

TWSa Twister Ceiling Swirl Diffuser - Adjustable Blades

Twister Swirl Diffuser - Adjustable Blade (data p74d-e)

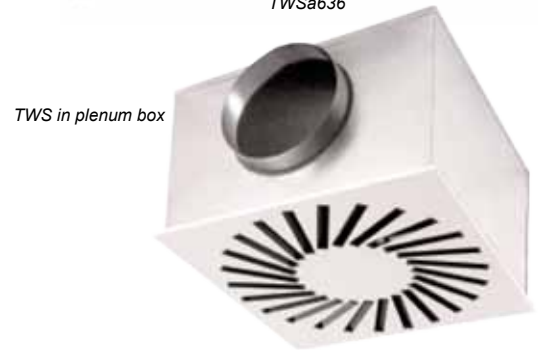
Code	Face size (mm)	Blade100	Blade 150
TWSa308	300 x 300	8	0
TWSa516	500 x 500	16	0
TWSa616	600 x 600	16	0
TWSa624	600 x 600	0	24
TWSa636	600 x 600	18	18
TWSa648	600 x 600	48	0

Smooth-Air's range of high performance adjustable TWS ceiling swirl diffusers have been designed to deliver the high air change rates required to meet the demand of high loads.

The circular pattern of deflection vanes creates an effective swirl motion that has excellent entrainment and provides the highest level of occupancy comfort.



TWSa636



TWS in plenum box

Features

- Available in 6 standard sizes
- High air volume capability
- Lightweight
- Available with top or side entry plenum
- Low noise level
- Special face sizes available on request

Construction

All units are constructed from steel with PVC components and are available with a matching range of top or side entry plenum boxes. Volume control can be achieved with a damper mounted within the plenum inlet spigot.

Range & Air Patterns

Swirl diffusers are available in three standard ceiling module sizes (300, 500 & 600) as per dimensional table. Custom sizes are also available. The blades can be adjusted to any angle. This allows the air pattern to be changed for example if the diffuser is positioned close to the wall.

Plenum Boxes

The plenum boxes for supply diffusers can be supplied with a perforated plate to ensure an even airflow across the diffuser blades. There is the option of top entry or side entry spigots which can be supplied with an optional volume control damper with a hand locking quadrant or cord operated that can be adjusted through the diffuser blades.

Finish

The standard diffuser finish is Polyester Powder White RAL 9010 semi-gloss with white deflection blades. Other panel colours are available on request as well as the option of white deflection blades.

Performance

The tabulated performance data for each listed size of diffuser is based on cooling and heating applications. Pressure drop is stated in pascals (N/m²). Throws stated are to a terminal velocity of 0.5m/s and used as a maximum value will give a velocity of less than 0.25m/s within the occupied space. Noise levels are based on the peak values on NR curves.

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Due to a policy of continuous development, prices and specifications are subject to change without notice.

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TWSa Twister Ceiling Swirl Diffuser (continued) Adjustable Blade

Model: TWSa

Materials: Pressed Steel, 1mm thick

Product features:

- High induction ratio square swirl diffusers are designed for CAV/VAV applications and for an air flow ranging from 100% to 25%
- Can be used for cooling and/or heating in CAV/VAV systems with temperature differences of up to 11°C and high air change rates.
- Can be used for supply or extract
- Adjustable blades
- Minimum mounting height between floor and diffuser face is 2.6m
- Cushion boxes of TD panel are available with top or side entry spigot and with or without internal acoustic insulation
- RAL colours available

Code	Performance - Total Pressure Loss / Noise Level - Pa / dB(A)												by Flow rate l/s
	20 l/s	25 l/s	30 l/s	40 l/s	45 l/s	50 l/s	70 l/s	100 l/s	125 l/s	150 l/s	200 l/s	250 l/s	
TWSa-300/8	5 / <20	9 / <20	15 / <20	25 / <27	x	35 / 38	x						
TWSa-500/24							10 / 22	20 / 33	x	x	70 / 50	x	170 / 70
TWSa-600/24								9 / 11	14 / 26	20 / 33	33 / 42	55 / 47	80 / 55
TWSa-600/48								7 / <20	9 / 20	13 / 25	25 / 35	50 / 46	90 / 50



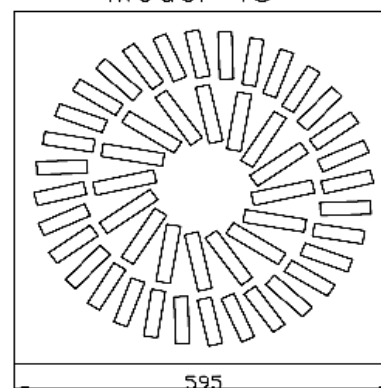
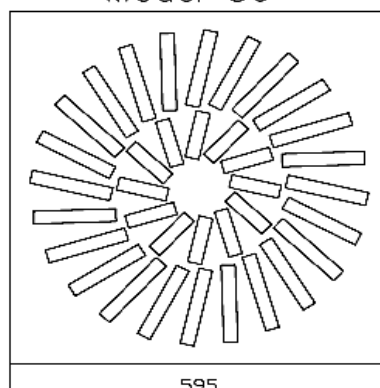
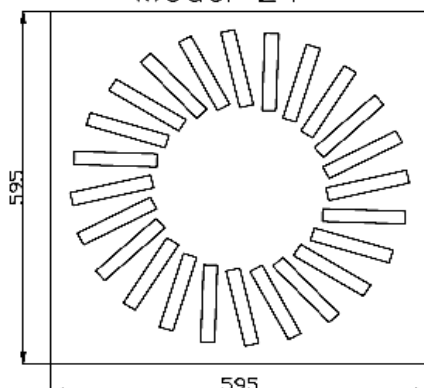
Model 24



Model 36



Model 48



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Performance Data

Based on diffuser with side entry cushion box and open damper, terminal velocity (V_t) is 0.37m/s and 1.8m from the floor.

Installation Height of Velocity

Velocity	m/s	2	3	4	5	6	8	9	10	12
Installation Height	min	2.6	2.7	2.8	2.9	3	3.1	3.2	3.3	3.4
	max	3.3	3.4	3.4	3.5	3.6	3.7	3.9	1	4.1

Performance Data SW-...24A

Delivery velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure drop	Pa	7	14	23	35	48	79	97	117	161
Air flow	l/s	72	108	144	180	215	289	324	360	433
Throw	m	0.6	0.9	1.2	1.5	1.8	2.4	2.7	3	3.6

Performance Data SW-...36A

Delivery velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure drop	Pa	7	14	23	34	47	79	96	116	160
Air flow	l/s	93	140	186	233	279	373	419	466	559
Throw	m	0.7	1.1	1.4	1.8	2.2	2.9	3.2	3.6	4.3

Performance Data SW-...48A

Delivery velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure drop	Pa	7	14	23	34	47	78	96	116	160
Air flow	l/s	100	150	200	250	300	400	450	500	600
Throw	m	0.8	1.1	1.5	1.9	2.3	3.1	3.5	3.9	4.6



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