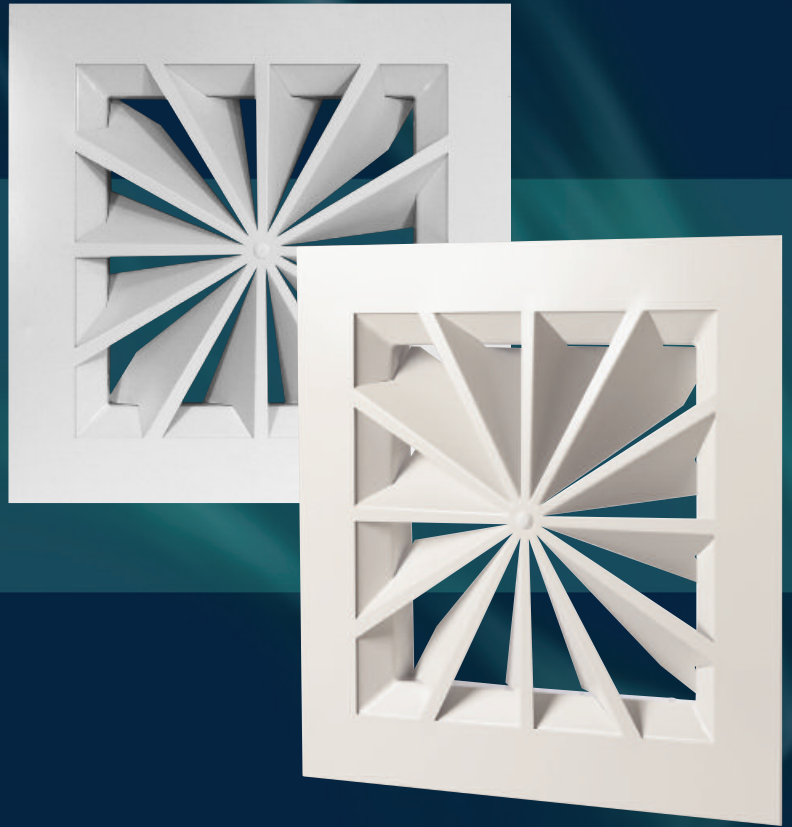


## Twister Ceiling Swirl Diffusers



High Performance

High Induction

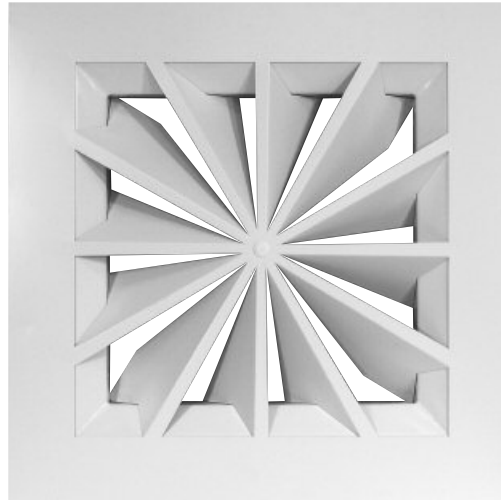
Round Neck

### "Twister" Ceiling Swirl Diffusers

- High Performance
- High Induction
- Round Neck

#### Model:

TWR Steel



The **Advanced Air Model Series TWR "Twister" Stamped Square Ceiling Diffuser** is a high performance ceiling diffuser that is ideal for VAV applications. The name "Twister" is given to this diffuser because of its tight horizontal 360° swirl air pattern. The contemporary architectural radial vane design produces an unmatched high induction swirl pattern engineered to optimise occupant comfort by minimising stratification over a wide range of air volumes. The "Twister's" superior coanda effect air pattern eliminates dumping and is ideal for VAV applications.

The diffuser features the popular 600mm x 600mm module size and is available with frame/border styles to suit all ceiling systems. The round neck design includes a 50mm high collar for an easy, secure connection.

#### Features:

- Constructed from corrosion-resistant steel.
- Stamped face design allows for uniformity of the radial vanes.
- Superior coanda effect air pattern, eliminates dumping and is ideal for VAV applications.
- 600mm x 600mm ceiling module size available with frame/border types to suit all ceiling systems.
- Engineered 'swirl' air diffusion pattern.
- Designed for 28 – 350 l/s; available in five neck sizes 150mm – 350mm.
- High neck collars for solid connection.
- Removable plug for screwdriver adjustment of the optional damper from below the face.

#### Material:

Corrosion-resistant steel.

