

CIRCULAR DIFFUSER - CMD

DESCRIPTION & FEATURES

Circular Multi Cone Diffusers are designed to handle large volumes of air and distribute it evenly in a 360° pattern. Various blow patterns can be obtained by moving the core into or out of the frame simply by spinning it.



Adjustable core makes adjustment of throw easy. Screwing in the core gives a mostly vertical throw, perfect for spot cooling. In contrast, rotating the core out directs the majority of air sideways for excellent diffusion.

CMD Diffusers are manufactured with aluminium spinnings for the blades and frame with moulded plastic internal framework.

Standard finish is RAL9010 or polyester powder coated to the customers colour requirement.

PLENUM BOXES

Plenum boxes are accessories for use with Grilles and Diffusers. They are designed to equalise the pressure profile within the box and hence provide an even velocity at the face of the Grille or Diffuser without the use of Equalising Grids.

CMD ORDERING CODE (DIFFUSER)	
Series	CMD
Ceiling	S - Small Format L - Large Format (adjustable) F - Flat Face
Damper	B - Butterfly Damper (in neck)
Fixing	F0 - No fixings, 1 - (Mill Finish) 2 - RAL9006 (Silver/Grey) 3 - RAL9010 (White) 4 - RAL9005 (Black) 5 - RAL9003 (White) 6 - RAL9016 (White), 7 - Other RAL/BS Code (additional costs may apply) 8 - Chrome Finish - Powder Coated
Finish	
Example: CMD/L/B/F0/3/Model Size	

CMD ORDERING CODE (PLENUM)	
Type	PBU - Un-Lined Side PBL - Lined Side PBA - Adaptor Top
Series	CMD
Mesh	P - Perforated Equalising Mesh 0 - No Equalising Mesh
Spigot	OP - 2 Opposite Spigots AD - 2 Adjacent Spigots FL - Flat Oval Spigot
Finish	IN - Black Internal EX - Black External IE - Black Internal & External
Example: PBL/CMD/Model Size/Spigot Size	



CMD/S



CMD/L



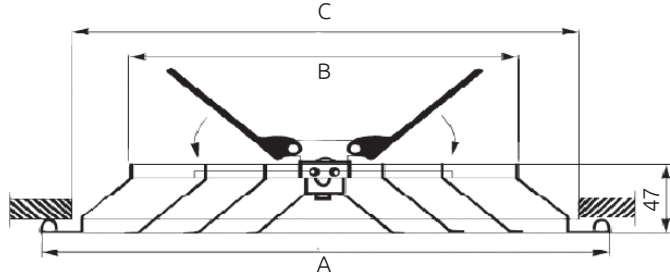
CMD/F

All units available with Thermostatic (self adjusting) Element. Please contact Sales Office for full details.

CIRCULAR DIFFUSER - CMD

CMD DIMENSIONS (DIFFUSER)

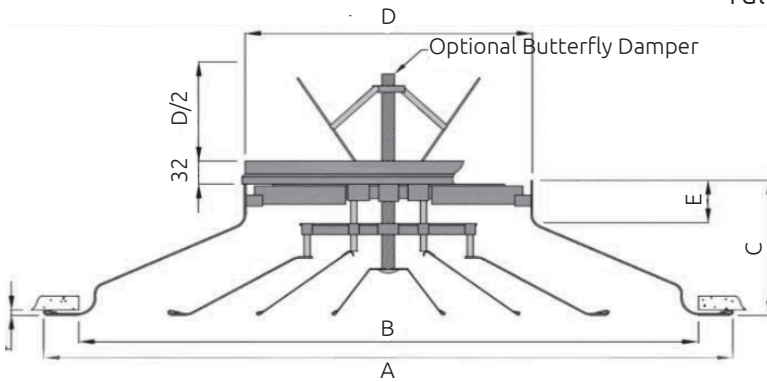
CMD/S & CMD/F - SMALL FORMAT & FLAT FACE



SIZE	A	B	C
150	257	149	225
200	307	199	275
250	357	249	325
300	407	299	475
350	457	349	425

Units available in a square plate for tile replacement. Please contact sales office for full requirements.

