Supply Ceiling Diffusers
Model : AWC CDS-4 Fourway

Construction Details

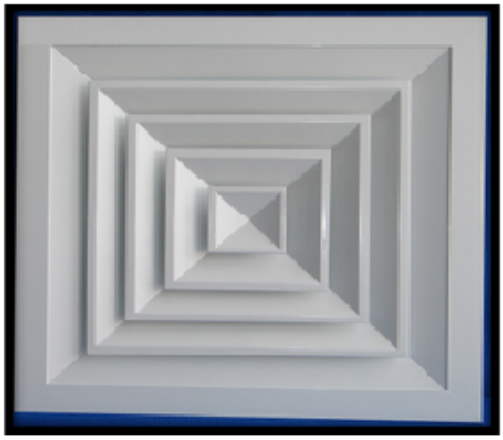
Frame and core

Airwellcare Diffusers constructed with High quality extruded Aluminum Profiles with the Flange width of 33mm.

Damper frame and core

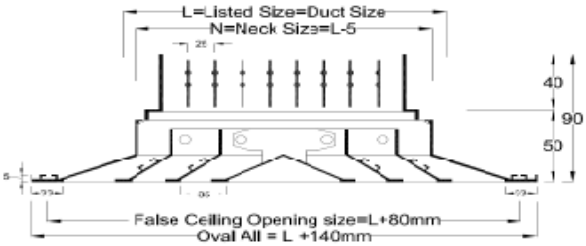
High quality extruded aluminium profile with natural aluminium finish.

Black matt finish is optional.



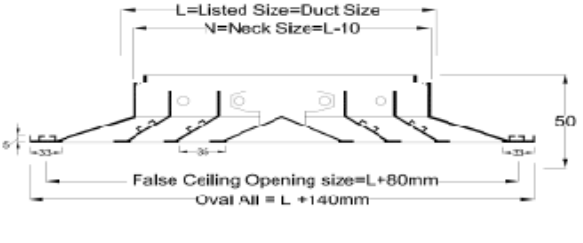
- **The frame and blades** are of high quality extruded corrosion resistant aluminium profile.
- **The Core** of louvered type is fixed to the frame by the help of Aluminium pins and steel springs, which is easily removable to allow for optimum flexibility in installation, maintenance and damper adjustments.
- **Bushes** are of Nylon and properly positioned in the frame through which the damper blade pass through, to provide rattle free smooth operations.
- **Damper fit rigidly** to the frame by the help of Aluminium Rivets Fixing with spring clips is optional.
- **Opposed blade damper** is screw operated from the face opening of the Diffuser.
- **Foam Gasket (Optional)** can be provided all around the back of frame, to prevent the leakage of air.
- **The Air is distributed** equally in Four horizontal directions.
- **Rectangular sizes / Non Standard Sizes** are available as per choices and as optional.
- **Powder coated finish** as per RAL Colour codes.

Supply Air Square Ceiling Diffuser
(Four Way Throw)



For Return Ceiling Diffusers, Model AWC CD-R 4
(Without Opposed Blade Damper)

Return Air Square Ceiling Diffuser
(Four Way Throw)



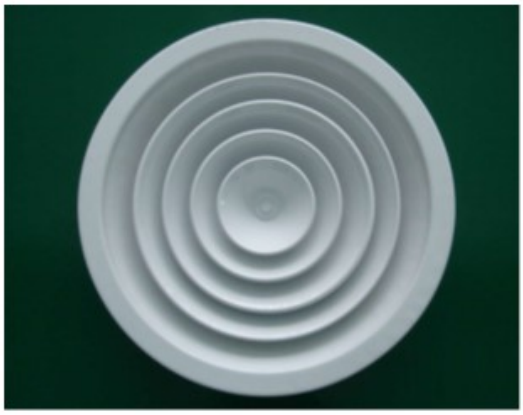
Circular Diffusers
Model : AWC CD-S

Construction Details

Frame and core

Airwellcare Round Diffusers are constructed with :

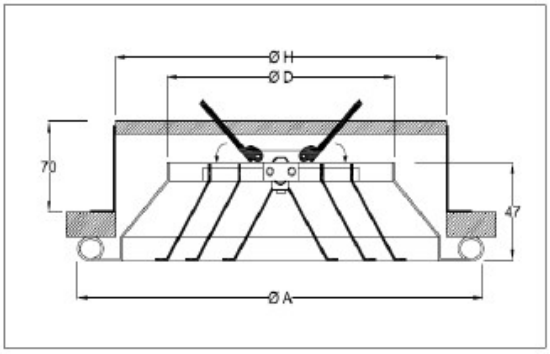
- High Quality Aluminum.
- With Removable Core.
- With Butterfly Damper.
- The frame and inner cones are constructed with high quality Aluminium Sheet.
- The Butterfly Damper can easily be adjusted through the face of the Diffuser by rotating the Screw.



