

20/21
PRODUCTS

Product Catalogue

Swirl Diffuser

Type (SWD)



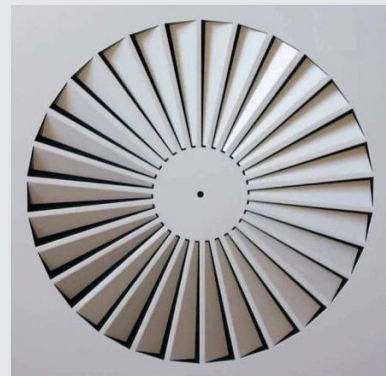
Khedr Trust
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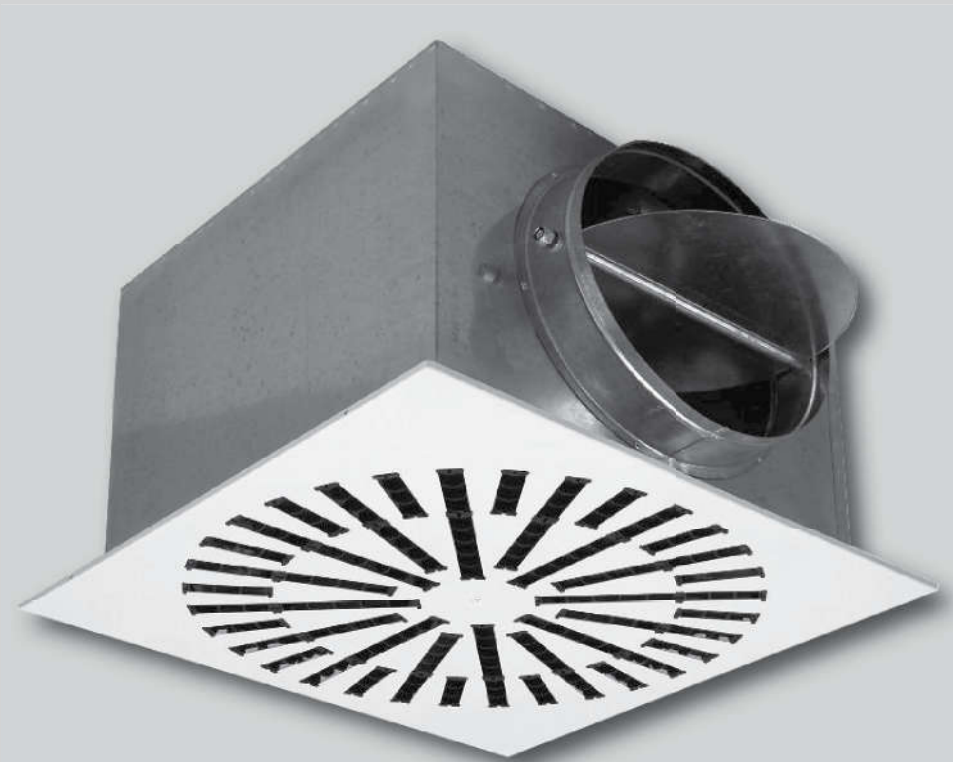
Swirl Diffuser products are manufactured by



“ Your comfort is
our priority ”

www.khedr-eg.com





Models

- SWD

Finish

- Standard Finish - White



Swirl Diffuser

Model Design

Khedr Model SWD Diffusers has fixed spiral blades that creates rotational as well as axial, Tangential and radial air Movement.

