



DSO

Aluminum Round Plaque Diffusers



DSO SERIES

Aluminum Round Plaque Diffusers



Architecturally appealing lines and finish



Removable central disc facilitates installation and maintenance



Heavy-gauge spun aluminum construction



Duct mounted or drywal



Ideal for heating and cooling applications



Available in imperial and metric dimensions



DSO
by **MADEL®**

Neck Diameter	Free Area (sqf)	Min cfm	Max cfm
6" (160 mm)	0.215	106	212
8" (200 mm)	0.338	166	332
10" (250 mm)	0.527	259	519
12" (315 mm)	0.839	412	823

DSO Aluminum Round Plaque Diffusers by EffectiV HVAC™ and MADEL® are recommended for heating, ventilating, and cooling applications. DSO diffusers provide a 360° air diffusion pattern and excellent performance in VAV systems.

They can be mounted in false ceilings, suspended from ductwork or from the ceiling.

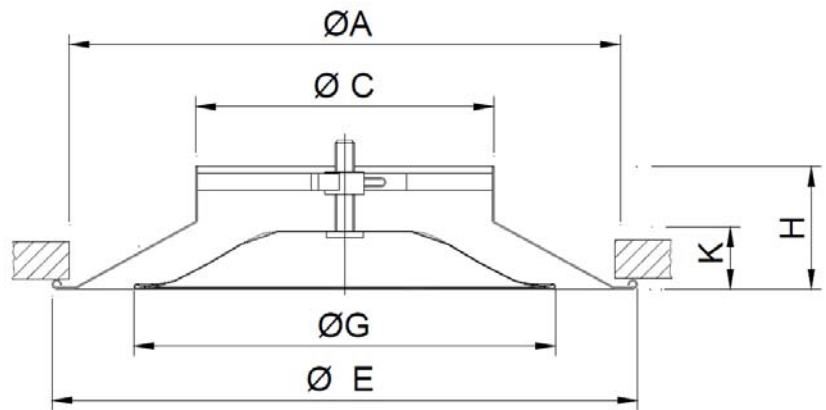
The removable central disc greatly facilitates installation and maintenance.

DSO diffusers provide great performance in temperature differentials up to 22°F (12°C) and are suitable for premises with ceilings 8.5 ft (2.6 m) up to 13 ft (4 m).

DSO Plaque diffusers meet the functional requirements of modern architecture. Its minimalist design fits perfectly in any kind of interior design.

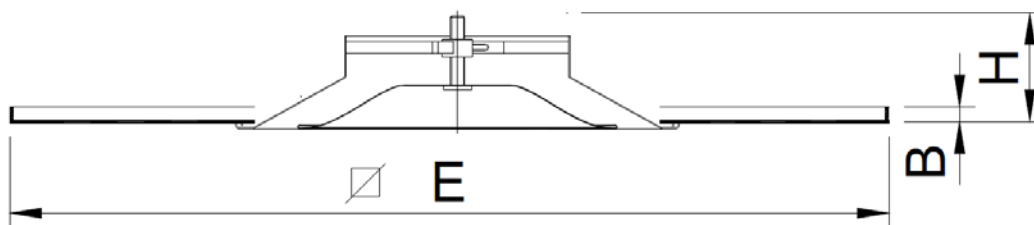


DSO Dimensions



	Duct Diameter	A	C	E	H	K
Imperial	6"	11 13/16	5 3/4	12 51/64	4 15/16	1 47/64
	8"	15 43/54	7 3/4	16 47/64	4 17/32	2 9/32
	10"	19 11/64	9 3/4	20 5/64	5 3/64	2 53/64
	12"	21 31/32	11 3/4	22 41/64	6 19/32	3 5/32
Metric	160 mm	300	157	325	101	44
	200 mm	398	197	425	115	58
	250 mm	487	248	510	128	72
	315 mm	550	313	575	137	80

DSO-MOD Dimensions



	Duct Diameter	B	E	H
Imperial	6"	15/32	23 3/4 x 23 3/4	4 15/16
	8"	15/32	23 3/4 x 23 3/4	4 17/32
	10"	15/32	23 3/4 x 23 3/4	5 3/64
	12"	15/32	23 3/4 x 23 3/4	6 19/32