- The diffuser can be used for ceiling or exposed duct mounting.
- **Foam Gasket (Optional)** can be provided all around the back of frame, to prevent the leakage of air.

Finish

- Powder coated color finish as per RAL Colour



For Return Circular Diffuser,
Model : AWC CD-R
(Without Butterfly Damper)

Model	Neck Dia (mm)	Dimensions (mm)		
		A	D	H
CD-R	150	257	148	220
CD-R	200	309	198	271
CD-R	250	362	249	324
CD-R	300	415	298	377
CD-R	350	460	348	411

Standard Construction Details

Drum Louver
Model : AWC DL-1

Frame
1.5mm Thick Extruded Aluminium Profiles

Blade
Extruded Aluminium Adjustable blades

Damper
High quality extruded Aluminium Opposed Dampers

Drum
Drum is made of Aluminium Sheets with aesthetically designed extruded profile shapes.

Specification

- Blades are fixed inside the drum body made with aluminium sheets and specially shaped profiles and the opposed blade damper is attached to the drum body.
- The hole assembly is fixed to the frame by mechanical fasteners so as to enable rotation in the vertical direction.
- The louver is suitable for both long and short throw patterns with trajectory control.
- The drum can be adjusted in the vertical direction 0° to 30° upwards or downwards to direct the throw on the desired direction.
- Foam Gasket is sealed around the back of the frame to prevent air leakage and for an air tight operations.