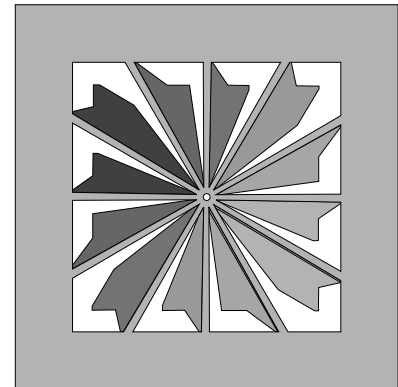
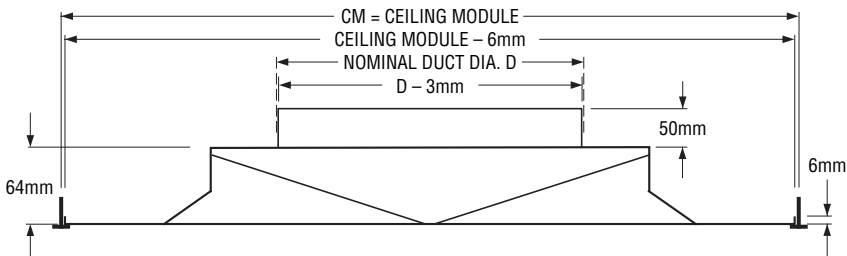
#### Finish:

AW Appliance White polyester powder finish RAL 9010 semi-gloss as standard. Other finishes are also available.

## Dimensional Data and Frame Types

### Model TWR

#### Type L Lay-in T-Bar Frame

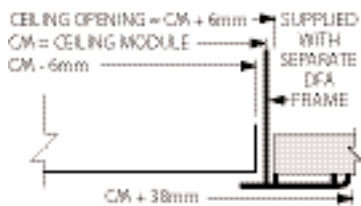


FACE VIEW

#### DIMENSIONAL DATA:

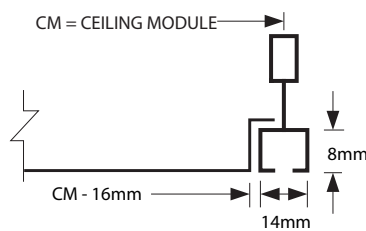
CEILING MODULE CM (mm)	NOMINAL DUCT SIZE (mm)
600 x 600	150, 200, 250, 300, 350

#### Type L Surface Mount with DFA

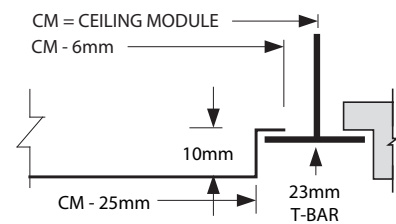


Drywall/Plaster Frame. Recommended for flexible duct and ceiling access.