Some Applications



Modern architecture



Minimalist design



Open ceilings/exposed ducts



Restaurants, Bars, Hotels, Retail



Office spaces



Showrooms



Indoor Pools and corrosion-sensitive applications



DSO Performance Data

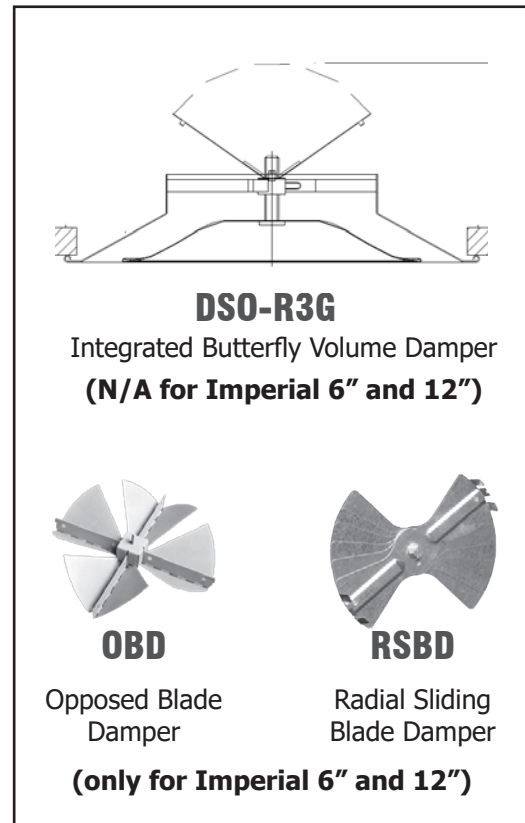
Neck Size	Neck (fpm) Velocity	300	400	500	600	700	800	1000	1200	1400
	Velocity Pressure (H2O)	.010	.010	.016	.022	.031	.041	.062	.090	.122
6" (160mm)	CFM	59	79	98	118	137	157	196	236	275
	Pressure Loss (in.w.g.)	0.017	0.027	0.04	0.055	0.071	0.09	0.132	0.182	0.237
	NC	< 15	< 15	< 15	< 20	< 20	< 25	< 30	< 35	> 40
	Throw (ft) - Coanda Effect	1-2-3	2-3-4	2-4-5	3-4-7	3-5-8	4-6-9	4-7-11	5-9-13	6-10-15
	Throw (ft) - No Ceiling Effect	1-2-2	1-2-3	2-3-4	2-3-5	2-4-6	3-4-7	3-5-8	4-7-10	5-8-12
8" (200mm)	CFM	105	140	175	209	244	279	349	419	
	Pressure Loss (in.w.g.)	0.02	0.033	0.048	0.065	0.086	0.108	0.159	0.217	
	NC	< 15	< 15	< 15	< 20	< 25	< 25	< 35	> 40	
	Throw (ft) - Coanda Effect	2-3-4	2-4-6	3-5-7	3-5-8	4-6-10	4-7-11	6-9-14	7-11-17	
	Throw (ft) - No Ceiling Effect	1-2-3	2-3-4	2-3-5	2-4-6	3-5-7	3-5-8	4-7-10	5-8-12	
10" (250mm)	CFM	164	218	273	327	382	436	545	654	
	Pressure Loss (in.w.g.)	0.031	0.05	0.074	0.101	0.133	0.166	0.245	0.335	
	NC	< 15	< 15	< 15	< 20	< 25	< 25	< 35	> 40	
	Throw (ft) - Coanda Effect	2-3-5	2-4-6	3-5-8	4-6-9	4-7-11	5-8-12	6-10-15	7-12-18	
	Throw (ft) - No Ceiling Effect	1-2-3	2-3-5	2-4-6	3-5-7	3-5-8	4-6-9	5-8-11	5-9-14	
12" (315mm)	CFM	236	314	393	471	550	628	785	942	1100
	Pressure Loss (in.w.g.)	0.03	0.05	0.073	0.1	0.13	0.164	0.241	0.329	0.43
	NC	< 15	< 15	< 15	< 20	< 25	< 25	< 30	> 40	> 40
	Throw (ft) - Coanda Effect	2-3-5	3-4-7	3-6-8	4-7-10	5-8-12	5-9-13	7-11-17	8-13-20	9-15-23
	Throw (ft) - No Ceiling Effect	2-2-4	2-3-5	3-4-6	3-5-8	3-6-9	4-7-10	5-8-13	6-10-15	7-12-17

Performance Notes

- NC value based on 10 db room attenuation
- Horizontal Throw values are based on isothermal air and terminal velocities of **100 fpm, 60 fpm and 40 fpm** respectively

