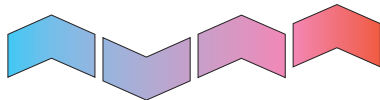


COLMAN[®]

SWIRL DIFFUSERS
DWT SERIES



DWT
SERIES



DISTRIBUTION PATTERNS & FIXING OPTIONS

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 with nozzle inserts.

Description

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

The DWT Series swirl diffusers are available in six standard sizes and four standard styles which will integrate with most types of ceiling systems.

Special styles are available on request.

All swirl diffusers can be supplied with matching side or top entry plenum boxes, with or without mono blade dampers.

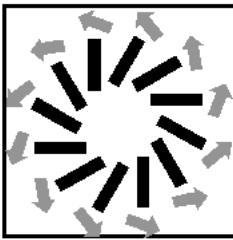
Fixing

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 drop rods or wires to suitable structural support.

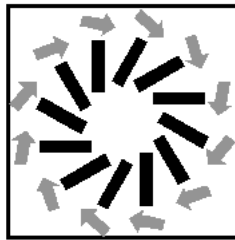
Finish

The diffuser panel is supplied powder coated white (RAL 9010) matt as standard. Other RAL colours are available on request.

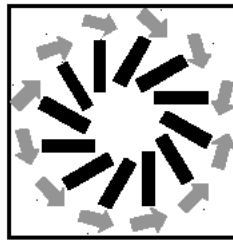
Distribution Pattern Adjustment Options



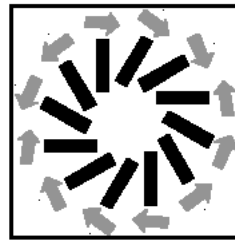
External swirl pattern
(Code O)



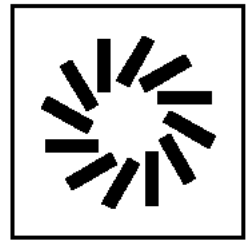
Internal swirl pattern
(Code S)



One way pattern
(Code D)

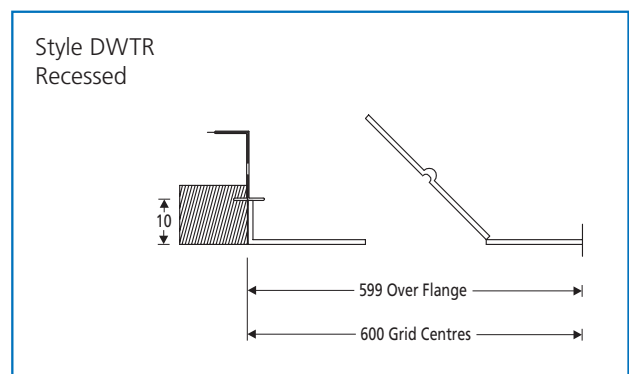
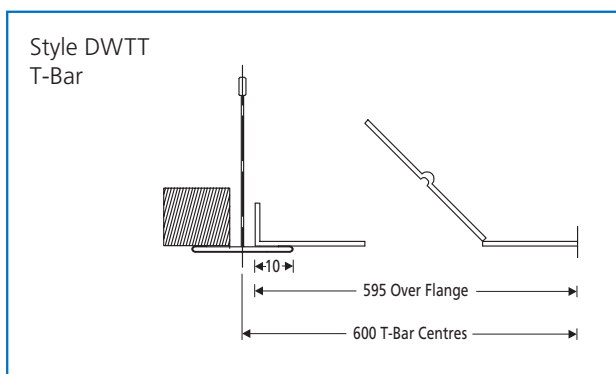
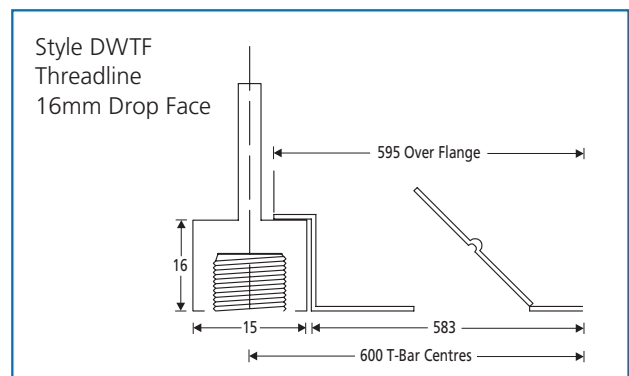
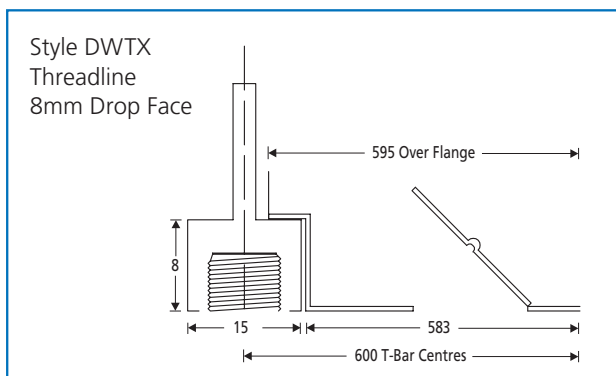


Two way pattern
(Code C)



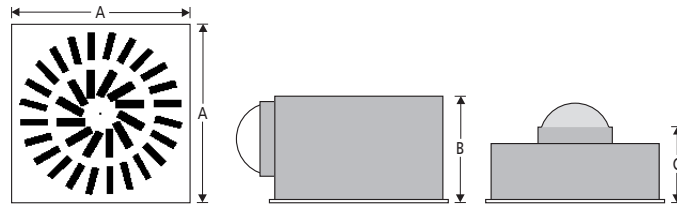
Without nozzles for
extract (Code X)