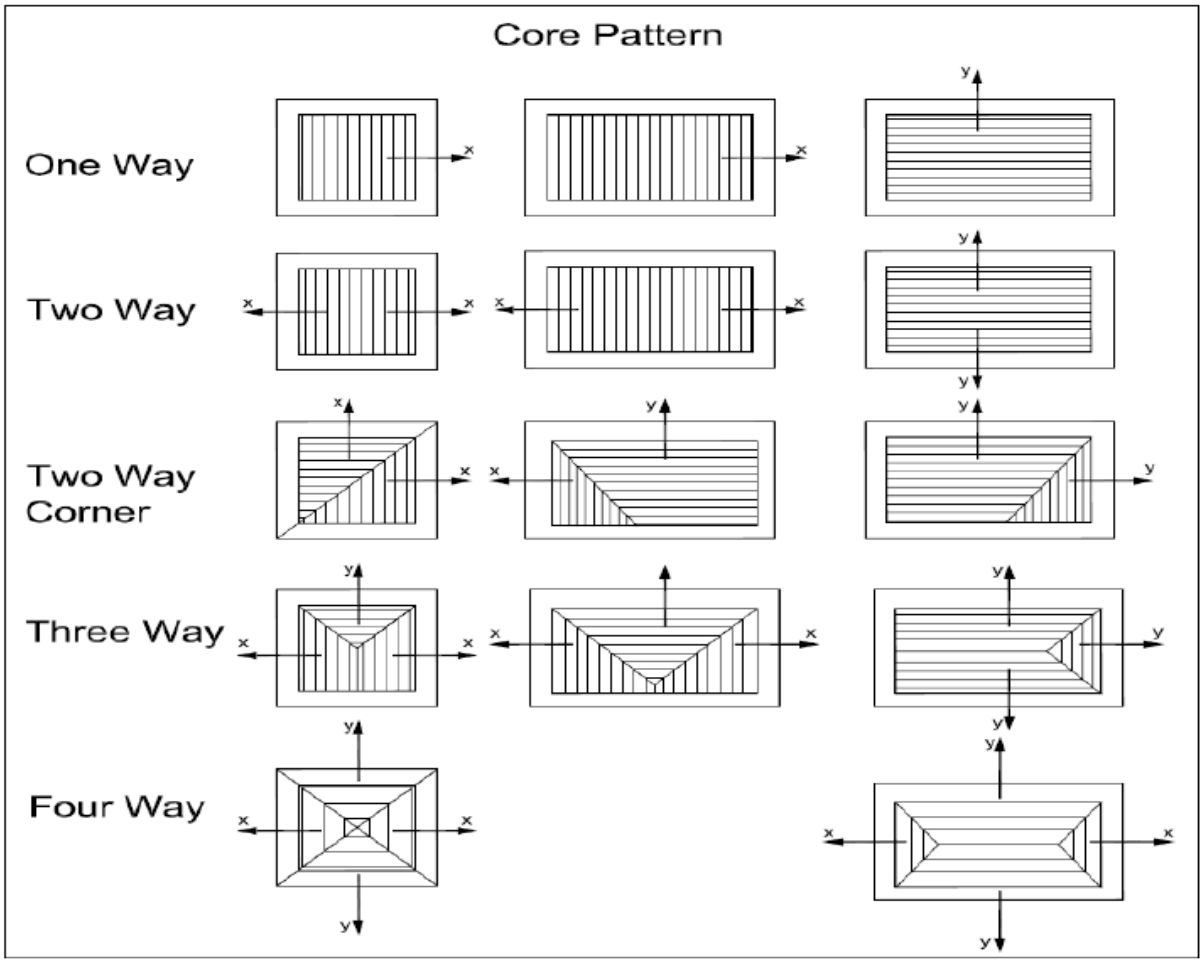
Features

- Adjustable Vanes within a rotatable Drum.
- Drum is adjustable through 30 degrees, with positive detent mechanism to fix drum angle setting.
- Ideal solution for air movement in shopping malls, industrial plants, arenas, stadiums or any large enclosed space.

Finish & Colour
Standard Powder Coating finish as per RAL Colour Codes.

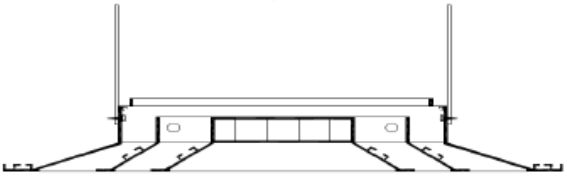
Ceiling Diffusers

Air Pattern **Square** **Rectangular**



Diffuser Size (Width x Depth mm) / Duct Size (mm)	150x150	225x225	300x300	375x375	450x450	525x525	600x600
False Ceiling Opening Size (mm)	230x230	305x305	380x380	455x455	530x530	605x605	680x680

Fixing Detail



Concealed screw fixing from neck of the diffuser to the duct after removing the inner core.

Engineering & Performance Data

Supply And Return Air Diffuser Four way

Neck Size (mm) Area factor in M^2	Neck Vel. (M/sec)	1.0	1.5	2.0	2.5	3.0	3.5
150 x 150	CFM	47	72	95	119	144	167
	M3/Sec	0.023	0.034	0.045	0.056	0.068	0.079
	Pt.	0.020	0.030	0.060	0.100	0.140	0.180
0.0095	Throw	1.2-1.8-2.4	1.8-2.4-3.1	2.4-3.1-3.7	2.7-3.4-4	3.1-3.7-4.6	3.4-4.3-4.9
	NC	<15	16	21	27	34	39
225x225	CFM	108	161	214	269	322	375
	M3/Sec	0.051	0.076	0.101	0.127	0.152	0.177
	Pt.	0.020	0.039	0.080	0.120	0.170	0.230
0.0172	Throw	1.2-1.8-2.4	1.8-2.4-3.4	2.4-3.1-4.3	3.1-4.3-5.5	4-5.5-7.3	5.5-6.7-9.1
	NC	<15	17	24	30	36	41
300x300	CFM	191	286	381	476	572	667
	M3/Sec	0.09	0.135	0.18	0.225	0.27	0.315
	Pt.	0.020	0.050	0.090	0.150	0.210	0.290
0.028	Throw	2.1-3.1-4.9	3.1-4.3-6.1	4.0-4.9-7.3	4.6-5.8-7.9	4.9-5.8-9.1	5.5-6.7-9.8
	NC	<15	17	26	33	38	43
375x375	CFM	299	447	595	745	893	1042
	M3/Sec	0.141	0.211	0.281	0.352	0.422	0.492
	Pt.	0.030	0.060	0.100	0.160	0.230	0.320
0.044	Throw	2.4-3.7-5.5	4.0-5.5-7.6	5.2-6.1-8.8	5.8-7-10.1	6.1-7.6-11.3	6.7-8.2-12.2
	NC	<15	18	28	35	40	44
450x450	CFM	430	644	858	1071	1287	1501
	M3/Sec	0.203	0.304	0.405	0.506	0.608	0.709
	Pt.	0.030	0.060	0.110	0.180	0.260	0.360
0.067	Throw	3.1-4.6-7.6	4.6-6.4-9.1	5.6-7.6-10.7	6.7-8.5-12.2	7.6-9.2-13.4	8.2-10.1-14
	NC	<15	20	30	36	41	44
525x525	CFM	585	875	1165	1461	1757	2033
	M3/Sec	0.276	0.413	0.55	0.69	0.83	0.96
	Pt.	0.030	0.070	0.120	0.190	0.270	0.330
0.095	Throw	3.7-5.2-8.5	5.2-7.6-11	7.0-8.5-12.5	7.9-9.8-14	8.5-11-15.9	9.5-11.6-16.8
	NC	15	23	32	37	42	45
600x600	CFM	762	1143	1524	1906	2287	2668
	M3/Sec	0.36	0.54	0.72	0.9	1.08	1.26
	Pt.	0.030	0.070	0.120	0.190	0.270	0.330
0.133	Throw	4-5.8-10.4	5.8-8-12.2	7.6-10-14.3	8.5-11.3-16.1	9.4-12.5-18	10-13.4-19.5
	NC	16	26	33	38	42	45

