-29	17-21-30	18-22-32
	Throw 2-Way (2 cores)	9-13-23	13-19-29	17-23-34	21-26-38	23-29-41	25-31-45	27-34-48	29-36-50	30-38-53
	Throw 2-Way (3 cores)	11-16-28	16-24-36	21-28-41	25-32-45	28-35-49	31-38-54	33-41-58	35-43-61	37-45-64
	Throw 1-Way (4 cores)	13-18-33	18-28-43	25-33-47	30-37-52	33-41-57	36-44-62	38-47-67	41-49-71	43-52-75
	NC	—	17	24	28	34	39	44	47	50
22 x 22	Total Pressure	.018	.040	.071	.111	.159	.217	.284	.359	.443
	Airflow, CFM	675	1000	1345	1680	2015	2350	2690	3025	3360
	Throw 4-Way (1 core)	5-8-15	8-12-19	10-15-22	13-17-25	15-19-27	16-20-29	18-22-31	19-23-34	20-25-35
	Throw 2-Way (2 cores)	10-14-26	14-21-32	19-26-37	23-29-42	26-32-46	28-35-48	30-37-52	32-39-55	34-41-58
	Throw 2-Way (3 cores)	12-17-31	17-26-39	24-31-44	28-35-50	31-39-55	34-42-58	36-44-63	39-47-67	41-50-70
	Throw 1-Way (4 cores)	14-20-36	20-31-45	28-36-51	33-41-58	36-45-63	39-48-68	41-51-73	45-54-78	47-58-81
	NC	—	19	26	30	36	41	46	49	52
24 x 24	Total Pressure	.021	.046	.082	.129	.185	.252	.329	.416	.514
	Airflow, CFM	800	1200	1600	2000	2400	2800	3200	3600	4000
	Throw 4-Way (1 core)	5-8-16	8-13-21	11-16-24	14-19-27	16-21-30	18-22-32	19-24-35	21-26-37	22-27-39
	Throw 2-Way (2 cores)	10-15-28	15-23-35	20-28-41	26-32-45	28-35-49	31-38-53	33-41-57	35-43-61	37-45-64
	Throw 2-Way (3 cores)	12-19-34	19-29-42	25-34-49	31-39-54	34-42-59	37-45-64	39-49-68	42-52-73	44-54-77
	Throw 1-Way (4 cores)	14-22-40	22-34-48	30-40-56	36-45-63	40-48-69	43-52-75	45-56-79	48-60-84	51-63-89
	NC	—	21	28	32	34	43	48	51	54

Performance Notes:

1. All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.

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

3. NC (Noise Criteria) values are based on 10 dB room absorption, re 10^{-12} watts. Dash (-) in spaces indicates an NC level of less 15.

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

Neck Size Square in Inches	Ak Factor
18 x 18	0.9541
20 x 20	1.2096
22 x 22	1.4636
24 x 24	1.7304

CURVED BLADE DIFFUSERS

- 1, 2, 3 OR 4-WAY DISCHARGE PATTERNS AVAILABLE

Model 61CC

Steel Models:

61CC 1, 2, 3 or 4-Way

61CCD 1 or 2-Way with Rear Directional Vanes

Aluminum Models:

51CC 1, 2, 3 or 4-Way

51CCD 1 or 2-Way with Rear Directional Vanes

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

The **Nailor 61CC and 51CC Series Curved Blade Diffusers** are similar in design and construction to the **Nailor 61C and 51C Series Curved Blade Grilles** with the addition of a modular sized panel to integrate with various types of ceiling systems. Available with the choice of a 1, 2, 3 or 4-way discharge pattern.

They also feature individually adjustable friction pivoted curved blades on 1" (25) centers that positively control the airflow. Blades are adjustable from the face, regulating the angle of discharge from a horizontal through to a full down-blow vertical pattern as required. Blades can also regulate air volume as they are closed off.

Available in a comprehensive range of square duct sizes to suit a large range of air volumes, these diffusers, when adjusted correctly, produce a tight horizontal ceiling pattern and work extremely well in variable air volume applications.

The **Nailor 61CCD and 51CCD Series**, available in a 1 or 2-way discharge pattern are similar to the above but incorporate a set of rear vanes on 3/4" (19) centers that are individually adjustable, thus providing complete directional control and airflow equalization.

FEATURES:

- Extruded aluminum blades are formed to an engineered curved and streamlined cross-section. Formed with tenons at each end to fit snugly into side margin, friction loaded to firmly hold deflection setting.
- Adjustable angle of discharge from horizontal to vertical.
- Choice of one, two, three or four-way discharge patterns.
- Optional steel or aluminum opposed blade dampers have a screwdriver slot operator accessible through the face of the diffuser.
- A variety of frame/border styles to suit most ceiling systems.
- Available in square neck sizes 6" x 6" (152 x 152) through 21" x 21" (533 x 533) for standard 24" x 24" (600 x 600) ceiling modules.
- For non-listed rectangular sizes, see the **61C and 51C Series** in this catalog and add a module sized extended panel (PL).