DSO-R3G Pressure Loss & Sound Power Level Correction

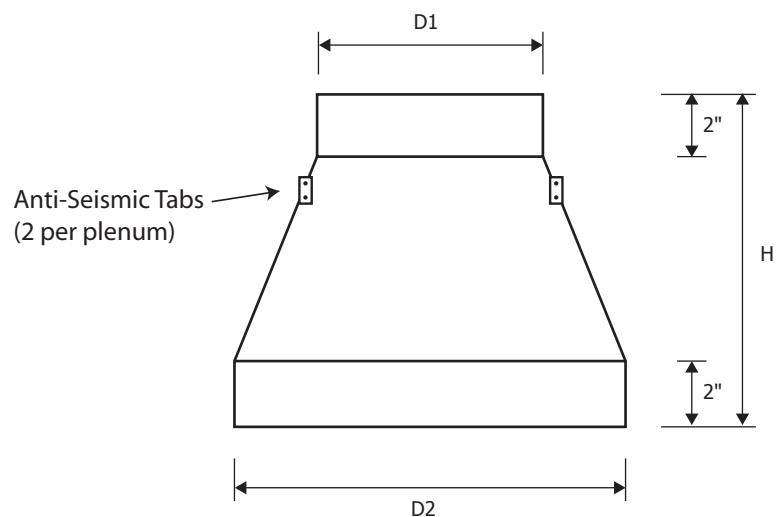
Damper Correction Factor		100% Open	50% Open
6"D (160mm)	Pressure Loss	x 1.3	x 5.4
	NC	+1.6	+10.4
8"D (200mm)	Pressure Loss	x 1.2	x 5.5
	NC	+0.6	+11.7
10"D (250mm)	Pressure Loss	x 1.3	x 5.8
	NC	+0.2	+10.3
12"D (315mm)	Pressure Loss	x 1.3	x 5.5
	NC	-0.8	+6.2



PLRR Plenum

Optional plenum used to equalize the air (specify with EQ air equalizing grid option), to use an oversized face with a given duct diameter, or to add a special damper to DCG diffusers.

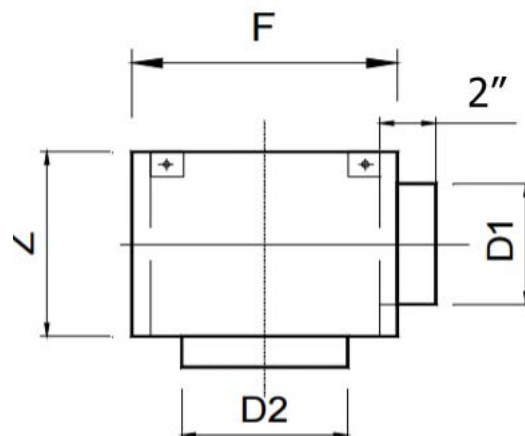
Model	Duct	D1	D2	H
PLRR 0605	5"	4 7/8	6 3/8	6
PLRR 0606	6"	5 7/8	6 3/8	6
PLRR 0805	5"	4 7/8	8	8
PLRR 0806	6"	5 7/8	8	8
PLRR 0808	8"	7 7/8	8	8
PLRR 1006	6"	5 7/8	10	8
PLRR 1008	8"	7 7/8	10	8
PLRR 1010	10"	9 7/8	10	8
PLRR 1208	8"	7 7/8	12 3/8	10
PLRR 1210	10"	9 7/8	12 3/8	10
PLRR 1212	10"	9 7/8	12 3/8	10



PLXP Plenum

Optional plenum with side connection used when space in the ceiling is limited, when acoustical performance is important or to add a special damper to DCG diffusers.

Model	Duct	D1	D2	F	Z
PLXP 06	5"	4 7/8	6 19/64	10	7
PLXP 08	6"	5 7/8	8	12	10
PLXP 10	8"	7 7/8	10	15	11
PLXP 12	10"	9 7/8	12 13/32	19	14



How to Specify DSO

Supply and mounting of model DSO Aluminum Round Plaque Diffuser with removable core for easier installation and maintenance. Constructed from spun aluminum, powder coated in white M9016. By EffectiV HVAC / MADEL.

How to Order DSO Series

DSO	-R3G	08				
			Imperial		Metric	
			06	6”D	160	160 mm
			08	8”D	200	200 mm
			10	10”D	250	250 mm
			12	12”D	315	315 mm
Damper		R3G	Butterfly Damper			
		OBD	Opposed Blade Damper			
		RSBD	Radial Sliding Blade Damper			
Model		DSO	Round diffuser			
		DSO-MOD	Square face for false ceiling			