

20/21
PRODUCTS

Product Catalogue

Circular Ceiling Diffuser

Type (CCD)



Khedr Trust
ALL AIR PRODUCTS

Circular Ceiling Diffuser products
are manufactured by



Khedr Trust
ALL AIR PRODUCTS

“Your comfort is
our priority”

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Models

- CCD-A
- CCD-B

Finish

- Standard Finish - White

Circular Ceiling Diffuser

Model Use

Khedr Model CCD Diffusers used for supply or Exhaust applications.

Flow Pattern

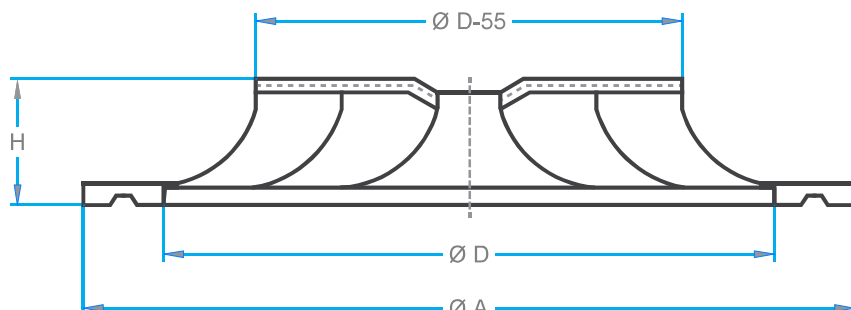
Maintains an unbroken horizontal flow pattern from maximum cfm down to minimum.

Two Types

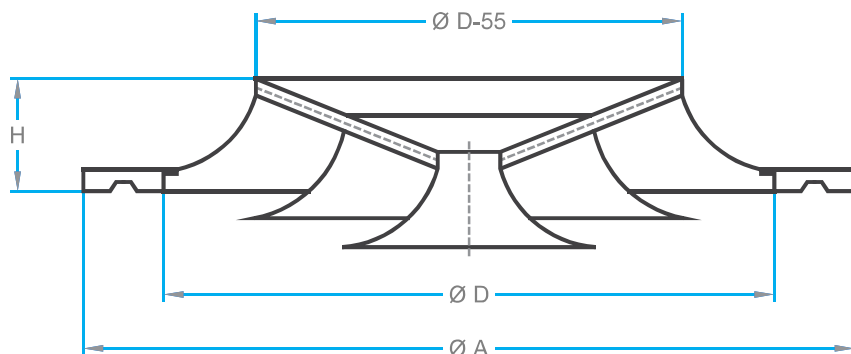
CCD Diffusers appears with two different types Fixed Diffuser Ring & Fixed Diffuser cone-form Rings.

- Dimensions

• Type (A) - Fixed Diffuser Rings



• Type (B) - Fixed Diffuser Cone Form Rings



Size	D (mm)	A (mm)	H (mm)
Ø 6	192	220	30
Ø 8	248	300	45
Ø 10	304	356	60
Ø 12	360	412	75
Ø 14	416	468	90
Ø 16	472	542	98
Ø 18	528	598	112
Ø 20	584	654	126

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- Performance data

Type (A) - Fixed Diffuser Rings

Neck Size "Inch"		V _K Outlet Velocity "FPM"								
		400	500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"								
		0.025	0.04	0.057	0.077	0.099	0.12	0.15	0.22	0.30
Ø 6	CFM	80	100	120	135	155	175	195	235	275
	T	2-4	3-5	3-5	4-6	4-6	5-7	5-7	6-8	6-8
	NC	< 20	< 20	< 20	< 20	23	26	30	35	40
Ø 8	CFM	140	175	210	245	280	315	350	420	490
	T	3-5	4-6	4-7	5-7	6-8	6-8	7-9	7-10	8-11
	NC	< 20	< 20	21	26	31	34	37	44	48
Ø 10	CFM	220	275	325	380	435	490	545	655	765
	T	5-7	5-8	6-9	7-9	8-10	8-11	9-12	10-13	11-14
	NC	< 20	< 20	< 20	21	26	30	33	39	45
Ø 12	CFM	315	395	470	550	630	705	785	940	1100
	T	5-7	6-9	7-10	8-11	9-12	10-13	10-14	11-15	13-16
	NC	< 20	< 20	< 20	22	26	30	33	39	45
Ø 14	CFM	430	535	640	750	855	965	1070	1285	1500
	T	6-8	7-10	8-11	9-12	10-13	11-15	12-16	13-17	15-19
	NC	< 20	< 20	23	28	32	36	40	46	49
Ø 16	CFM	560	700	840	980	1120	1260	1400	1680	1960
	T	7-10	8-12	10-13	11-15	12-16	13-17	14-18	15-20	17-21
	NC	< 20	< 20	22	27	31	35	39	44	49
Ø 18	CFM	710	885	1060	1240	1415	1595	1770	2125	2480
	T	7-11	9-12	10-14	12-16	13-17	14-19	16-20	18-22	19-24
	NC	< 20	< 20	21	26	30	34	37	43	48
Ø 20	CFM	870	1090	1310	1525	1745	1960	2180	2615	3050
	T	8-12	10-14	12-16	14-17	15-19	16-21	17-22	19-24	21-26
	NC	< 20	< 20	21	26	30	34	38	43	48

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The minimum T Dimensions in feet is based on a VT of 100 FPM , The Maximum T Dimension In feet is based on a VT of 50 .