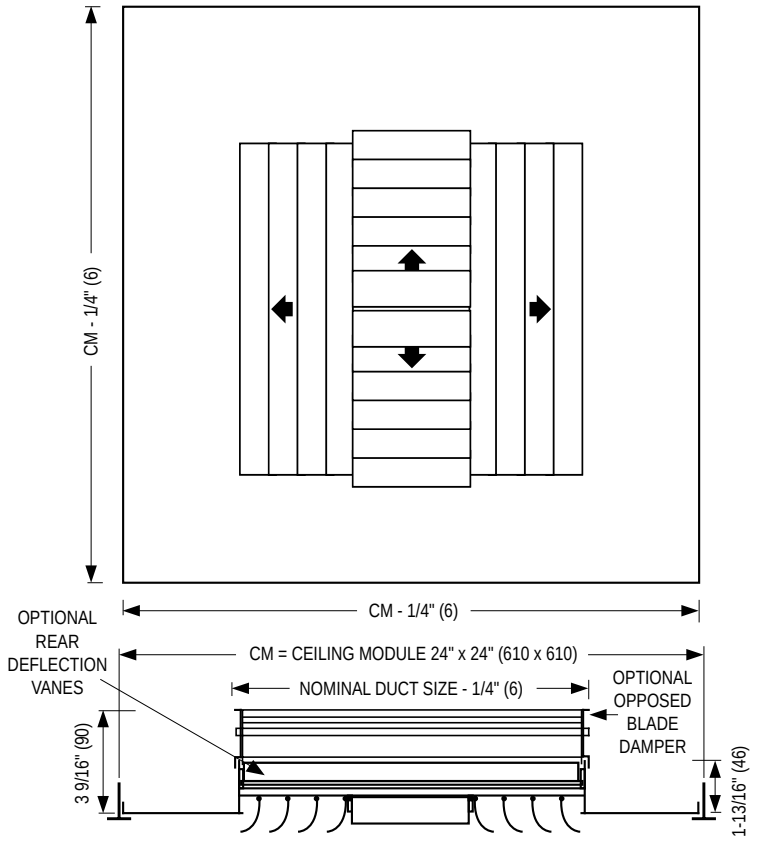
Material: Extruded aluminum blades with corrosion-resistant steel or aluminum panel construction, depending on model selection.

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

Dimensional Data and Frame Types

Models 61CC and 51CC

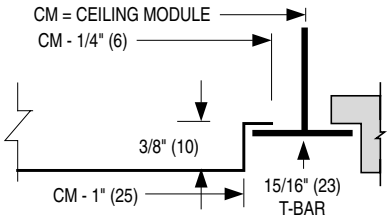
Type PL Panel Lay-in T-Bar



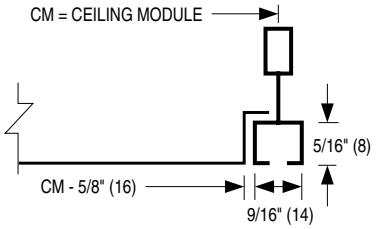
Standard Duct Sizes for 24 x 24 (600 x 600) Ceiling Module

Imperial Units (inches)				Metric Units (mm)			
6 x 6	10 x 10	15 x 15	21 x 21	152 x 152	254 x 254	381 x 381	553 x 553
8 x 8	12 x 12	16 x 16		203 x 203	305 x 305	406 x 406	
9 x 9	14 x 14	18 x 18		229 x 229	356 x 356	457 x 457	

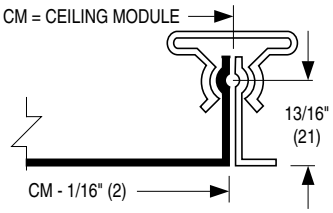
Type TL Tegular Lay-in



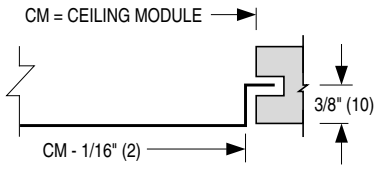
Type F Fineline®



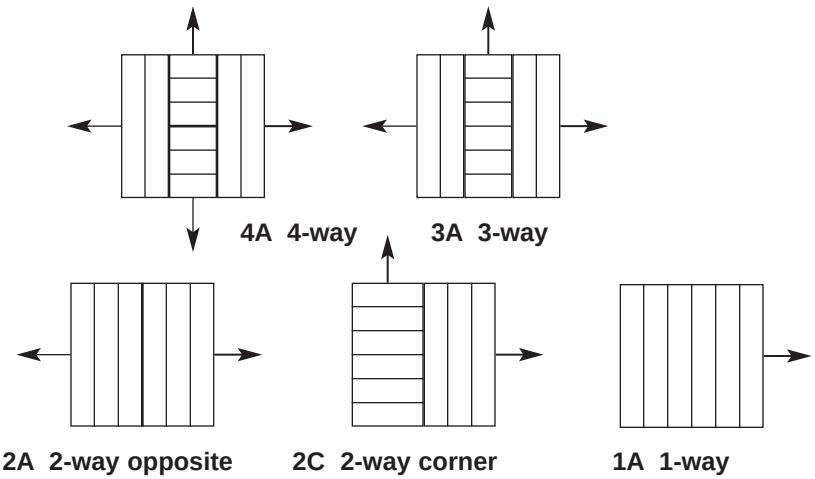
Type M Metal Pan (Snap-in)



Type SP Spline



Available Discharge Patterns:



61CC and **51CC** Diffusers may be ordered in any of the discharge patterns illustrated above.

D

CEILING DIFFUSERS

HOW TO SPECIFY OR TO ORDER

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

Curved Blade Ceiling Diffusers – Model Series 51CC and 61CC

51CC - O - 12 x 12 - 24 x 24 - PL - AW - 4A - –

MODEL

- Aluminum	51CC
- Aluminum w/Rear Vanes	51CCD
- Steel	61CC
- Steel w/Rear Vanes	61CCD

DAMPER

- No Damper (default)	—
- Opposed Blade (steel)	O
- Opposed Blade (aluminum) (available on aluminum models only)	OA

NECK SIZE (inches)

6 x 6, 8 x 8, 9 x 9, 10 x 10,
12 x 12, 14 x 14, 15 x 15,
16 x 16, 18 x 18, 21 x 21

CEILING MODULE SIZE

Standard Module

Imperial (in.)	Metric (mm)
24 x 24 (default)	600 x 600

FRAME TYPE

- Panel Lay-in T-Bar (default)	PL
- Tegular	TL
- Fineline®	F
- Metal Pan Snap-in	M
- Spline	SP

