

20/21
PRODUCTS

Product Catalogue

Perforated Ceiling Diffuser

Type (PCD)



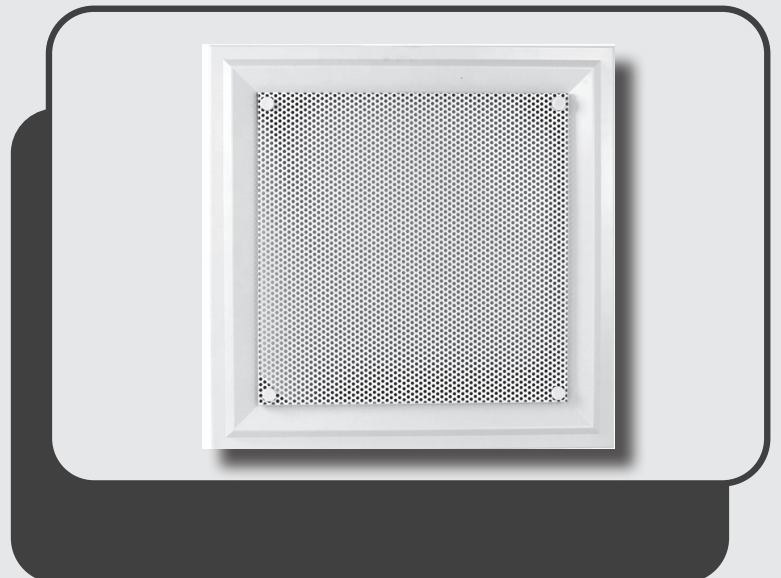
Khedr Trust
ALL AIR PRODUCTS

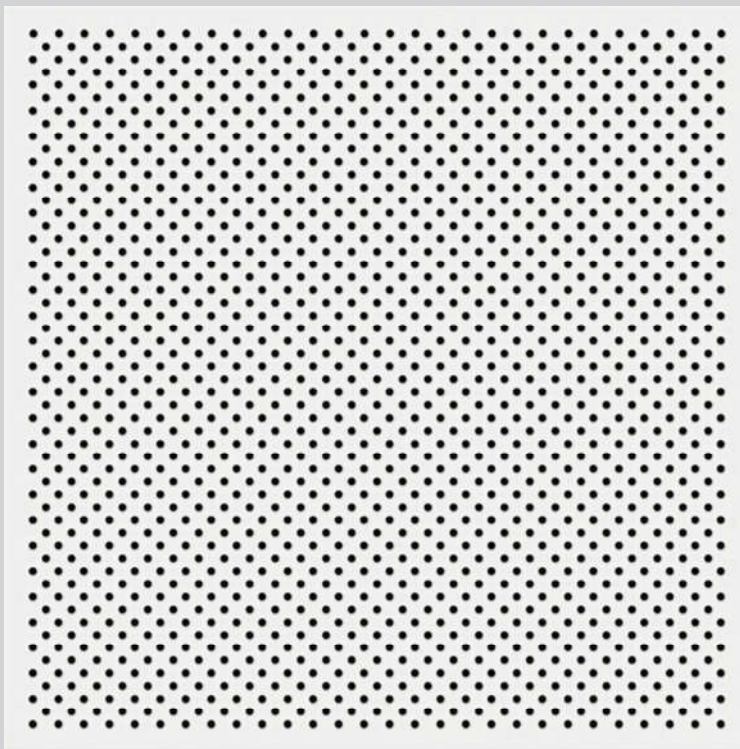
Perforated Ceiling Diffuser products are
manufactured by



“Your comfort is
our priority”

www.khedr-eg.com





Models

- **St. Steel Models**
PCD-F / Flushed Face
PCD-D / Drop Face
- **Aluminum Models**
PCD-F / Flushed Face
PCD-D / Drop Face

Finish

- Standard Finish - White

Features

- Perforated face has 6mm diameter holes on 6mm staggered center.
- Round / Rectangular inlet collar (Neck).

Perforated Ceiling Diffuser

Model Use

Khedr Model PCD Diffusers is suitable to use with all clean room applications.