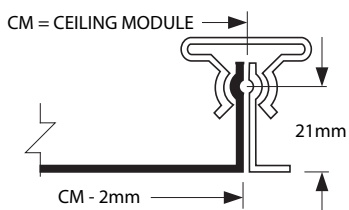
#### Type F Fineline®



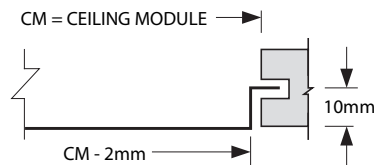
#### Type TL Tegular Lay-in



#### Type M Metal Pan (Snap-in)



#### Type SP Spline

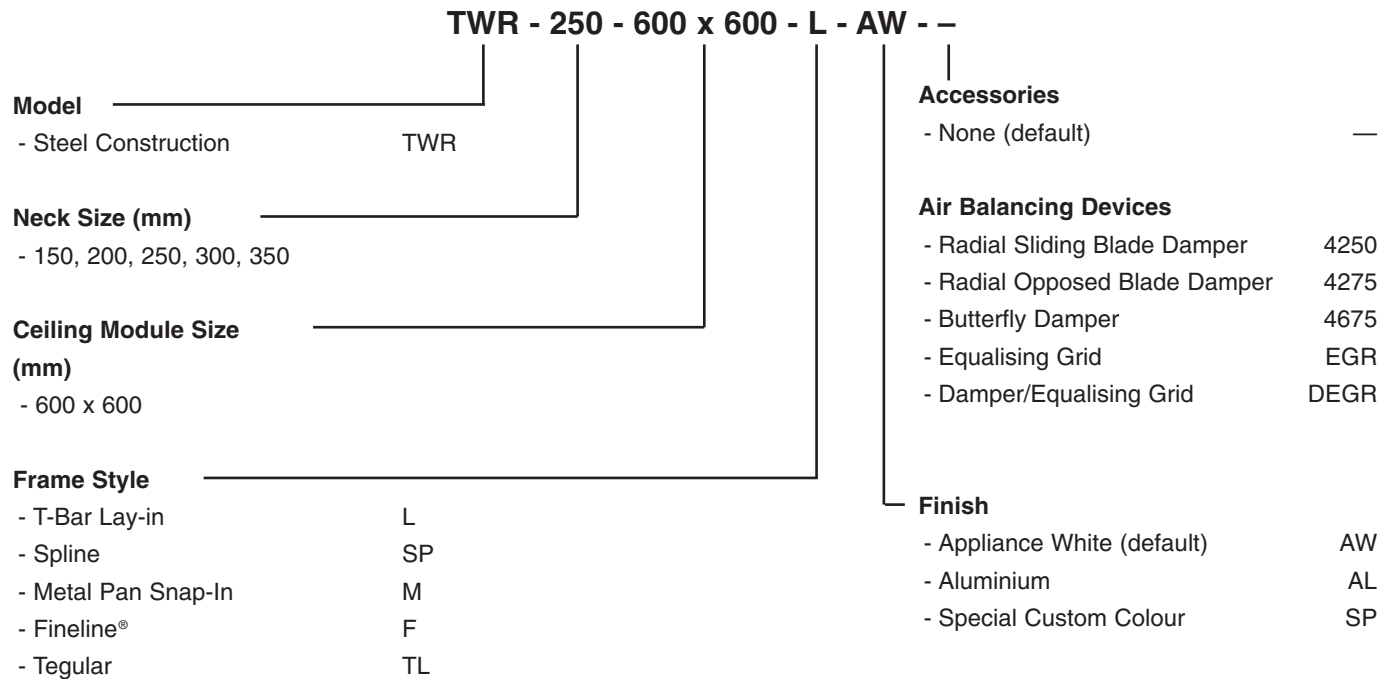


For one directional exposed T-bar or fully concealed grid. One spline on two opposite sides, steel lift bracket on others.

### How To Specify or To Order

(Show complete Model Number and Size, unless "Default" is desired)

#### "Twister" Square Ceiling Swirl Diffuser – Model TWR



#### Suggested Specification:

Supply and install **Advanced Air Model TWR "Twister" Ceiling Swirl Diffusers** of the sizes and capacities as shown on the plans and air distribution schedules. The diffuser shall be manufactured from heavy gauge corrosion-resistant steel. Radial induction vanes shall be one-piece stamped construction. The diffuser is to be sized to suit a 600mm x 600mm ceiling suspension system. The round duct connection collar shall be an integral part of the diffuser assembly, and be not less than 50mm high. The diffuser shall have a removable plug for screwdriver adjustment of the optional damper. The finish shall be AW Appliance White polyester powder finish RAL9010 semi-gloss (optional finishes are available).

## Performance Data

### Model TWR "Twister" • 600 x 600 Module

Nominal Neck Size	Neck Velocity, (m/s)	1.5	2	2.5	3	3.5	4	4.5	5	6	7	8
150 Dia.	Pressure Drop (Pa)	4	7	10	15	20	25	33	40	53	78	103
	Flowrate (l/s)	28	38	47	57	140	76	85	94	111	130	149
	Throw (m)	0.3 - 0.9	0.6 - 1.2	0.9 - 1.5	0.9 - 1.8	1.2 - 2.1	1.2 - 2.4	1.5 - 2.7	1.5 - 3	1.8 - 3.3	2.1 - 3.3	2.4 - 3.6
	NC Level	—	—	—	—	—	16	20	24	30	35	38
200 Dia.	Pressure Drop (Pa)	4	7	10	15	20	27	34	42	60	82	107
	Flowrate (l/s)	50	66	83	99	116	132	149	165	198	231	264
	Throw (m)	0.9 - 1.5	1.2 - 2.1	1.5 - 2.7	1.5 - 3.0	1.8 - 3.3	2.1 - 3.3	2.4 - 3.6	2.7 - 3.6	3.0 - 4.2	3.0 - 4.5	3.3 - 4.8
	NC Level	—	—	—	—	17	22	25	29	34	38	40
250 Dia.	Pressure Drop (Pa)	4	7	11	15	21	28	35	43	66	85	110
	Flowrate (l/s)	78	104	127	156	179	205	231	257	309	361	411
	Throw (m)	1.5 - 2.7	1.5 - 3.0	2.1 - 3.3	2.4 - 3.6	2.7 - 3.9	3.0 - 4.2	3.0 - 4.8	3.3 - 5.4	3.3 - 5.7	3.6 - 6.0	4.8 - 6.6
	NC Level	—	—	—	16	22	27	31	34	39	44	48
300 Dia.	Pressure Drop (Pa)	4	7	11	16	21	28	35	44	70	86	112
	Flowrate (l/s)	111	149	184	222	260	297	333	370	467	519	592
	Throw (m)	1.8 - 3.0	2.1 - 3.6	2.4 - 4.2	3.0 - 4.8	3.3 - 5.4	3.6 - 5.4	3.9 - 6.0	4.2 - 6.3	5.1 - 7.2	6.0 - 8.1	6.9 - 9.0
	NC Level	—	—	—	20	25	30	34	37	43	48	53
350 Dia.	Pressure Drop (Pa)	4	7	11	16	22	29	36	45	74	88	115
	Flowrate (l/s)	151	201	250	300	352	401	451	500	599	703	800
	Throw (m)	2.1 - 3.6	2.7 - 4.5	3.0 - 5.1	3.6 - 5.4	4.2 - 6.3	4.8 - 6.6	5.1 - 7.2	6.3 - 8.1	7.2 - 9.3	8.4 - 10.5	9.3 - 12.0
	NC Level	—	17	24	30	34	38	41	44	50	54	57

**Performance Notes:**

1. Throws are given at 0.5 and 0.25 m/s terminal velocities, under isothermal conditions.

2. NC (Noise Criteria) values are based on 10 dB room absorption, re 10<sup>-12</sup> watts. Dash (-) in spaces indicates an NC level of less than 15.

3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 1991.