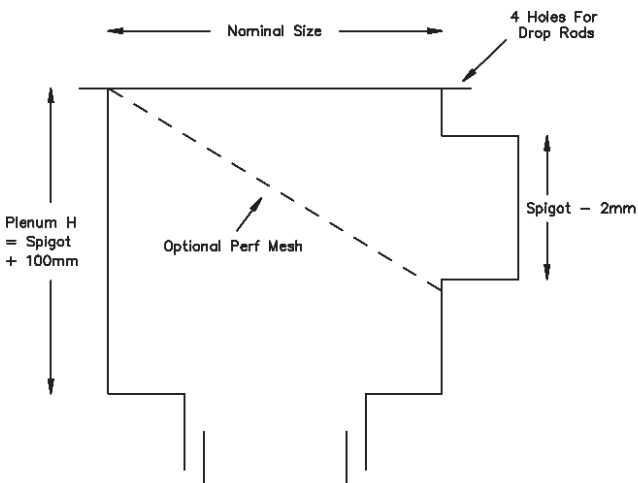
CMD/L - LARGE FORMAT



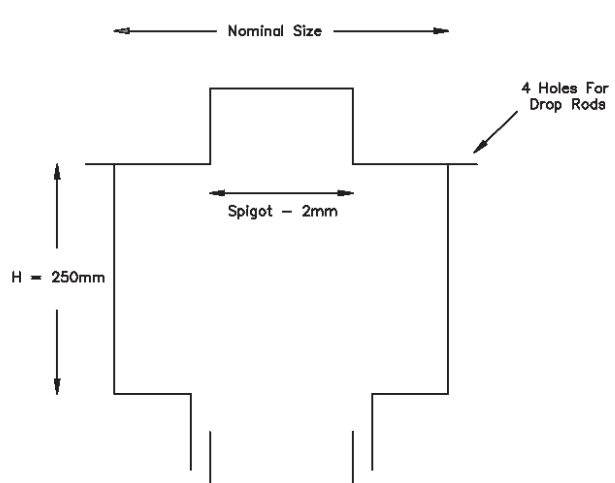
SIZE	A	B	C	D	E	F
150	340	325	110	152	60	5
200	457	427	127	203	60	5
250	569	528	146	254	60	5
300	680	630	155	305	60	6
350	851	782	172	356	60	6
380	851	782	172	381	60	6
400	851	782	172	406	60	6
450	1041	934	248	457	60	20
500	1041	934	248	508	60	20
530	1148	1100	280	533	60	20
600	1170	1100	280	610	60	20

PLENUM BOX DIMENSIONS

SIDE ENTRY PLENUM



TOP ENTRY PLENUM



Side entry as drawn. Top entry 250 high.

CIRCULAR DIFFUSER - CMD

CMD/S - SMALL FORMAT PERFORMANCE DATA

SIZE	PARAMETER						
150	AIR VOL (l/s)	30	40	50	60	70	80
	THROW (m)	0.5	0.6	0.7	0.8	1.0	1.1
	P.DROP (Pa)	10	15	23	32	42	53
	NOISE (NR)	/	/	20	25	30	35
200	AIR VOL (l/s)	70	80	100	125	150	175
	THROW (m)	0.6	0.8	0.9	1.1	1.3	1.5
	P.DROP (Pa)	9	11	17	25	34	45
	NOISE (NR)	/	/	23	29	34	38
250	AIR VOL (l/s)	125	150	200	225	250	300
	THROW (m)	0.9	1.0	1.3	1.5	1.7	2.0
	P.DROP (Pa)	10	13	22	27	33	46
	NOISE (NR)	20	24	32	35	38	43
300	AIR VOL (l/s)	200	250	300	350	400	450
	THROW (m)	1.2	1.4	1.7	2.0	2.2	2.5
	P.DROP (Pa)	11	17	23	30	38	47
	NOISE (NR)	25	31	36	40	44	47
350	AIR VOL (l/s)	250	300	400	500	550	650
	THROW (m)	1.3	1.5	2.0	2.4	2.6	3.1
	P.DROP (Pa)	10	13	22	33	39	53
	NOISE (NR)	25	30	38	44	47	52

Throw data is based on a Terminal Velocity of 0.5m/s to give an average room air movement of 0.25m/s when fitted within a 2.7m high ceiling.

Sound Power Levels (NR) and Pressure Drops (Pa) applies to a fully opened Damper. The assumed room absorption is between 8-10dB.

Selection and tests are based on +/- 10°C.

/ indicates a value of less than 20.

Please contact sales office for performance of flat face diffuser.