- Neck velocity is Measured in M/Sec.
- Pt : Static Pressure Loss across the Diffuser in Inch of H_2O
- Throw (Meters) is measured for the terminal Velocities of 0.75, 0.5 & 0.25 M/sec.
- Noise Criteria (NC) is based on Room Attenuation of 10 dB.

Engineering & Performance Data

Supply And Return Air Round Diffuser

Neck Dia (mm)	Neck Vel. (M/sec.)	2.0	2.5	3.0	4.0	5.0	6.0	7.0
160	M3/Sec	0.052	0.065	0.078	0.104	0.13	0.156	0.182
	Pt.	0.014	0.022	0.031	0.056	0.088	0.128	0.169
	Throw	0.5-0.7-1.3	0.6-0.9-1.7	0.7-1.2-2.0	1.0-1.6-2.5	1.3-1.9-3.3	1.6-2.4-4.0	1.9-2.8-4.8
	NC	15	19	24	31	37	41	47
200	CFM	110	138	165	220	275	330	385
	M3/Sec	0.052	0.065	0.078	0.104	0.13	0.156	0.182
	Pt.	0.014	0.022	0.031	0.056	0.088	0.128	0.169
	Throw	0.5-0.7-1.3	0.6-0.9-1.7	0.7-1.2-2.0	1.0-1.6-2.5	1.3-1.9-3.3	1.6-2.4-4.0	1.9-2.8-4.8
	NC	15	19	24	31	37	41	47
250	CFM	178	222	267	356	445	534	622
	M3/Sec	0.084	0.105	0.126	0.168	0.21	0.252	0.294
	Pt.	0.014	0.022	0.031	0.056	0.088	0.128	0.169
	Throw	0.7-0.9-1.7	0.8-1.3-2.3	1.0-1.5-2.5	1.3-2.0-3.4	1.7-2.4-4.0	2.0-3.0-5.0	2.3-3.6-6.2
	NC	15	21	26	32	38	43	48
315	CFM	263	328	394	525	656	788	920
	M3/Sec	0.124	0.155	0.186	0.248	0.64	0.372	0.434
	Pt.	0.014	0.022	0.031	0.056	0.088	0.128	0.169
	Throw	0.8-1.2-2.0	0.9-1.4-2.2	1.2-1.7-2.8	1.4-2.2-3.8	2.0-3.0-5.0	2.2-3.5-5.7	2.8-4.4-6.8
	NC	15	22	26	34	39	44	49
355	CFM	360	450	540	720	900	1080	1260
	M3/Sec	0.17	0.213	0.255	0.34	0.125	0.51	0.595
	Pt.	0.014	0.022	0.031	0.056	0.088	0.128	0.169
	Throw	0.9-1.3-2.3	1.1-1.6-2.8	1.3-2.0-3.4	1.8-2.8-4.4	2.2-3.5-5.7	2.8-4.4-6.8	3.4-5.0-8.6
	NC	16	23	27	35	41	45	50
400	CFM	475	593	711	949	1186	1423	1660
	M3/Sec	0.224	0.28	0.336	0.448	0.56	1.672	0.781
	Pt.	0.014	0.022	0.031	0.056	0.088	0.128	0.169
	Throw	1.0-1.6-2.6	1.3-2.0-3.2	1.6-2.4-4.0	2.1-3.2-5.2	2.6-4.0-5.6	3.1-4.8-7.6	3.6-5.6-9.6
	NC	17	23	27	36	41	46	51
450	CFM	605	758	908	1210	1514	1817	2117
	M3/Sec	0.286	0.358	0.429	0.572	0.715	0.858	1.0
	Pt.	0.014	0.022	0.031	0.056	0.088	0.128	0.169
	Throw	1.1-1.8-3.0	1.5-2.4-3.6	1.8-2.7-4.5	2.4-3.6-6.0	3.0-1.5-7.5	3.5-5.4-8.6	4.0-6.0-10.0
	NC	19	25	29	37	43	48	52

- Neck velocity is Measured in M/Sec.
- Pt : Static Pressure Loss across the Diffuser in Inch of H_2O
- Throw (Meters) is measured for the terminal Velocities of 0.75, 0.5 & 0.25 M/sec.
- Noise Criteria (NC) is based on Room Attenuation of 10 dB.

