

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)

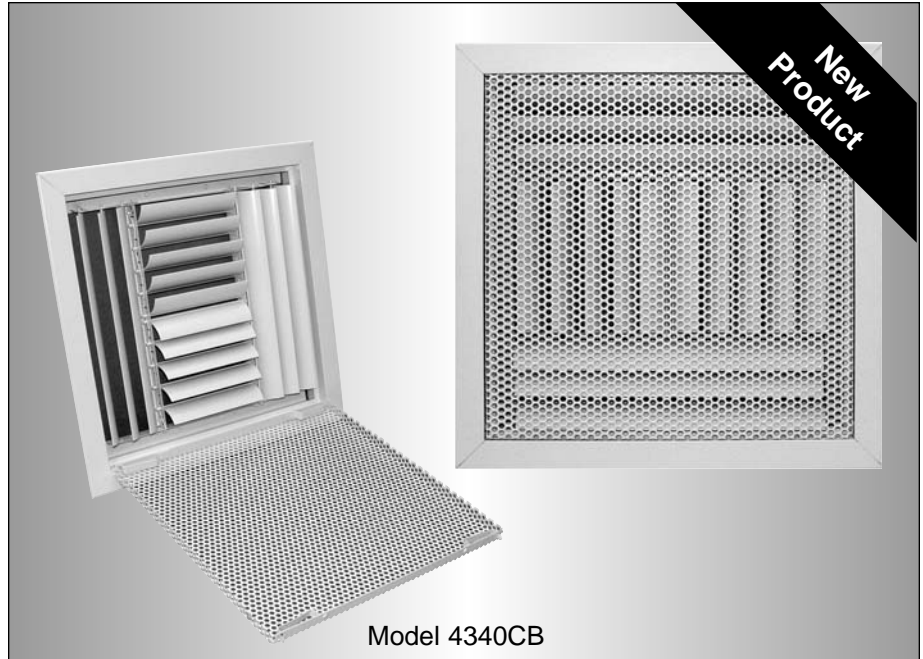
Steel Face Model:

4340CB

Aluminum Model:

4340CBA

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



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.

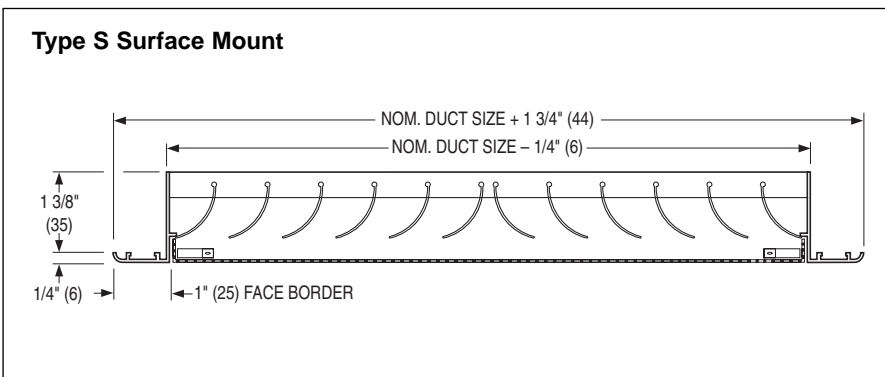
FEATURES:

- 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 screw holes 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.

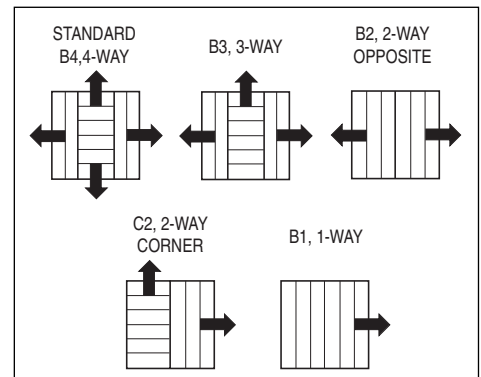
Material: Extruded aluminum blades and frame. Corrosion-resistant steel or aluminum perforated face depending on model selection.

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

Dimensional Data



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) N
(installs through neck of frame)
- 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:

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 – 1991.

Performance Data

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

Nominal Neck Size	Neck Velocity, FPM		200	300	400	500	600	700	800	900	
	VP	TP	.003	.006	.010	.016	.022	.031	.040	.050	
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	6-8-10
		3-Way	1-2-3	2-3-4	3-4-5	4-5-7	5-7-9	6-8-10	6-9-12	7-10-13	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 – 1991.

Balancing:

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