

# COLMAN

ENGINEERED AIR DISTRIBUTION

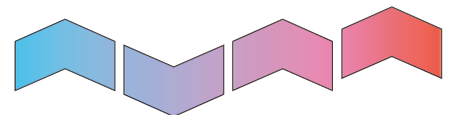
## SWIRL DIFFUSERS DWT SERIES



# DWT

---

SERIES



# SWIRL DIFFUSERS

## DWT SERIES

QUALITY AND EFFICIENCY WITHOUT COMPROMISE

### Application

The DWT Series of swirl diffusers have been designed for the supply of cooled or warmed air to a wide range of commercial applications. A high level of induction is achieved allowing supplied air to mix more thoroughly with room air, closer to the diffuser.

By adjusting the setting of individual radial nozzles different distribution patterns can be created.

A matching extract version is also available without nozzles.

### Description

The diffuser comprises a circular array of black plastic supply nozzles fitted within a square steel panel. Nominal size is determined by the number of nozzles and the overall face size of the diffuser.

All diffuser sizes are available within a 594mm square panel to fit directly into 600mm square T-bar suspended ceiling systems. Smaller nominal sizes may be supplied within 294mm square, 394mm square or 494mm square panels.

The DWT Series diffusers can be supplied with matching side or top entry plenum boxes, with or without perforated volume control dampers.



### Fixing

The DWT Series 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 panel is supplied powder coated white (RAL 9010) gloss as standard. Matt finish is available at no extra cost. Other RAL colours are available on request.

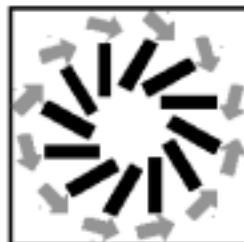
### Distribution Pattern Adjustment Options



External swirl  
pattern  
(Code O)



Internal swirl  
pattern  
(Code S)



One way  
pattern  
(Code D)

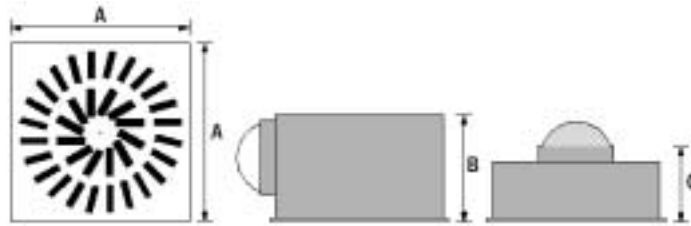


Two way  
pattern  
(Code C)



Without nozzles  
for extract  
(Code X)

## Diffuser Dimensions



Nominal Size code	Number of nozzles	Calculated free area (m <sup>3</sup> )	A Overall panel size (mm)	Plenum size (L & W) (mm)	B Side entry plenum height (mm)	C Top entry plenum height (mm)	Standard Spigot Diameter
1030	9	0.0105	294 × 294	265 × 265	230	150	125
1040	9	0.0105	394 × 394	265 × 265	230	150	125
1050	9	0.0105	494 × 494	265 × 265	230	150	125
1060	9	0.0105	594 × 594	265 × 265	230	150	125
1240	12	0.0140	394 × 394	265 × 265	305	200	200
1250	12	0.0140	494 × 494	265 × 265	305	200	200
1260	12	0.0140	594 × 594	265 × 265	305	200	200
3660	36	0.0396	594 × 594	555 × 555	355	200	250
4860	48	0.0500	594 × 594	555 × 555	420	250	315

## Options and Order Codes

### Diffuser Codes

1 - SERIES	2 - STYLE	3 - CORE	4 - ACCESSORIES	5 - ARRANGEMENT	6 - FIXING	7 - FINISH
<b>D</b>	<b>W</b> <b>1</b>	<b>T</b> Adjustable Pattern <b>1</b> Special	<b>O</b> None <b>1</b> Special	<b>O</b> External swirl <b>S</b> Internal swirl <b>D</b> 1 way <b>C</b> 2 way <b>X</b> Extract <b>1</b> Special	<b>O</b> None <b>1</b> Special	<b>E</b> RAL 9010 Gloss <b>F</b> RAL 9010 Matt White <b>1</b> Special

### Plenum Codes

1 - SERIES	2 - LINING	3 - INSTALLATION METHOD	4 - ACCESSORIES	5 - ARRANGEMENT	6 - SPIGOT TYPE	7 - SPIGOT DIAMETER
<b>D</b>	<b>L</b> Lined <b>N</b> Unlined <b>1</b> Special	<b>T</b> Adjustable pattern c/w supports for drop rods <b>1</b> Special	<b>O</b> None <b>A</b> Perforated cord operated monoblade damper <b>B</b> Perforated cord operated monoblade damper (Matt Black) <b>P</b> Internally painted (Matt Black) <b>1</b> Special	<b>S</b> Supply <b>E</b> Extract	<b>R</b> Round-side entry <b>T</b> Round-top entry <b>1</b> Special	<b>B</b> 125 <b>C</b> 150 <b>D</b> 200 <b>E</b> 250 <b>F</b> 300 <b>N</b> 315 <b>P</b> 280 <b>R</b> 225 <b>T</b> 175 <b>I</b> Special

### Example of Order Codes

**DWTOOOE 3660**  
**DLTASRE 3660**

Supply diffuser complete with lined side entry plenum.  
Perforated volume control damper in 250 diameter spigot.  
Overall diffuser size 594mm square with 36 outlet nozzles.  
Diffuser panel powder coated white (RAL 9010) gloss.

## Performance Data

Number of nozzles	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)
9	50	0.05	4.8	21	0.5	20
	75	0.08	7.1	48	0.8	28
	100	0.10	9.5	85	1.1	33
	125	0.13	11.9	13.4	1.4	37
12	60	0.06	4.3	23	0.6	19
	80	0.08	5.7	41	0.8	24
	100	0.10	7.1	65	1.0	29
	130	0.13	9.3	109	1.3	34
	160	0.16	11.4	166	1.6	38
36	125	0.13	3.2	10	0.7	18
	150	0.15	3.8	14	0.9	21
	175	0.18	4.4	19	1.0	24
	200	0.20	5.1	25	1.2	27
	250	0.25	6.3	39	1.5	31
	300	0.30	7.6	57	1.8	35
	350	0.35	8.8	77	2.2	38
48	175	0.18	3.8	17	0.9	19
	200	0.20	4.3	22	1.1	22
	250	0.25	5.4	35	1.4	27
	300	0.30	6.5	50	1.7	31
	365	0.37	7.9	74	2.1	35
	425	0.43	9.2	100	2.4	38

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 with external pattern (code 0) and 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.



**Air Distribution and Air Handling**

Oldfields Business Park  
 Birrell Street, Fenton  
 Stoke-on-Trent ST4 3ES  
 Telephone: +44 (0)1782 599995  
 Facsimile: +44 (0)1782 332092  
 email: colman.moducel@eaton-williams.com



**Eaton-Williams**

Station Road, Edenbridge  
 Kent TN8 6EG, England  
 Telephone: +44 (0)1732 866055  
 Facsimile: +44 (0)1732 869626  
 www.eaton-williams.com