Flow Pattern

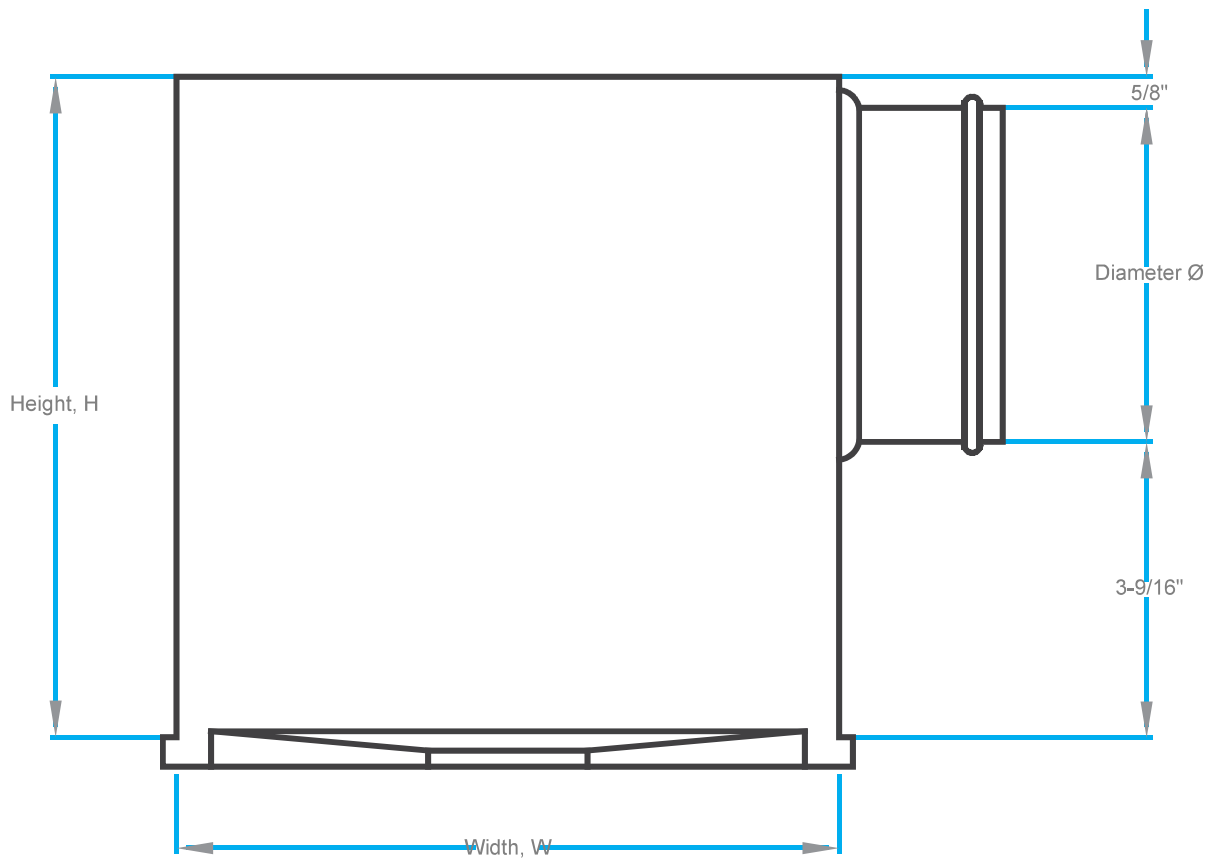
SWD Diffusers produces a strong horizontal swirl allowing the supply air flow to rapidly mix room air.

Model Use

SWD Diffusers are suitable to be used with applications like Offices, retails, Hotels and Fitness Gyms.

- Dimensions

- Type (A)



Neck Size (Inch)	Neck Size (Inch)		Width (Inch)	Height (Inch)
	Round	Rectangular		
24 x 24	Ø 6	6 x 6	23.8	9
	Ø 8	8 x 8	23.8	11
	Ø 10	10 x 10	23.8	13
	Ø 12	12 x 12	23.8	15

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- Performance data

Neck Size "Inch"		V_K Outlet Velocity "FPM"											
		200	300	400	500	600	700	800	900	1000	1100	1200	1300
6 x 6 or Ø 6	CFM	38	57	76	95	114	133	152	171	190	209	228	247
	P_T	0.004	0.012	0.022	0.034	0.049	0.067	0.087	0.106	0.126	0.155	0.188	0.129
	T	1-3	2-4	3-5	3-6	4-6	5-7	5-7	5-8	6-8	6-9	6-9	7-9
	NC	-	-	4	9	13	16	19	23	26	30	33	35
8 x 8 or Ø 8	CFM	68	101	135	169	203	237	271	304	338	372	406	440
	P_T	0.008	0.017	0.030	0.047	0.067	0.094	0.117	0.145	0.189	0.218	0.259	0.304
	T	2-3	2-4	3-5	3-7	4-7	5-8	5-9	6-9	7-10	7-10	7-11	8-11
	NC	-	6	12	17	21	27	31	35	38	40	41	43
10 x 10 or Ø 10	CFM	106	159	211	264	317	370	423	476	528	581	634	-
	P_T	0.011	0.024	0.043	0.068	0.144	0.152	0.191	0.240	0.297	0.359	0.427	-
	T	2-4	3-6	4-8	5-9	6-10	7-11	8-12	9-13	9-13	10-14	10-14	-
	NC	-	10	16	21	28	34	36	40	42	44	46	-
12 x 12 or Ø 12	CFM	152	228	304	380	457	533	609	685	761	837	-	-
	P_T	0.023	0.053	0.094	0.138	0.199	0.271	0.354	0.448	0.554	0.670	-	-
	T	3-5	4-8	5-10	6-11	8-13	9-14	10-15	11-15	12-16	12-17	-	-
	NC	9	18	24	30	38	41	44	47	49	51	-	-

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

T Throw "Feet"

V_K Outlet Velocity "FPM"

NC re 8db room

P_T Total Pressure "Inch Water"

- 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

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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 250 CFM as per cooling load calculations.
2. The recommended outlet velocity ranges from 300 – 500 FPM.
3. The size of air outlet :
 - A. Size 10" X 10" at 400 FPM.
 - B. Size 12" X 12" at 300 FPM.

Neck Size "Inch"		V _k Outlet Velocity "FPM"			
		200	300	400	500
10 x 10 or Ø 10	CFM	106	159	211	264
	P _T	0.011	0.024	0.043	0.068
	T	2-4	3-6	4-8	5-9
	NC	-	10	16	21
12 x 12 or Ø 12	CFM	152	228	304	380
	P _T	0.023	0.053	0.094	0.138
	T	3-5	4-8	5-10	6-11
	NC	9	18	24	30

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- How to oprder

Type	SWD	Swiril Diffser
Material	A	A Aluminum S Steel
Size	Ø	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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