



Swirl Diffusers



Our Product Ranges

Dampers

- 1 Fire Dampers
- 2 Fire / Smoke Dampers
- 3 Volume Control Dampers
- 4 Motorized Control Dampers
- 5 Pressure Relief Dampers /Non Return Dampers

Variable Air Volumes

- 6 Pressure Independent VAV
- 7 Constant Air Volume VAV
- 8 By Pass VAV

Louvers

- 9 Sand Trap Louvers
- 10 Acoustic Louvers
- 11 Stationery Louvers / Architectural Louvers
- 12 Storm Louvers
- 13 Weather Louvers

Sound Attenuators

- 14 Rectangular Sound Attenuators
- 15 Circular Sound Attenuators
- 16 Crosstalk Attenuators

Electric Duct Heaters

- 17 Flange & Slip 'n' Type
- 18 Modulating & On/Off Type

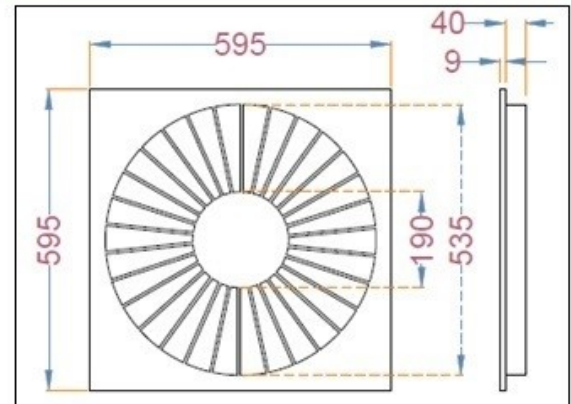
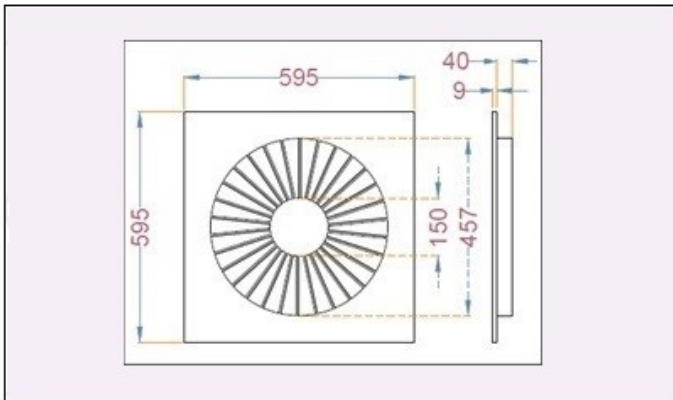
Air Outlets

- 19 Registers & Grilles
- 20 Diffusers (Linear Diffusers, Sq. & Rect. Ceiling Diffusers, Round Diffusers, Jetflow Diffusers)
- 21 Swirl Diffusers & Disc Valves
- 22 Drum Louvers

Model : AHS 100 SWF

Airwellcare range of Swirl Diffusers are designed to produce swirling, turbulent throw for most useful in environments, where supplied and resident air need to be mixed quickly.

The fixed air pattern swirl diffusers have a horizontal discharge and are suitable for minimum mounting heights of 2.6 meters to a maximum of 4.5 meters at a temperature difference of $\pm 10^{\circ}\text{K}$.



Standard Construction Details

Frame

Frame is made of 18 Gauge / 16 Gauge high quality Aluminium

Finish

Standard Powder Coated finish as per RAL 9010. Optional Colours are available upon request.

Core

Fixed and Non Removable

Mounting

Mounted in Ceiling and Ducts

Optional Construction

1. Swirl Diffusers fixed in Plenum Box made of 20 Gauge or 22 Gauge Galvanized Steel with Standard Neck Dia 250 mm.
2. Plenum Box with $\frac{1}{2}$ " internal Acoustic Liners

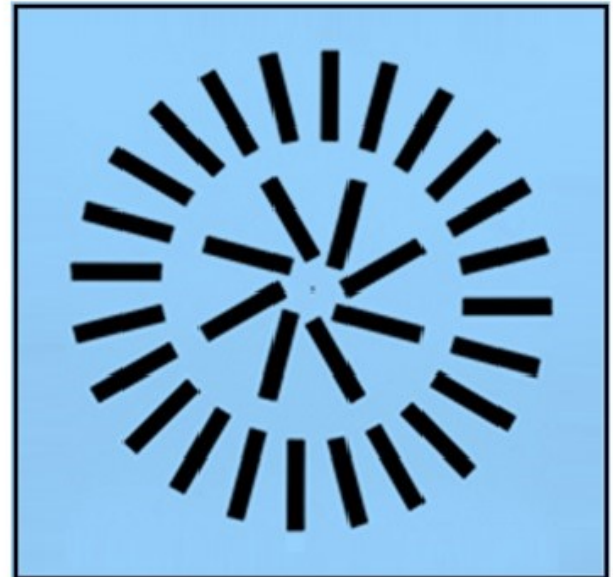
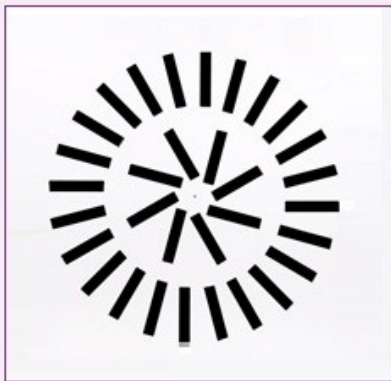
Weight

The weight of 600 x 600mm Aluminium Swirl Diffuser will be approx. 3.4 Kgs.