ACCESSORIES

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

AIR BALANCING DEVICES

Square Neck

- Equalizing Grid	EGL
- Damper/Equalizing Grid	DEGL

Round Neck

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

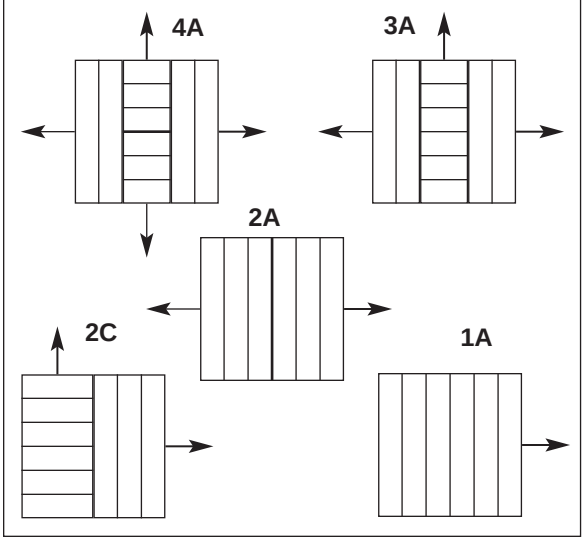
BLOW PATTERN

- 4-Way	4A
- 3-Way	3A
- 2-Way Corner	2C
- 2-Way Opposite	2A
- 1-Way	1A

FINISH

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

AVAILABLE DISCHARGE PATTERNS



Notes:

1. Consult text as to limitations of panel, neck size and core style combinations.
2. If more than one accessory is required, list in order.

SUGGESTED SPECIFICATION:

Specification Text File

Models 51CC, 51CCD – Aluminum

Furnish and install **Nailor Model** (select one) **51CC** or **51CCD** (with deflector vanes) **Aluminum Curved Blade Supply Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have an aluminum panel type frame that has a square neck and contains an extruded aluminum curved blade pack with individually adjustable blades. The blade pack shall be configured in a 4, 3, 2 or 1-way pattern as specified. 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), operable from the face of the diffuser, 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.

Specification Text File

Models 61CC, 61CCD – Steel

Furnish and install **Nailor Model** (select one) **61CC** or **61CCD** (with deflector vanes) **Steel Curved Blade Supply Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall have a corrosion-resistant steel, panel type frame that has a square neck and contains an extruded aluminum curved blade pack with individually adjustable blades. The blade pack shall be configured in a 4, 3, 2 or 1-way pattern as specified. 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, operable from the face of the diffuser, 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.

Performance Data

Models: 61CC, 61CCD
51CC, 51CCD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM		100	200	300	400	500	600	700	800	900	1000
		TP		.003	.015	.032	.058	.094	.136	.182	.234	.302	.369
.20	6 x 6	CFM				60	80	100	120	140	160	180	200
		NC				—	15	21	26	29	32	35	38
		T	4-Way			4-6-9	5-8-13	6-9-15	8-11-17	9-13-20	10-15-23	11-16-26	12-17-28
			3-Way			4-6-10	6-9-14	7-10-16	8-12-19	10-14-22	11-16-25	12-17-28	13-19-31
			2-Way			5-7-11	6-9-15	8-11-17	9-14-21	10-16-24	12-17-28	13-19-31	15-21-39
			1-Way			6-9-14	8-11-17	9-14-21	11-16-25	12-18-29	14-20-33	16-23-37	17-25-41
.38	8 x 8	CFM			75	115	150	190	230	265	305	340	380
		NC			—	—	17	23	28	31	35	37	40
		T	4-Way		3-4-7	5-7-11	6-9-15	8-11-17	9-13-20	10-16-24	12-17-27	13-18-30	14-20-33
			3-Way		3-5-8	5-7-12	6-9-15	8-12-18	10-14-22	11-16-25	14-18-29	14-20-32	15-22-36
			2-Way		4-6-9	5-8-13	7-11-16	9-13-20	10-16-24	12-17-28	14-20-32	15-22-36	16-25-40
			1-Way		4-6-10	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	17-24-39	17-26-43	19-30-48
.61	10 x 10	CFM		60	120	185	245	305	365	430	490	550	610
		NC		—	—	13	20	26	30	34	37	40	43
		T	4-Way	2-3-4	4-6-9	5-8-13	7-11-16	9-13-20	10-16-24	12-17-27	13-19-21	15-21-35	16-24-39
			3-Way	2-3-5	4-6-9	6-9-14	8-11-17	9-14-21	11-16-26	13-18-30	14-20-33	16-24-38	17-26-42
			2-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-33	16-23-37	17-26-42	19-28-46
			1-Way	2-4-6	5-7-12	8-11-17	10-15-27	12-18-29	15-21-24	17-25-40	18-28-45	20-31-49	23-35-55
.90	12 x 12	CFM		90	180	270	360	450	540	630	720	800	900
		NC		—	—	14	21	27	31	35	38	41	44
		T	4-Way	2-3-5	4-6-9	6-9-14	8-12-18	10-14-22	11-16-26	13-18-30	15-21-34	16-23-38	17-26-42
			3-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-32	16-23-37	17-25-41	19-28-46
			2-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-26	13-19-31	15-22-36	17-25-41	19-28-46	21-31-51
			1-Way	3-4-7	6-9-14	8-12-19	11-16-25	13-19-30	16-23-38	18-27-44	20-30-49	22-35-55	25-38-62
1.24	14 x 14	CFM		125	250	375	500	620	745	870	995	1120	1240
		NC		—	—	15	23	29	33	37	40	43	46
		T	4-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-33	16-23-37	17-26-42	19-28-46
			3-Way	2-4-6	5-7-11	7-10-16	9-14-21	11-16-26	13-19-31	15-22-36	16-25-40	18-28-45	20-31-49
			2-Way	2-4-6	5-7-12	8-11-17	10-15-23	12-18-29	15-21-34	16-25-40	18-28-45	20-31-49	23-35-55
			1-Way	3-5-8	6-9-15	9-14-20	12-17-28	15-21-34	17-25-40	19-29-47	22-33-53	25-38-60	28-42-67

CFM - cubic feet per minute

FPM - feet per minute velocity

TP - total pressure - inches w.g.