Alternative Ceiling Fixings



DIMENSIONS, OPTIONS & ORDER CODES

Diffuser Dimensions



Nominal Size Code	Number of Nozzles	Calculated Free Area (m ²)	A Overall Panel Size (mm)	Plenum Size (L & W) (mm)	B Side Entry Plenum Height (mm)	C Top Entry Plenum Height (mm)
0930	9	0.0105	294 × 294	265 × 265	230	250
0940	9	0.0105	394 × 394	265 × 265	230	250
0950	9	0.0105	494 × 494	265 × 265	230	250
0960	9	0.0105	594 × 594	265 × 265	230	250
1240	12	0.014	394 × 394	355 × 355	305	250
1250	12	0.014	494 × 494	355 × 355	305	250
1260	12	0.014	594 × 594	355 × 355	305	250
2050	20	0.0233	494 × 494	355 × 355	305	250
2060	20	0.0233	594 × 594	355 × 355	305	250
2450	24	0.0278	594 × 594	395 × 395	305	250
2460	24	0.0278	594 × 594	395 × 395	305	250
3660	36	0.04	594 × 594	555 × 555	355	250
4860	48	0.05	594 × 594	555 × 555	420	250

Options and Diffuser Order Codes

1. SERIES	2. STYLE	3. CORE	4. ACCESSORIES	5. ARRANGEMENT	6. FIXING	7. FINISH
D	W Swirl 1 Special	T Adjustable pattern 1 Special	T T-bar mounted X Threadline mounting 8mm drop face F Threadline mounting 16mm drop face R Recessed mounting 1 Special	O External Swirl S Internal Swirl D 1 way C 2 way X Extract 1 Special	O None C Central screw fixing 1 Special	F RAL 9010 matt white E RAL 9010 gloss white 1 Special

Options and Plenum Order Codes

1. SERIES	2. LINING	3. INSTALLATION METHOD	4. ACCESSORIES	5. ARRANGEMENT	6. SPIGOT TYPE	7. SPIGOT DIAMETER
D	L Lined N Unlined 1 Special	T Adjustable pattern c/w supports for drop rods 1 Special	O None A Cord operated monoblade damper B Cord operated monoblade damper (matt black) P Internally painted (matt black) 1 Special	S Supply E Extract	R Round — Side entry T Round — Top entry 1 Special	B 125 C 150 D 200 E 250 F 300 N 315 P 280 R 225 T 175 1 Special

Example of Order Codes

Diffuser Code: **DWTTOCF 3660**
Plenum Code: **DLTASRE 3660**

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

PERFORMANCE DATA

Number of Nozzles	Volume (m³/s)	Volume (l/s)	Face Velocity (m/s)	Pressure Drop (Pa)	Throw to 0.5 m/s Velocity (m)	Noise Rating (NR)
9	0.030	30	2.86	7	0.4	9
	0.040	40	3.81	12	0.4	18
	0.050	50	4.76	18	0.5	22
	0.075	75	7.14	44	0.8	29
	0.100	100	9.52	75	1.1	35
12	0.040	40	3.81	3	0.4	13
	0.050	50	4.76	4	0.5	17
	0.060	60	4.29	15	0.6	20
	0.080	80	5.71	26	0.8	25
	0.100	100	7.14	39	1	29
	0.130	130	9.29	68	1.3	34
20	0.065	65	2.79	6	0.6	14
	0.075	75	3.22	6	0.6	17
	0.100	100	4.29	12	0.8	23
	0.130	130	5.58	24	0.9	25
	0.160	160	6.87	32	1.2	30
	0.180	180	7.73	44	1.4	35
24	0.075	75	2.70	6	0.5	13
	0.100	100	3.60	10	0.7	18
	0.130	130	4.68	15	0.8	23
	0.150	150	5.40	21	1	26
	0.200	200	7.19	34	1.3	32
	0.250	250	8.99	68	1.7	36
36	0.080	80	2.00	4	0.4	9
	0.100	100	2.50	6	0.6	14
	0.130	130	3.25	9	0.8	18
	0.150	150	3.75	12	0.9	23
	0.180	180	4.50	15	1	26
	0.200	200	5.00	20	1.2	27
	0.250	250	6.25	35	1.5	32
	0.300	300	7.50	48	1.8	35
	0.350	350	8.75	69	2.2	42
48	0.180	180	3.60	14	0.9	19
	0.200	200	4.00	13	1.1	22
	0.250	250	5.00	16	1.4	27
	0.300	300	6.00	25	1.7	31
	0.370	370	7.40	47	2.1	35
	0.430	430	8.60	65	2.4	38

Performance figures are for diffusers only and assume supply air temperature -10°C to $+10^{\circ}\text{C}$ relative to room temperature.

Throw value is measured horizontally to terminal velocity of 0.5m/s with external pattern (code 0) and ceiling effect.

Pressure drop given is static pressure for diffuser only, when used with a plenum box the following corrections are applied
– Supply unit $\text{Ps} \times 2.2$, NR +5.

Multiply throw values by 0.7 for installation without ceiling effect.

All NR ratings are based on room absorption of 8db, dampers fully open.



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We reserve the right to alter specifications without notice and products will sometimes be supplied with modifications which do not strictly comply with the descriptions and illustrations in this publication.

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