Model : AHS 100 SWA

Airwellcare range of Swirl Diffusers are designed to produce swirling, turbulent throw for most useful in environments, where supplied and resident air need to be mixed quickly.

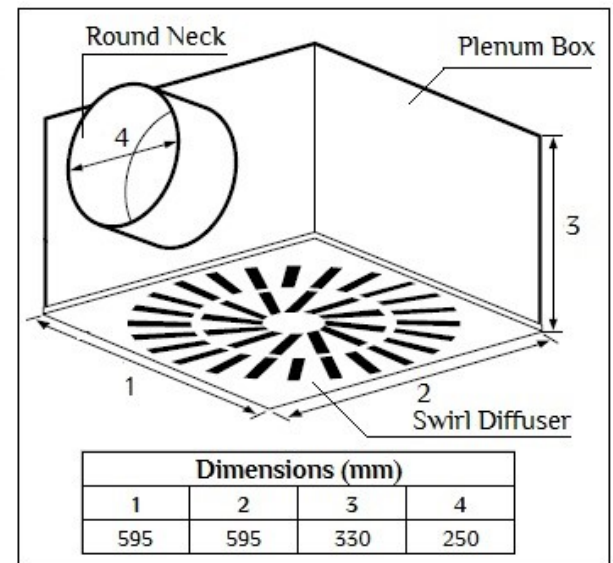
It is designed to create a rotary swirling motion to the supply air discharge, which rapidly induces the room air to quickly reduce the velocity and temperature difference of the supply air. These diffusers have been remarkably proved in performing in such places, where excessive draughts would cause discomfort. It is mostly suitable for offices, airport terminals and other areas, where people may be present for an extended period of time.



Standard Construction Details

Frame

Frame is made of 18 Gauge / 16 Gauge high quality Aluminium



Diffuser Blades

Diffusers are supplied with easily rotatable plastic blades.

Finish

Standard Powder Coated finish as per RAL 9010. Optional Colours are available upon request.

Optional Construction

1. Swirl Diffusers fixed in Plenum Box made of 20 Gauge or 22 Gauge Galvanized Steel with Standard Neck Dia 250 mm.
2. Plenum Box with ½" internal Acoustic Liners

Weight

The weight of 600 x 600mm Aluminium Swirl Diffuser will be approx. 3.4 Kgs.



Engineering Guidelines

Adjustable Swirl Diffusers, Model AHS 100 SWA

Airflow in CFM	190	240	285	336	382	424	473	519	575
Airflow in M ³ /Sec.	0.090	0.113	0.135	0.159	0.180	0.200	0.223	0.245	0.271
Face Velocity in M/sec.	2.12	2.49	3.1	3.3	4	4.45	5.1	5.7	6.2
Throw (Meters)	1.4 - 2.2	2.0 - 2.8	2.3 - 3.5	2.7 - 3.8	2.7 - 4.5	3.2 - 4.8	3.8 - 5.5	4.4 - 6.3	5.2 - 7.0
Pressure Loss in mm of H ₂ O	0.39	0.70	0.98	1.32	1.70	2.10	2.51	3.01	3.63
NC	< 12	< 15	20	25	28	33	35	40	47

Note : Module Size is based on 600 x 600 mm (Outer Size) with Plenum Box Neck Dia 250mm.

1. Neck Velocities are measured in M/sec.
2. Static Pressure Loss across the diffuser in mm of H₂O
3. Throw is measured in Meters, based on terminal velocities of 0.75, 0.5 & 0.25 m/sec.
4. NC (Noise Criteria) is based on a room attenuation of 10 dB.

Fixed Swirl Diffusers, Model AHS 100 SWF

Airflow in CFM	220	272	322	375	431	482	540	592	638
Airflow in M ³ /Sec.	0.104	0.128	0.152	0.177	0.203	0.228	0.255	0.279	0.301
Face Velocity in M/sec.	2.15	2.6	3.12	3.6	4.2	5.6	5.3	5.8	6.3
Throw (Meters)	1.0 - 1.9	1.5 - 2.2	1.8 - 2.6	2.2 - 3.0	2.5 - 3.6	2.8 - 4.1	3.3 - 4.6	4.0 - 5.1	4.2 - 6.0
Pressure Loss in mm of H ₂ O	0.33	0.61	0.10	1.20	1.45	1.84	2.20	2.70	3.50
NC	18	19	23	29	31	37	41	45	49

Note : Module Size is based on 600 x 600 mm (Outer Size) with Plenum Box Neck Dia 250mm.

1. Neck Velocities are measured in M/sec.
2. Static Pressure Loss across the diffuser in mm of H₂O
3. Throw is measured in Meters, based on terminal velocities of 0.75, 0.5 & 0.25 m/sec.
4. NC (Noise Criteria) is based on a room attenuation of 10 dB.



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