

Swirl Diffusers

Adjustable circular swirl diffusers



AR 883 series - Aluminium

Advantages

- Adjustable diffusion.
- Ideally suited for high ceilings or those requiring a high-volume air displacement.
- Motor driven air diffuser blades.

APPLICATION

- Air supply: high inductance adjustable airflow.
- Ideal for high temperature air-conditioning installations (high ΔT).
- Adjustable, motorised diffusion for optimum supply in both winter and summer.
- Very high levels of air circulation.
- Ceiling mounted.

DESCRIPTION

- Body and diffusion vanes in aluminium.
- White epoxy painted aluminium finish, RAL 9010 tint.
- Concealed fixing to the plenum by using a screw on the neck of the diffuser. The plenum is fitted with lugs for fixing to the concrete tile.
- Use the suspension cables.

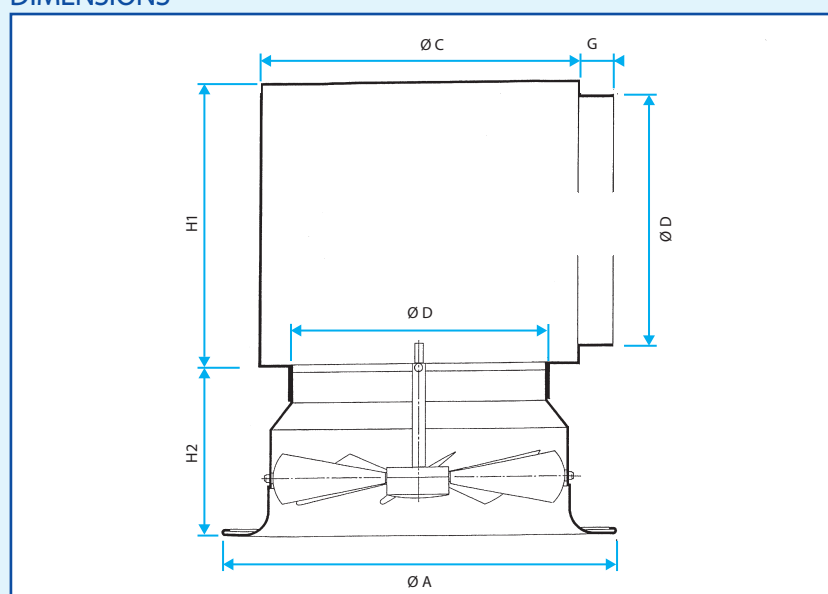
ACCESSORIES

- Connection plenum "side connection", supplied with the diffusers, code RE.
- Single speed 230V motor included.
- Damper with mounting frame supplied with the diffuser on request (supplied fitted with a plenum connection.)

ADDITIONAL RANGE

- Proportional motors.
- Manual version.
- Insulated plenums on 2 or 5 sides.
- Damper with control dial delivered fitted to the plenum connection.
- Paint finish in accordance with the RAL colour chart (please, consult us).

DIMENSIONS



AR 883 diffuser with RE plenum

Comfort airflow levels for $L_w < NR 40$ and dimensions							
Ø D (mm)	C (mm)	Ø A (mm)	G (mm)	H1 (mm)	H2 (mm)	Airflow (m ³ /h)	Airflow in cooling position (m ³ /h)
250	310	425	50	300	225	500	450
315	375	500	50	365	240	1000	750
400	460	615	60	450	280	1600	900
500	560	850	70	550	320	2500	1400
630	690	1070	70	680	410	6000	1600

- See selection table on page 280.

RANGE R10

Dimensions	AR 883 M1 Motorised Code	AR 883 Manual Code	Plenum side connector Code
Ø 250	11051095	11002361	11053313
Ø 315	11051096	11002362	11053314
Ø 400	11051097	11002363	11053316
Ø 500	11051098	11002364	11053318
Ø 630	11051099	11002365	11053319

Selection Tables



AR 883 Series

Air supply with ceiling effect - Heating Position - $\Delta T +10^\circ \text{C}$ - $\alpha 90^\circ$

Ak (m²)	Ø D (mm)	qv (m³/hr)														Lw Vk	Lt Pa							
		500		750		1000		1200		1600		2000		3000				4000		5000		6500		8000
0.03665	250	38 3.8	5.9 27	48 5.8	9.0 63																			
0.07355	315			27 2.7	4.5 14	37 3.8	6.5 27	41 4.4	7.6 35	49 6.4	10.3 76													
0.10970	400							29 2.9	5.2 15.8	37 4.0	7.3 29	43 5.2	9.0 47											
0.16293	500									25 2.5	5.1 11.4	31 3.3	6.3 19.5	42 5	10 45	50 6.9	14 86							
0.30157	630	Lw Vk	Lt Pa											25 2.5	5.8 11.4	37 3.5	7.8 23	37 4.6	10 37	44 5.8	12.7 64	52 7.3	16 99	

The values Lw (NR) do not take the attenuation in the premises into account.

Vt = 0.25 m/s.

Corrections for other angles of air diffusion

α	LtM	Vk	ΔPt	Lw	Ak
45°	x 0.35	x 1.59	x 1.42	+ 10	x 0.63
60°	x 0.66	x 1.13	x 1.12	+ 3	x 0.88

α = angle of the blades. LtM = vertical reach.



AR 883 Series

Air supply with ceiling effect - Cooling Position - $\Delta T -10^\circ \text{C}$ - $\alpha 30^\circ$

Ak (m²)	Ø D (mm)	qv (m³/hr)																				Lw Vk	Lt Pa				
		200		300		400		500		600		800		1000		1400		1800		2000				2500			
0.01705	250	20	0.62	30	0.9	37	1.25	42	1.5																		
		3.4	8.1	5.0	16.5	7.0	30	8.7	44																		
0.03090	315			18	0.7	25	0.87	30	1.15	35	1.35	42	1.8	47	2.3												
				2.7	5.3	8.5	3.5	4.6	15	5.8	21	7.2	33	9.5	53												
0.03810	400							26	1.0	31	1.25	38	1.65	43	2	52	2.8										
								3.6	8.7	4.5	14	6	23	7.5	35	10.5	65										
0.06700	500											26	1.2	32	1.5	38	2.1	46	2.8	48	3.1						
												3.2	7.4	4.0	11	5.7	20	7.5	35	8.1	40						
0.07720	630	Lw	Lt													28	1.4	37	1.9	43	2.5	45	2.7	51	3.5		
		Vk	Pa													3.4	8.0	4.8	16	6.3	25	7.0	35	9.0	48		

The values Lw (NR) do not take the attenuation in the premises into account. α = angle of the blades.

Vt = 0.25 m/s.

Corrections for other terminal velocities

Vt (m/s)	0.25	0.37	0.5	0.63
Lt	x 1	x 0.67	x 0.5	x 0.4