T - throw in feet

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

Performance Notes:

1. Pressures are expressed in inches of water gauge.

2. Throw values are given for terminal velocities of 150, 100 and 50 fpm, with a cooling temperature differential (ΔT) of 20°F and are based on surface mount units benefiting from the coanda effect. The blade settings were set for optimum discharge, parallel to the face of the grille, that have the outer blades closest to the frame set with an opening of 1/8" (3) and progressively wider spacing between blades away from the frame. (**Note:** The throw values may be increased or decreased by as much as 20% by changing the blade setting).

3. Blades in the full open position
   - reduce the NC by 6.
   - multiply the total pressure x 0.3.

4. The NC values are based on a room absorption of 10 dB, re 10^{-12} watts.

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

Performance Data

Models: 61CC, 61CCD
51CC, 51CCD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM	100	200	300	400	500	600	700	800	900	1000
		TP	003	015	032	058	094	136	182	234	302	369
1.44	15 x 15	CFM	145	290	430	575	720	860	1005	1150	1290	1435
		NC	—	—	15	23	29	33	37	40	43	46
		T 4-Way	2-4-6	4-6-10	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	16-23-38	17-26-38	19-29-47
		T 3-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-28	13-19-31	15-22-36	17-25-41	19-27-46	21-31-50
		T 2-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-32-51	24-36-57
		T 1-Way	3-5-8	6-9-15	10-14-22	12-17-28	15-21-35	17-26-42	20-30-49	22-34-54	25-38-61	28-43-68
1.64	16 x 16	CFM	165	330	490	655	820	985	1150	1315	1480	1640
		NC	—	—	16	24	29	34	38	41	44	47
		T 4-Way	2-4-6	5-7-11	7-10-16	9-13-20	11-16-25	13-18-30	15-21-35	16-24-39	18-27-44	20-30-49
		T 3-Way	2-4-6	5-7-12	7-11-16	10-14-22	12-17-27	14-20-32	16-23-38	17-26-43	19-30-48	21-33-52
		T 2-Way	3-4-7	5-8-13	8-12-18	10-16-24	13-19-31	15-22-36	17-26-42	19-29-46	22-33-53	24-36-58
		T 1-Way	3-5-8	7-10-16	10-14-22	12-18-29	15-22-36	17-26-43	20-31-49	23-35-49	26-40-63	29-45-71
2.10	18 x 18	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
		NC	—	—	17	25	30	35	39	42	45	48
		T 4-Way	2-4-6	5-7-12	8-11-17	10-14-22	12-17-27	14-20-33	16-23-43	17-26-43	19-30-48	22-33-53
		T 3-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-32-51	24-36-57
		T 2-Way	3-4-7	6-9-14	9-13-20	12-17-29	14-20-33	17-24-39	18-28-45	21-31-50	24-36-57	27-40-64
		T 1-Way	4-6-9	7-11-16	10-16-24	14-20-32	16-24-39	20-39-47	22-33-53	25-38-60	28-43-68	32-49-78
2.88	21 x 21	CFM	290	575	865	1155	1440	1730	2020	2305	2595	2885
		NC	—	—	19	27	32	37	41	44	47	50
		T 4-Way	3-4-7	5-8-13	8-12-18	11-16-25	13-18-30	15-22-36	17-26-42	19-30-48	22-34-53	25-38-60
		T 3-Way	3-4-7	6-9-14	9-13-20	11-16-26	14-20-33	16-24-39	18-28-45	21-31-50	24-37-57	27-40-64
		T 2-Way	3-5-8	7-10-16	10-15-23	12-18-29	16-23-37	18-27-44	20-31-49	23-35-56	26-41-63	29-45-71
		T 1-Way	4-6-10	8-12-18	12-17-27	15-20-37	18-27-44	21-32-51	25-38-60	28-42-67	32-49-77	36-54-86

CFM - cubic feet per minute

FPM - feet per minute velocity

TP - total pressure - inches w.g.

T - throw in feet

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

Performance Notes:

1. Pressures are expressed in inches of water gauge.

2. Throw values are given for terminal velocities of 150, 100 and 50 fpm, with a cooling temperature differential (ΔT) of 20°F and are based on surface mount units benefiting from the coanda effect. The blade settings were set for optimum discharge, parallel to the face of the grille, that have the outer blades closest to the frame set with an opening of 1/8" (3) and progressively wider spacing between blades away from the frame. (**Note:** The throw values may be increased or decreased by as much as 20% by changing the blade setting).

3. Blades in the full open position
   - reduce the NC by 6.
   - multiply the total pressure x 0.3.

4. The NC values are based on a room absorption of 10 dB, re 10^{-12} watts.

5. Data derived from tests conducted 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.

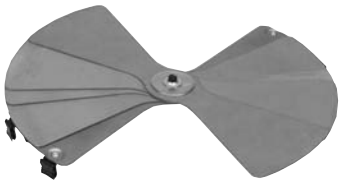
Nailor offers a comprehensive range of models and options to cover all applications.

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

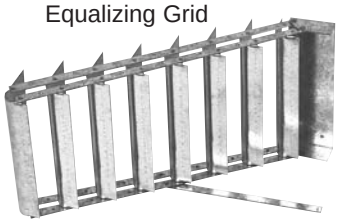
Model 4675
Butterfly Damper

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

MODELS: 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.

