

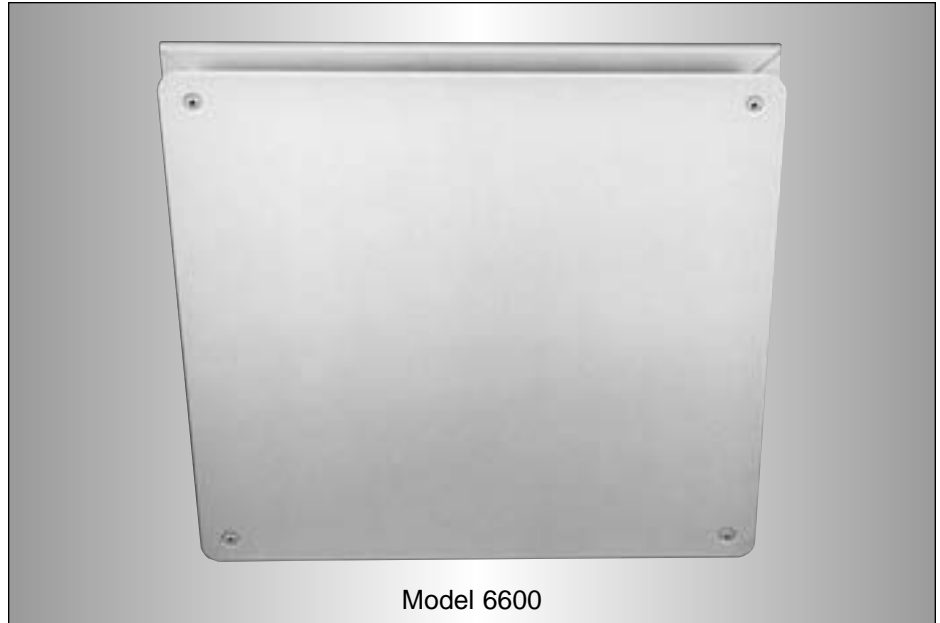
## ARCHITECTURAL PLAQUE DIFFUSERS

- ADJUSTABLE OPENING
- SQUARE FACE
- SQUARE NECK
- STEEL

### Model:

**6600 Steel**

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



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

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## 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 SR (04 thru 18 specify)  
 - 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

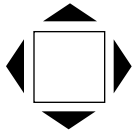
#### FINISH

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

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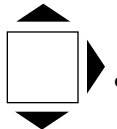
#### STANDARD AIR PATTERNS.

Default  
 4-way  
 blow

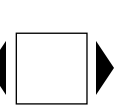


#### BLOW PATTERNS WITH OPTIONAL FACTORY INSTALLED QUADRANT BLANKS.

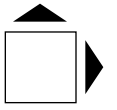
B3  
 3-way  
 blow



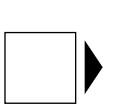
B2  
 2-way  
 opposite  
 blow



C2  
 2-way  
 corner  
 blow



B1  
 1-way  
 blow



#### 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 – 1991.

## Performance Data

### Model 6600 • Square Neck

Neck Size	Face Opening	Neck Velocity, FPM VP Airflow, CFM	160	240	320	400	600	800	1000	1200	1400
			.002 40	.004 60	.006 80	.010 100	.023 150	.040 200	.063 250	.090 300	.122 350
<b>6 x 6</b>	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	133	178	267	356	444	533	711	800
			.001 50	.001 75	.002 100	.004 150	.008 200	.012 250	.018 300	.031 400	.040 450
<b>9 x 9</b>	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	100	150	200	250	300	400	500	600
			.001 50	.001 100	.002 150	.003 200	.004 250	.006 300	.010 400	.016 500	.023 550
<b>12 x 12</b>	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	64	96	128	192	256	320	384	448
			.001 50	.001 100	.001 150	.001 200	.002 300	.004 400	.006 500	.009 600	.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	44	89	133	178	222	267	311	356
			.001 50	.001 100	.001 200	.001 300	.002 400	.003 500	.005 600	.006 700	.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<sup>-12</sup> 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 – 1991.

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

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