V_T Terminal Velocity "FPM"

T Throw "Feet"

V_K Outlet Velocity "FPM"P_T Total Pressure "Inch Water"

N Cre 8db room

- Performance data

Type (B) - Fixed Diffuser Cone Form Rings

Neck Size "Inch"		V _K Outlet Velocity "FPM"								
		400	500	600	700	800	900	1000	1200	1400
		P _T Total Pressure "Inches water"								
		0.021	0.033	0.047	0.064	0.084	0.106	0.131	0.189	0.257
Ø 6	CFM	80	100	120	140	160	180	200	235	275
	T	2-5	3-6	3-7	4-7	5-8	5-8	6-9	7-9	7-10
	NC	< 20	< 20	20	25	29	32	35	41	45
Ø 8	CFM	140	175	210	245	280	315	350	420	490
	T	3-6	4-7	4-9	5-10	6-10	6-8	7-11	9-12	10-13
	NC	< 20	< 20	21	26	30	33	36	42	47
Ø 10	CFM	220	275	325	380	435	490	545	655	765
	T	4-7	5-9	6-11	7-12	7-13	8-13	9-14	11-16	12-17
	NC	< 20	< 20	22	27	31	34	37	43	47
Ø 12	CFM	315	390	470	550	630	705	785	940	1100
	T	4-9	6-11	7-13	8-14	9-15	10-16	11-17	13-19	14-20
	NC	< 20	< 20	23	27	31	35	38	43	48
Ø 14	CFM	425	530	635	745	850	955	1060	1270	1490
	T	5-10	6-13	8-15	9-17	10-18	12-19	13-20	15-20	17-23
	NC	< 20	< 20	23	28	32	35	39	44	49
Ø 16	CFM	560	700	840	980	1120	1260	1400	1680	1960
	T	6-12	7-15	9-18	10-19	12-20	13-22	15-23	18-25	19-27
	NC	< 20	< 20	24	28	32	36	39	45	49
Ø 18	CFM	710	885	1060	1240	1415	1595	1770	2125	2480
	T	7-13	8-17	10-20	12-21	13-23	15-24	17-26	20-28	21-30
	NC	< 20	< 20	24	29	33	36	40	45	50
Ø 20	CFM	870	1100	1310	1525	1750	1960	2180	2615	3050
	T	7-15	6-19	11-22	13-24	15-25	17-27	10-28	22-31	24-34
	NC	< 20	< 20	25	29	33	37	40	45	50

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The minimum T Dimensions in feet is based on a VT of 100 FPM , The Maximum T Dimension In feet is based on a VT of 50 .

V_T Terminal Velocity "FPM"

T Throw "Feet"

V KOutlet Velocity "FPM"

P_T Total Pressure "Inch Water"

N Cre 8db room

- Selection Procedure

1. Determine the required CFM per each outlet as per cooling Load Calculation.
2. Determine the type of Rings from page (2).
Example : "Type (A) - Fixed Rings."
3. Determine the recommended Outlet Velocity V_K according to application as per following Table.
4. Select the suitable 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	500-750
General Offices	500-800
Dept. Stores	1000-1250

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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 350 CFM as per cooling load calculations.
2. Required Type (A) - Fixed Rings Diffuser.
3. The recommended outlet velocity ranges from 500 - 750 FPM.
4. The size of air outlet :
 - A. Ø 10 " at 700 FPM.
 - B. Ø 12 " at 500 FPM.

Neck Size "Inch"		V _k Outlet Velocity "FPM"				
		400	500	600	700	800
		P _T Total Pressure "Inches water"				
		0.025	0.040	0.057	0.077	0.099
Ø 10	CFM	220	275	325	380	435
	T	5-7	5-8	6-9	7-9	8-10
	NC	< 20	< 20	< 20	21	26
Ø 12	CFM	315	395	470	550	630
	T	5-7	6-9	7-10	8-11	9-12
	NC	< 20	< 20	< 20	22	26

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- How to oprder

Type	CCD - A	CCD-A CCD-B	Fixed Diffuser Rings Fixed Diffuser Cone-Form Rings
Size	Ø 10	Ø " Inch"	
Finish	1	0 Aluminum 1 White Color 2 Other Colors	
Damper	0	0 Without Damper 1 With Damper	

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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



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