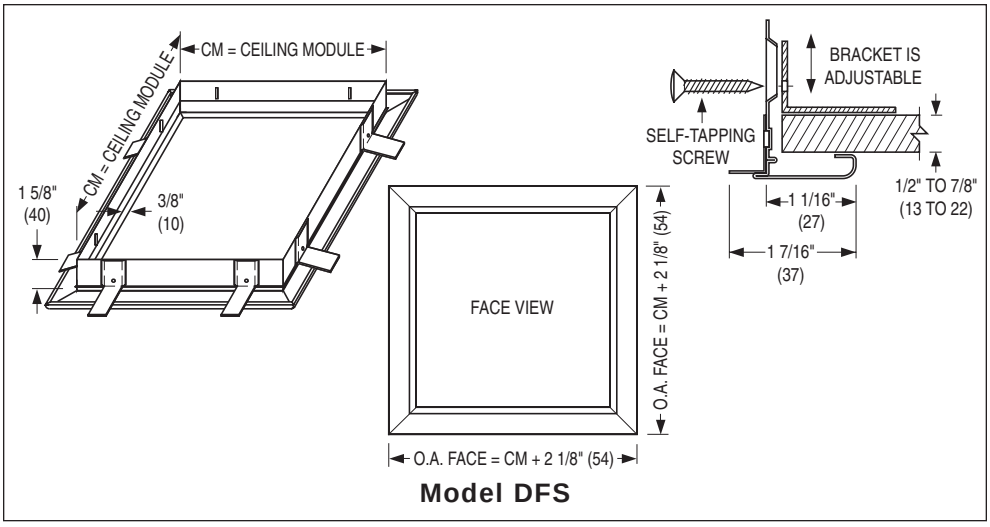
A major benefit is that the DF Series allows access to the ceiling plenum space above for maintenance purposes without the need for separate access doors. The finished appearance is professional and aesthetically pleasing.

Standard Finish: AW Appliance White baked enamel. 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)

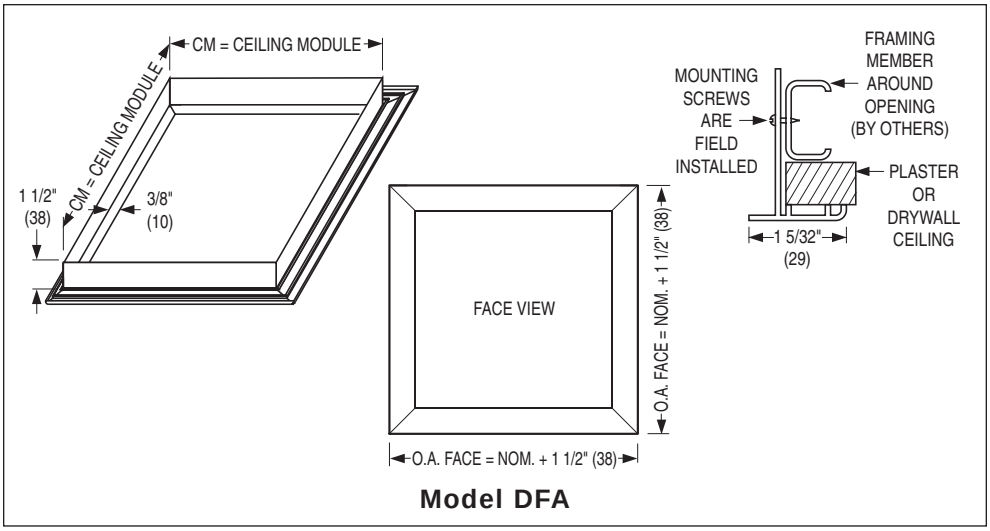


Model DFS

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 610	1200 x 600
60 x 12	1524 x 305	1500 x 300

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



Model DFA

D

CEILING DIFFUSERS

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

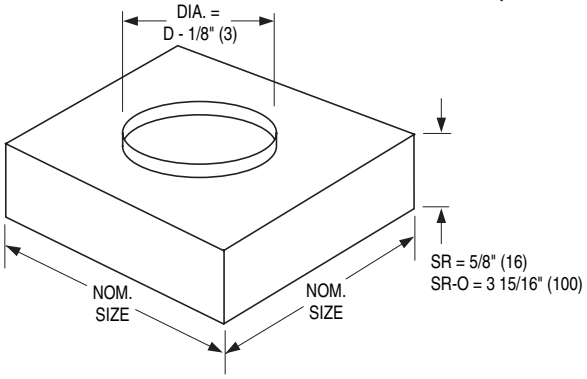
An optional safety chain is available on all of Nailor's round ceiling diffusers.

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.



SQUARE NECK SIZE (INCHES)	ROUND NECK SIZE D (INCHES)
6 x 6	4, 5, 6
9 x 9	6, 7, 8, 9
12 x 12	6, 8, 9, 10, 12
15 x 15	6, 8, 10, 12, 14, 15
18 x 18	6, 8, 10, 12, 14, 15, 16, 18
21 x 21	6, 8, 10, 12, 14, 15, 16, 18,20

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:

BAKED ENAMEL PAINT

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).

WH Off-White

Has a creamy appearance. (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)

ACRYLIC

AAW Acrylic Appliance White

Extra protection for your diffusers. This color matches the industry standard white finish. (Additional cost).

ASP Acrylic Special Finish

Extra protection for your diffusers. Custom colors are individually mixed to match customer supplied samples. (Additional cost)

ALSO AVAILABLE

MI Mill Finish

(No additional cost).

PPA Paint Prepared Metal (Washed only)

(No additional cost).

PC Prime Coat

(Additional cost).

