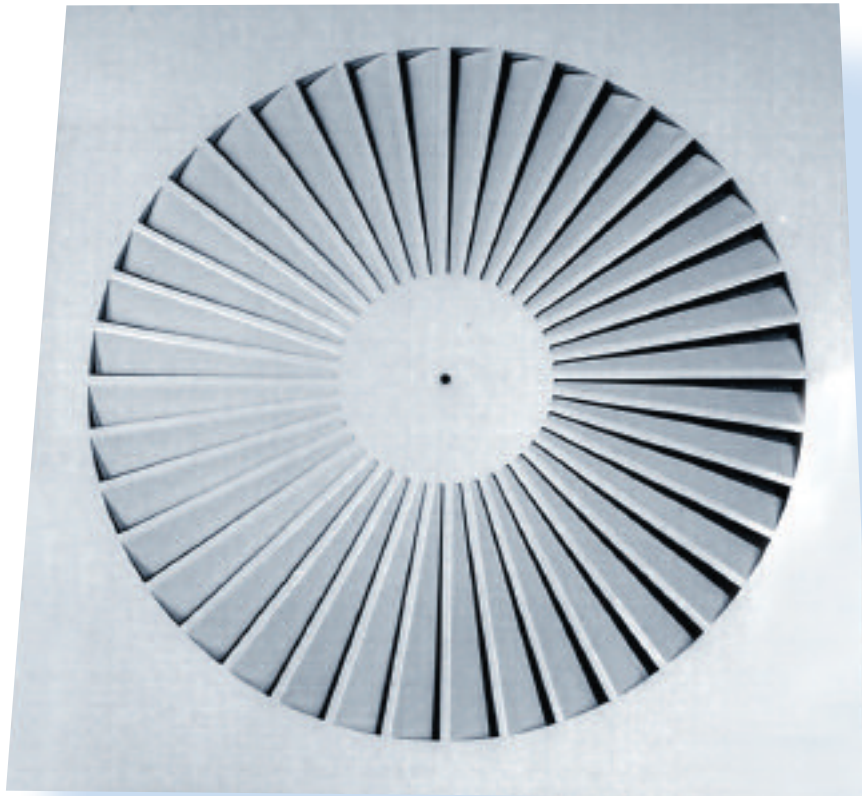


# COLMAN

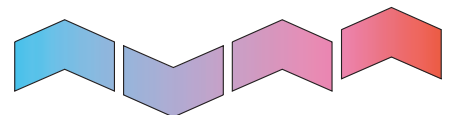
ENGINEERED AIR DISTRIBUTION

## SWIRL DIFFUSERS

DWS SERIES



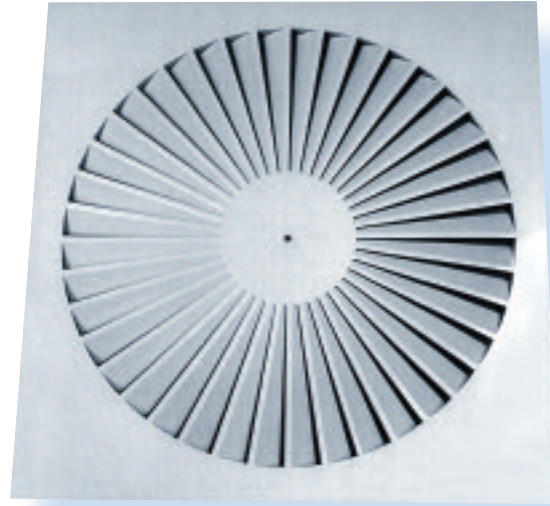
**DWS**  
SERIES



# SWIRL DIFFUSERS

## DWS SERIES

QUALITY AND EFFICIENCY WITHOUT COMPROMISE



### Application:

The DWS type swirl diffuser has been designed to supply cooled or warmed air to a wide range of commercial applications.

A high level of induction is achieved due to the pitch of the radial outlet pattern combined with a high relative free area. Temperature and velocity differences between supplied and room air are therefore quickly reduced.

The high relative free area also makes this diffuser type well suited to extract applications.

### Description:

A circular array of deflection blades are pressed into a square steel panel. Nominal size is determined by the diameter of the radial outlet pattern and the overall diffuser panel size.

Two sizes of outlet pattern are available:

Nominal size 200 has a radial outlet diameter of 350mm and overall panel sizes of 394, 494 and 594mm square respectively.

Nominal size 315 has a diffuser diameter of 500mm and is available only within a 594mm square panel.

The 594mm square panel is designed to fit directly into 600mm square T-bar suspended ceiling systems.

The DWS type swirl diffuser can be supplied with matching side or top entry plenum boxes, with or without monoblade volume control dampers.

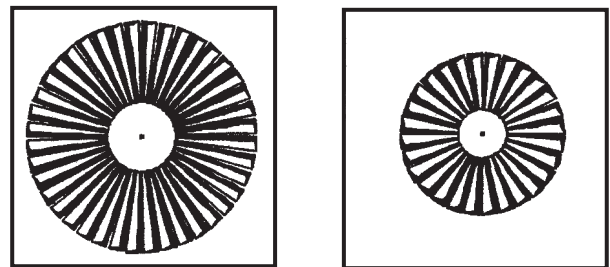
### Fixings:

The DWS type swirl diffuser is suitable for mounting at heights of between 2.5m and 4m from floor level.