Unit Design

A tight, uniform blanket of air protect the ceiling against smudging.

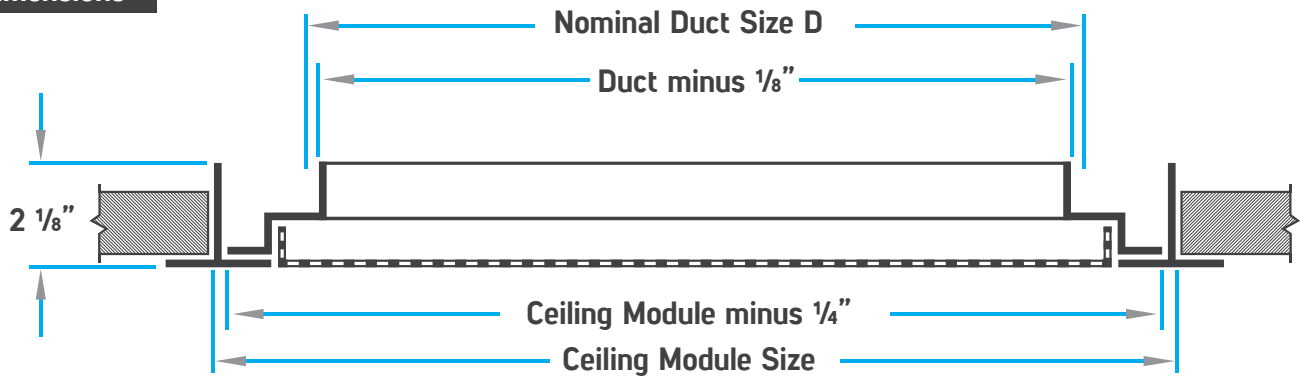
Appearance

Uniform face appearance with different neck sizes.

Perforated Face

Dropping the perforated face also gives access to the optional damper.

- Dimensions



- Performance data

Neck Size "Inch" /Outlet Area "Inch"		V _k Outlet Velocity "FPM"							
		300	400	500	600	700	800	900	1000
		P _T Total Pressure "Inches water"							
		0.01	0.03	0.05	0.07	0.10	0.13	0.17	0.21
6 x 6 A _k = 0.17	CFM	51	68	85	102	119	136	153	170
	NC	51	15	15	16	19	23	26	29
8 x 8 A _k = 0.33	CFM	99	132	165	198	231	264	297	330
	NC	15	15	15	16	19	23	26	29
10 x 10 A _k = 0.55	CFM	165	220	275	330	385	440	495	550
	NC	15	15	15	18	21	24	28	30
12 x 12 A _k = 0.83	CFM	249	332	415	498	581	664	747	830
	NC	15	15	16	19	22	26	29	32
16 x 16 A _k = 1.55	CFM	465	620	775	930	1085	1240	1395	1550
	NC	15	15	18	21	25	29	32	35
18 x 18 A _k = 1.99	CFM	597	796	995	1194	1393	1592	1791	1990
	NC	15	15	19	22	26	30	33	36
24 x 24 A _k = 1.74	CFM	522	696	870	1044	1218	1392	1566	1740
	NC	15	15	18	21	25	29	32	35

Perforated Ceiling Diffuser products are manufactured by Khedr Trust Co.

- V_k Outlet Velocity "FPM"
- A_k Outlet Area "Feet²"
- P_S Static Pressure "Inch Water"
- P_T Total Pressure "Inch Water"
- NC re 8db room

- Selection Procedure

1. Determine the required CFM per each outlet as per cooling Load Calculation.
2. Determine the recommended Outlet Velocity V_k according to application as per following Table.
3. Select the size that give the required CFM at recommended outlet velocity from performance data tables.

Application	V_k Outlet Velocity "FPM"
Broadcast Studios	300-500
Residences	500-750
Apartments	500-750
Mosques , Churches	500-750
Hotel Bedrooms	500-750
Theaters	500-750
Private Offices, Acoustically Treated	500-750
Private Offices, not Treated	500-800
General Offices	1000-1250
Dept. Stores	1500

Perforated Ceiling Diffuser products are manufactured by Khedr Trust Co.