Air Balancing Devices

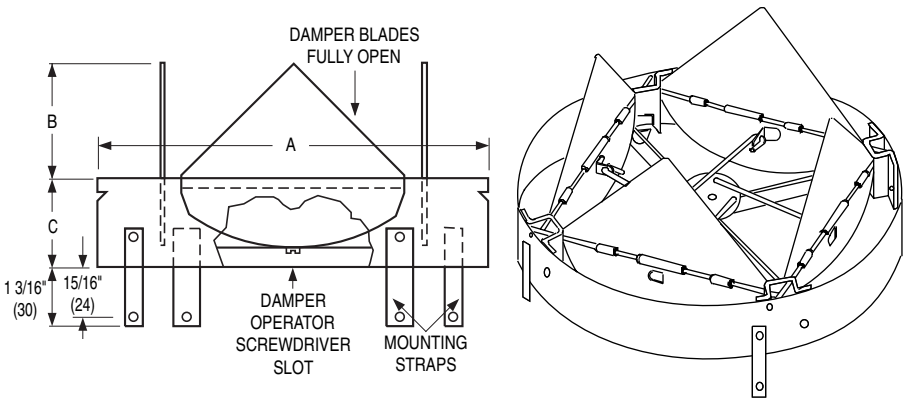
Radial Opposed Blade Damper

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



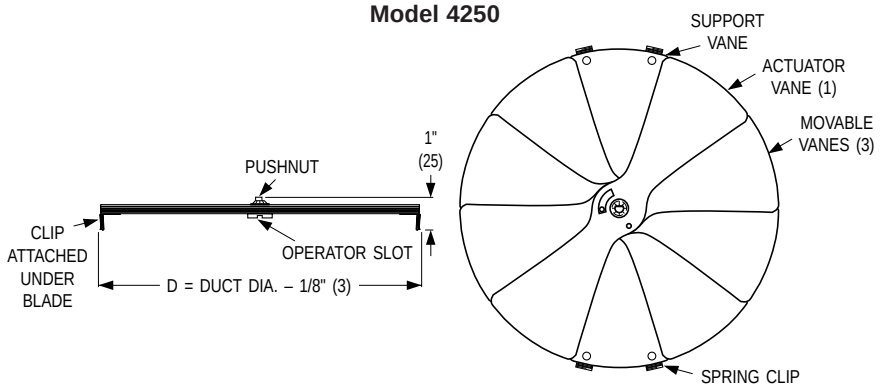
	Nominal Size (inches)							Nominal Size (mm)						
	6	8	10	12	14	15	16	152	203	254	305	356	381	406
A	5 7/8	7 7/8	9 7/8	11 7/8	13 7/8	14 7/8	15 7/8	149	200	251	302	352	378	400
B	1 5/8	2 1/2	2 1/4	2 7/8	3 3/8	3 3/4	4 3/8	41	64	57	73	86	95	111
C	1 5/8			2 1/2				41			61			

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

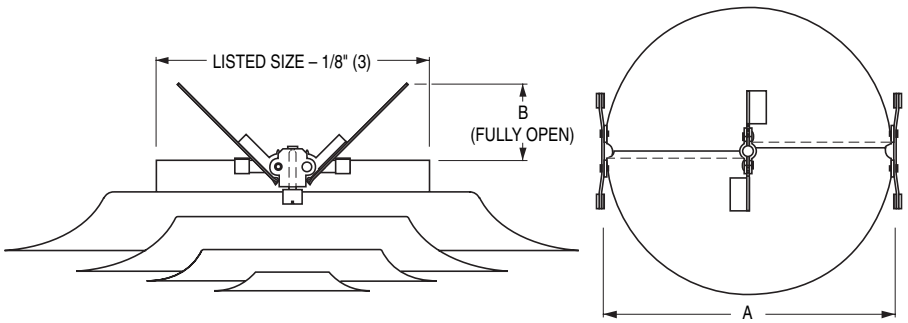


Butterfly Damper

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

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.

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.

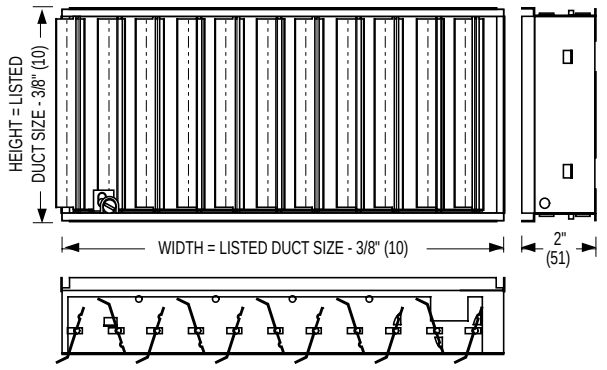
Available with Type DL Lever Operator for use with 6200, 6400 and 6500 Series Pattern Diffusers and 6600 Series Plaque Diffusers. Permits balancing without removing the diffuser inner core assembly.

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.

Model OBD Type SL (Screwdriver Slot)

Diffuser Mount – Face Operator

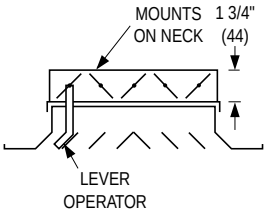


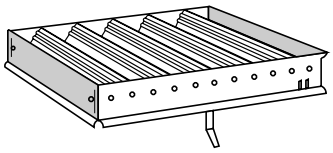
Type DL Operator

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

Model OBD Type DL (Lever Operator)

Diffuser Mount – Face Operator





Min. Size = 4" x 2 1/2" (102 x 64)

Max. Size = 24" x 24" (610 x 610)

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.

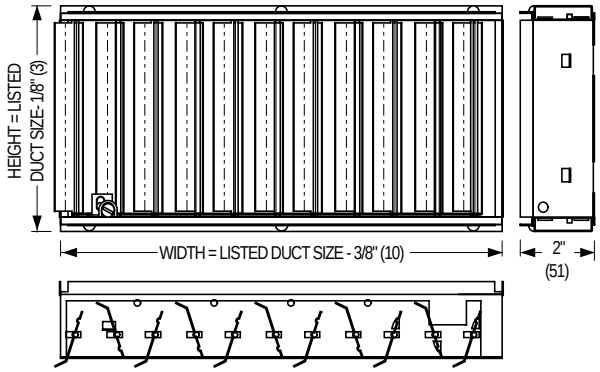
Min. Size = 4" x 2 1/2" (102 x 64) Max. Size = 24" x 24" (610 x 610)

Type SL Operator

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

Model OBDD Type SL (Screwdriver Slot)

Duct Mount – Face Operator

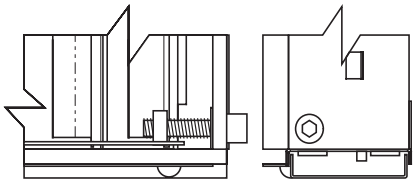


Type EH Operator

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.