The diffuser plate is fastened to the plenum by a central fixing screw. The side or top entry plenum is to be fixed via support rods or wires to suitable structural support.

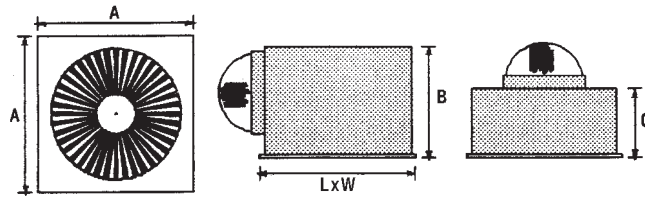
### Finish:

The diffuser is supplied powder coated white (RAL 9010) matt as standard. Gloss finish is available at no extra cost. Other RAL colours are available on request.



350 diameter and 500 diameter radial outlet patterns can be supplied within a 594mm square tile replacement plate.

## Diffuser Dimensions



Nominal Size code	Diameter of radial outlet pattern (mm)	Calculated free area (m3)	A Overall panel size (mm)	Plenum size (L & W (mm))	B Side entry plenum height (mm)	C Top entry plenum height (mm)_
3540	350	0.0320	394 x 394	355	305	250
3550			494 x 494			
3560			594 x 594			
5060	500	0.0732	594 x 594	555	420	

## Options and Order Codes

### Diffuser codes

1 - SERIES	2 - STYLE		3 - CORE		4 - ACCESSORIES		5 - ARRANGEMENT		6 - FIXING		7 - FINISH	
D	W	Swirl	S	Fixed pattern	0	None	0	External swirl	O	None	F	RAL 9010
	1	Special	1	Special	1	Special	1	Special	C	Central screw fixing	1	Matt White
									1	Special		Gloss White
												Special

### Plenum codes

1 - SERIES	2 - LINING		3 - INSTALLATION METHOD		4 - ACCESSORIES		5 - ARRANGEMENT		6 - FIXING		7 - SPIGOT DIAMETER	
D	L	Lined	S	Fixing holes	O	None	S	Supply	R	Round-side	B	125
	N	Unlined		for drop rods	M	Cord operated	E	Extract	T	Round-top	C	150
	1	Special	1	Special	N	monoblade damper			1	entry	D	200
						monoblade damper (Matt black)				entry	E	250
					P	Internally painted Matt black				Special	F	300
					1	Special					N	315
											P	280
											R	225
											T	175
											1	Special

## Example of Order Codes

DWSOOCE 5060  
DNSASRN 5060

Supply diffuser complete with side entry plenum.

Monoblade volume control damper in 315 diameter spigot

Overall diffuser size 594mm square with 500mm diameter radial outlet

Diffuser panel powder coated white (RAL 9010) gloss

# Performance data

Nominal size code	Volume (l/s)	Volume (m <sup>3</sup> /s)	Face Velocity (m/s)	Pressure Drop (Pa)	Throw to 0.5 m/s Velocity (m)	Noise Rating (NR)
3540 3550 3560	100	0.10	3.0	10	11	18
	110	0.11	3.3	12	1.2	19
	120	0.12	3.6	14	1.3	21
	130	0.13	3.9	17	1.5	22
	140	0.14	4.2	19	1.6	24
	150	0.15	4.5	22	1.7	25
	160	0.16	4.8	25	1.8	27
	170	0.17	5.1	28	1.9	29
	180	0.18	5.4	31	2.0	30
	190	0.19	5.7	35	2.1	32
	200	0.20	6.0	39	2.2	34
	210	0.21	6.3	43	2.3	36
	220	0.22	6.6	47	2.4	39
5060	180	0.18	2.5	13	1.3	18
	200	0.20	2.7	17	1.5	21
	220	0.22	3.0	21	1.7	24
	240	0.24	3.3	26	1.9	26
	260	0.26	3.6	31	2.0	28
	280	0.28	3.8	37	2.2	30
	300	0.30	4.1	43	2.4	32
	320	0.32	4.4	50	2.6	34
	340	0.34	4.6	58	2.7	36
	360	0.36	4.9	66	2.9	37
	380	0.38	5.2	75	3.1	39
	400	0.40	5.5	84	3.2	40
	420	0.42	5.7	95	3.4	41
440	0.44	6.0	105	3.6	43	

Performance figures are for diffuser only and assume supply air temperature -10 to +10 degrees C relative to room temperature.  
 Pressure drop shown is static pressure drop for diffuser only and does not allow for effect of plenum.  
 Throw value is measured horizontally to terminal velocity of 0.5 m/s and assumes ceiling effect.  
 Multiply throw value by 0.7 for installation without ceiling effect.  
 All NR ratings based on room absorption of 8 dB, dampers fully open.



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