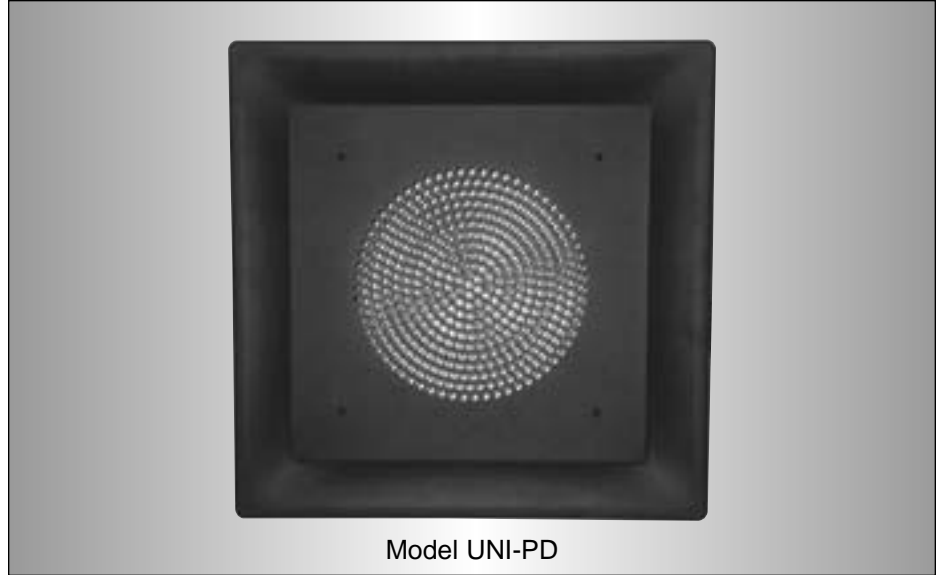


FIXED PERFORATED DOWNBLAST DIFFUSER

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

Model:
UNI-PD Steel



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 theatre, 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 theatres, 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.

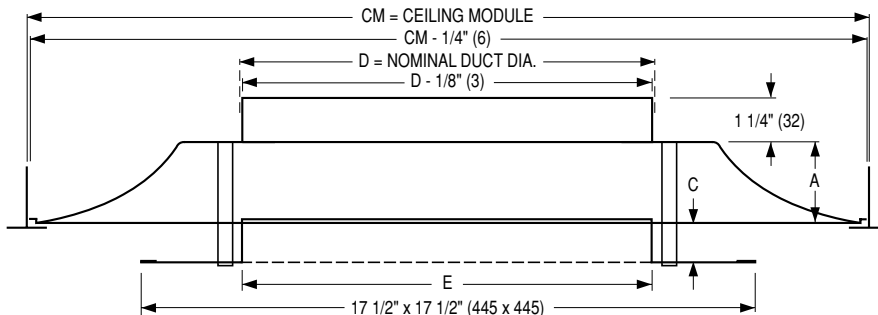
Material: Heavy gauge, corrosion-resistant steel.

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 D97 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

D

CEILING DIFFUSERS

SUGGESTED SPECIFICATION:

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 – 1991.

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
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 – 1991.