Table (1) – Recommended Outlet Velocity *

* Table 20—Carrier Handbook - Part 2. Air Distribution - Chapter 3. Room Air Distribution—p.72

- Selection Procedure Example

1. Required 400 CFM as per cooling load calculations.
2. The recommended outlet velocity ranges from 300 - 500 FPM.
3. The size of air outlet :
 - A. Size 12" X 12" at 500 FPM.
 - B. Size 16" X 16" at 300 FPM.

Neck Size "Inch" /Outlet Area "Inch"		V _k Outlet Velocity "FPM"		
		300	400	500
		P _T Total Pressure "Inches water"		
		0.01	0.03	0.05
12 x 12 A _k = 0.83	CFM	249	332	415
	NC	51	15	16
16 x 16 A _k = 1.55	CFM	465	620	775
	NC	15	15	18

Perforated Ceiling Diffuser products are manufactured by Khedr Trust Co.

- How to oprder

Type	PCD-D	PCD-F PCD-D	Flushed Face Drop Face
Material	A	A S	Aluminum Steel
Size	24 x 24	L X W " Inch"	
Finish	1	0 1 2	Aluminum White Color Other Colors
Damper	0	0 1	Without Damper With Damper

Perforated Ceiling Diffuser products are manufactured by Khedr Trust Co.

Room Types		Noise Criteria (NC)
Residences, apartments	Living areas	30
	Bathrooms, kitchens, utility rooms	35
Hotels/motels	Individual rooms or suites	30
	Meeting/banquet rooms	30
	Corridors and lobbies	40
	Service/support areas	40
Office buildings	Executive and private offices	30
	Conference rooms	30
	Teleconference rooms	25
	Open-plan offices	40
	Corridors and lobbies	40
Courtrooms	Unamplified speech	30
	Amplified speech	35
Performing arts spaces	Drama theaters, concert and recital halls	20
	Music teaching studios	25
	Music practice rooms	30
Hospitals and clinics	Patient rooms	30
	Wards	35
	Operating and procedure rooms	35
	Corridors and lobbies	40
Laboratories	Testing/research with minimal speech Communication	50
	Extensive phone use and speech communication	45
	Group teaching	35
Churches, mosques, synagogues	General assembly with critical music programs	25
Schools	Classrooms	30
	Large lecture rooms with speech amplification	30
	Large lecture rooms without speech amplification	25
Libraries		30
Indoor stadiums, gymnasiums	Gymnasiums and natatoriums	45
	Large-seating-capacity spaces with speech amplification	50

* ASHRAE Applications – Ch. 49 Noise and Vibration Control

Other Products are provided by Khedr Trust Co.

Diffusers & Grilles

- Squar Ceiling Diffuser
- Circular Ceiling Diffuser
- Slot Linear Diffuser
- Linear Bar Grille
- Aluminum Grille
- Swirl Diffuser
- Perforated Ceiling Diffuser
- Disc Valve Diffuser
- Jet Diffuser
- Eye Ball Diffuser
- Door Grille
- Raised Floor Grid

Louvers

- Aluminum Louver
- Sand Trap Louver

Dampers

- Blade Volume Damper
- Toothed Wheel Volume Damper
- Gravity Shutter Damper

Acoustics

- Sound Attenuator
- Acoustic Louver

Smoke Management

- Fire Damper
- Smoke Motorized Damper
- Smoke Vent

Duct Works

- Galvanized Steel Duct
- Black Steel Duct
- Stainless Steel Duct
- Spiral Duct
- Flexible Duct
- Canavas
- Flanges
- Flexible Duct Connector



Khedr Trust

ALL AIR PRODUCTS



Alqanater Alkhairia roads.Industrial Area. Behind Cocacola Co.. Cairo, Egypt

Mailing Address : P.O.Box 13621. Cairo 11511 - Egypt

Tel : +202 42452022

Mob : +2010 29999054 / +2010 29999056

+2010 29999057 / +2010 29999058

E-Mail : info@khedr-eg.com