Model OBDD Type EH (Hex.)

Duct Mount – External Operator

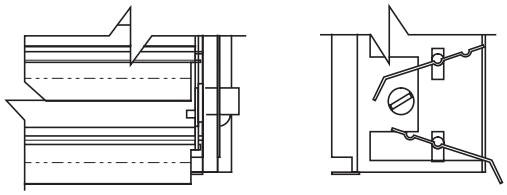


Type EN Operator

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.

Model OBDD Type EN (Screwdriver Slot)

Duct Mount – External Operator



Type QD Operator *

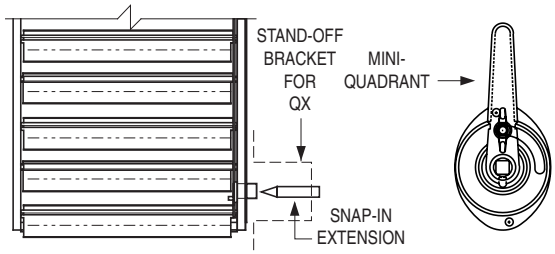
A snap-in shaft extension with 'mini' hand locking quadrant is available as an optional accessory.

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

Type QD or Type QX (Hand Quadrant)



D

CEILING DIFFUSERS

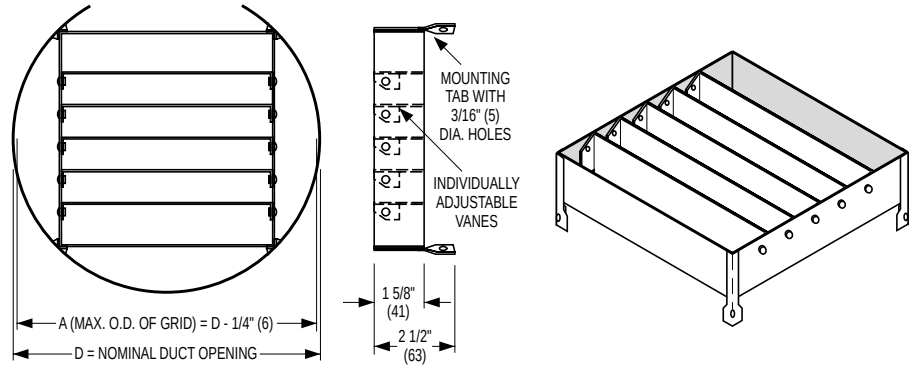
Air Balancing and Directional Control Devices

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.

Model EGR



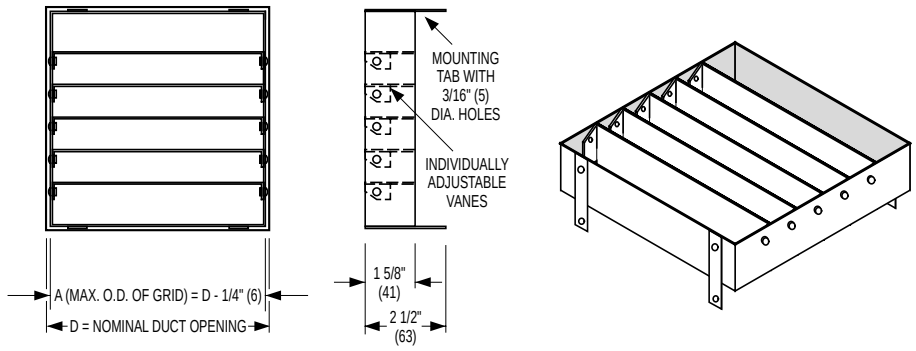
Equalizing Grid for Square and Rectangular Necks

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.

Models EGS and EGL



Damper with Equalizing Grid for Round Necks

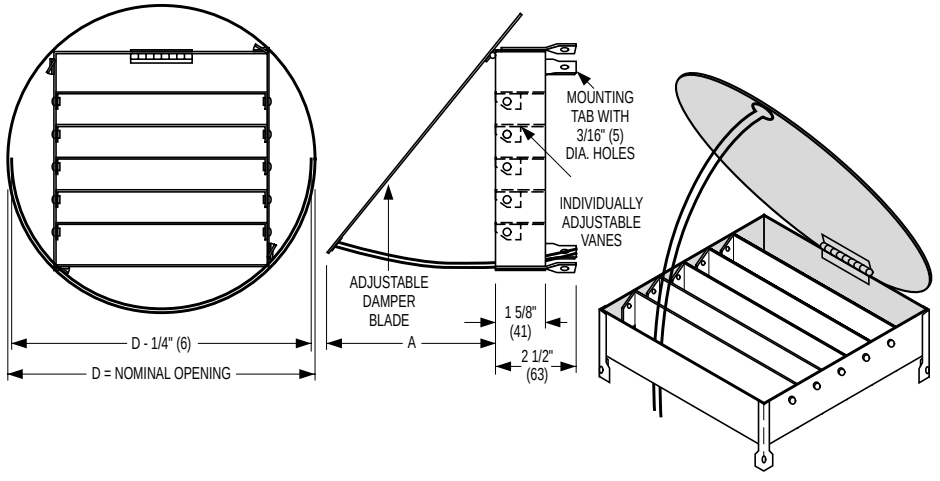
The **Model DEGR** is a duct mounted combination damper with equalizing grid.

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.