Engineering & Performance Data

Drum Louver (AWC DL-1)

Neck Velocity	Size	225x150 175x200	750x150 550x200	1500x150 1100x200 850x250 750x300	1600x200 1250x250 1000x300 750x375	1750x250 1500x300 1000x375	1750x300 1250x375
1	CFM	83	261	475	651	914	1363
	NC	<15	<15	<15	<15	<15	<15
	P_S in mm of H_2O	0.45	0.275	0.20	0.175	0.125	0.1
	THROW in M	1-1.2-1.5	3.9-5.8-8.8	4.6-6.0-10.0	7-9.1-14.3	7.3-9.4-15.2	7.0-10.4-17.9
1.5	CFM	124	390	713	974	1373	1615
	NC	<15	15	<15	<15	<15	<15
	P_S in mm of H_2O	1.025	0.675	0.375	0.375	0.3	0.275
	THROW in M	1.8-2.1-3.7	4.5-6.0-10.0	7.0-9.1-14.3	7.6-9.7-15.8	7.6-10.6-17.9	8.2-10.6-19.2
2	CFM	162	523	950	1297	1829	2157
	NC	15	16	15	15	16	17
	P_S in mm of H_2O	1.75	1.15	0.7	0.7	0.55	0.525
	THROW in M	2.7-3.7-6.0	5.8-7.6-12.1	7.6-9.8-15.8	9.1-11.5-18.2	9.4-12.1-21.3	10.0-13.1-21.9
2.5	CFM	204	651	1188	1625	2285	2693
	NC	16	18	20	21	23	25
	P_S in mm of H_2O	2.8	1.825	1.05	1.05	0.85	0.8
	THROW in M	3.4-4.9-7.3	7-9.1-14.3	8.8-11.9-18.6	10.3-13.1-21.3	12.8-15.8-27.4	13.1-16.7-30.4
3	CFM	247	781	1425	1948	2741	3230
	NC	18	23	28	30	32	31
	P_S in mm of H_2O	4.125	2.7	1.575	1.575	1.25	1.175
	THROW in M	4.0-5.8-8.8	7.9-10.9-16.7	10.9-14.0-21	13.4-16.1-24.9	14.3-17.9-30.4	17.3-21.3-37.4
3.5	CFM	285	912	1663	2275	3197	3772
	NC	24	30	33	33	35	35
	P_S in mm of H_2O	5.475	3.625	2.175	2.175	1.7	1.6
	THROW in M	4.9-6.4-9.8	9.4-12.4-18.8	13.1-15.8-24.9	14.6-17.9-27.7	17.0-21.0-36.5	20.1-25.9-43.0
4	CFM	333	1040	1900	2598	3658	4308
	NC	27	35	39	40	40	43
	P_S in mm of H_2O	7.475	4.5	2.825	2.825	2.2	2.05
	THROW in M	5.4-7.0-10.7	10.0-13.1-20.1	14.3-17.0-27.7	16.4-19.8-30.4	19.8-24.0-41.1	23.1-25.9-48.7
4.5	CFM	380	1173	2138	2921	4114	4850
	NC	31	39	43	44	47	48
	P_S in mm of H_2O	9.8	5.975	3.55	3.55	2.775	2.6
	THROW in M	5.8-7.9-11.6	10.7-14.0-21.0	15.2-18.2-29.5	18.5-21.9-33.8	21.3-25.9-43.5	25.9-32.3-53.3
5	CFM	413	1302	2375	3249	4570	5387
	NC	36	43	47	48	49	50
	P_S in mm of H_2O	11.55	7.2	4.425	4.425	3.45	3.225
	THROW in M	6.0-8.2-11.9	10.9-14.3-21	16.4-19.2-30.4	18.8-22.2-34.1	22.2-24.3-45.7	26.2-33.5-54.8

- Neck velocity is measured in m/sec.
- P_S Static pressure in mm of H_2O.
- Throw (meters) is measured for a terminal velocity of 0.75, 0.5 and 0.25 m/sec.
- NC based on a room attenuation of 10 dB.