Model DEGR



Air Balancing and Directional Control Devices

Damper with Equalizing Grid for Square and Rectangular Necks

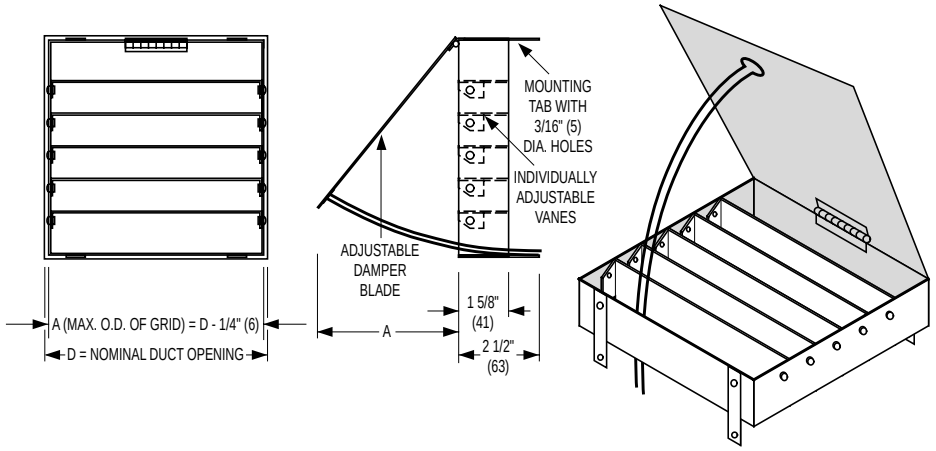
The **Models DEGS** and **DEGL** are duct mounted combination dampers with equalizing grids. They perform as a volume extractor with dampering to near shut-off as well as equalizing the airflow into the branch duct or diffuser neck and providing directional control.

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.

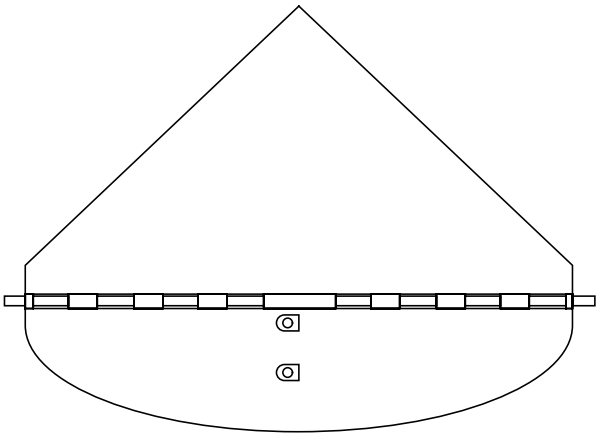
Models DEGS and DEGL



Quadrant Blanks for RNS and RNSA Round Neck Diffusers

The **Model 4295 Quadrant Blanks** are for insertion into the diffuser neck to provide one, two or three-way discharge as may be required to accommodate nearby airflow obstructions. Quadrant Blanks are available for all neck sizes. Hinge pins on the unit clip easily into pre-set holes on the collar for simple installation.

Model 4295



Volume Extractors

MODEL SERIES

EX Blades on 2" centers

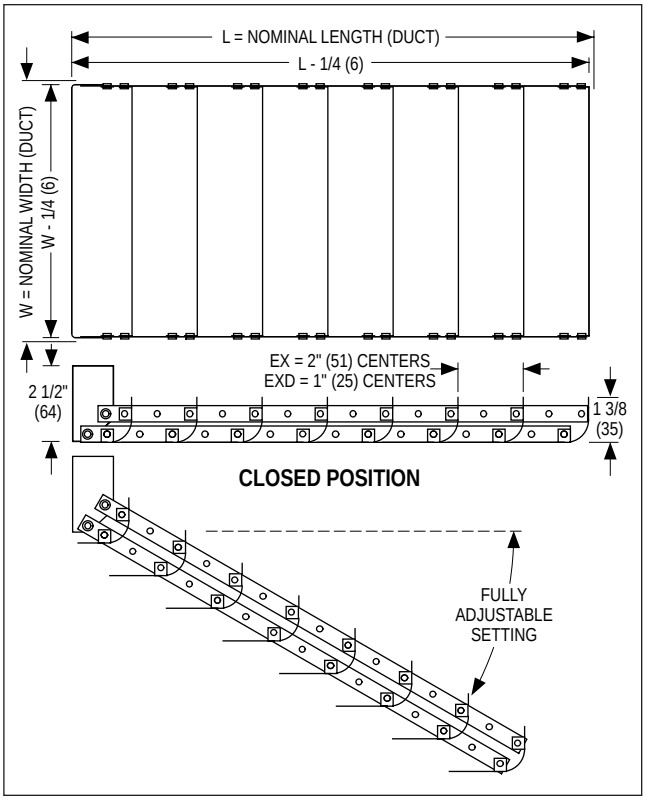
EXD Blades on 1" centers

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).

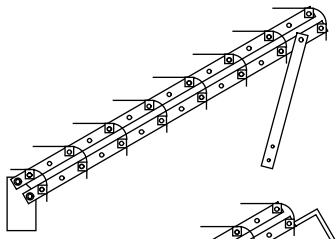
FEATURES:

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

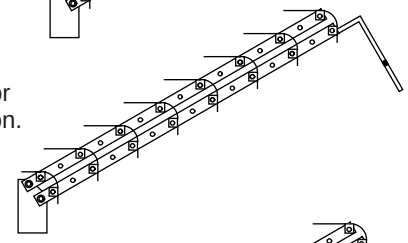


Operator Types

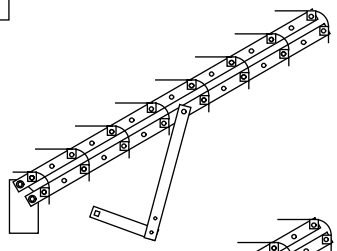
EX/EXD-1
Standard unit with adjusting strap.



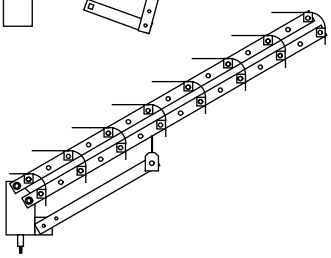
EX/EXD-1-R
Rod operator for external operation.



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" (48) wrench (by others).



Optional Accessories

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