CMD

CMD/L - LARGE FORMAT PERFORMANCE DATA

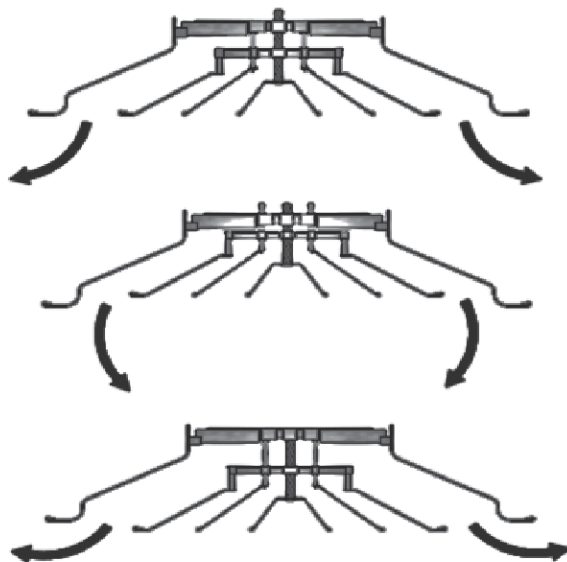
Throw is based on 3m high ceiling, 11°C cooling. When installed in an exposed duct, reduce throws by a factor of 0.7.

Data based on a recessed core supplying air with a temperature differential of 10°C with terminal velocity 0.5m/s. Use the correction table for temperatures other than 10°C.

Performance figures are for Diffuser only (no Plenum) and based on Supply Air.

Temperature differential (°C)	-10	0	+10	+15	+20	+25
Projection factor	1.2	1.05	1	0.9	0.8	0.65

DISCHARGE PATTERNS



Core flush with frame: Adjust the core to be flush with the frame to create a throw with a balance between verticle and horizontal projection.

Core recessed: Screw the core in to recess it into the frame, and create a powerful downward throw. Perfect for spot cooling/heating. **(Throw x 0.7, Noise: -2 NR, Pressure x 0.8)**

Core protruding: Screw out the core until it protrudes past the frame, and the blades will deflect supplied air sideways. When installed in a ceiling, this allows use of the coanda effect to maximise the affected area. **(Noise: + 2 NR, Pressure x 1.7)**

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CMD/L - LARGE FORMAT PERFORMANCE DATA

SIZE	PARAMETER	NECK VELOCITY (m/s)						
		3	3.5	4	4.5	5	5.5	6
150	AIR VOL (l/s)	50	60	70	80	90	100	110
	THROW (m)	0.9	1.1	1.2	1.4	1.5	1.7	1.8
	PROJECTION (m)	3.6	4.0	4.3	4.5	4.7	5.0	5.2
	P.DROP (Pa)	13	18	24	30	37	44	53
	NOISE (NR)	/	16	21	24	28	31	34
200	AIR VOL (l/s)	100	115	130	145	160	180	200
	THROW (m)	1.2	1.4	1.6	1.8	2.1	2.2	2.4
	PROJECTION (m)	4.7	5.2	5.5	6.0	6.2	6.5	6.7
	P.DROP (Pa)	11	16	21	26	32	41	50
	NOISE (NR)	17	21	25	28	31	35	37
250	AIR VOL (l/s)	150	180	200	230	250	280	300
	THROW (m)	1.5	1.8	2.1	2.3	2.6	2.9	3.1
	PROJECTION (m)	5.8	6.4	6.8	7.3	7.7	8.1	8.5
	P.DROP (Pa)	9	13	17	21	25	33	39
	NOISE (NR)	16	22	26	30	33	36	39
300	AIR VOL (l/s)	220	255	300	330	370	400	440
	THROW (m)	1.8	2.1	2.4	2.7	3.3	3.4	3.7
	PROJECTION (m)	6.9	7.6	8.2	8.8	9.5	10.4	11.4
	P.DROP (Pa)	9	12	16	21	25	30	37
	NOISE (NR)	18	23	27	31	35	38	41
380	AIR VOL (l/s)	340	400	450	510	570	630	680
	THROW (m)	1.8	2.7	3.1	3.5	3.9	4.2	4.6
	PROJECTION (m)	6.9	9.5	10.9	11.8	12.3	12.8	13.3
	P.DROP (Pa)	9	10	13	16	20	24	28
	NOISE (NR)	18	25	29	32	35	38	41
450	AIR VOL (l/s)	490	575	655	740	820	900	980
	THROW (m)	2.7	3.3	3.7	4.2	4.6	5.1	5.6
	PROJECTION (m)	10.9	11.9	12.8	13.3	14.2	14.7	15.7
	P.DROP (Pa)	6	8	10	13	15	19	22
	NOISE (NR)	20	25	29	33	36	39	42
530	AIR VOL (l/s)	670	780	900	1000	1120	1230	1340
	THROW (m)	3.3	3.8	4.3	4.8	5.4	6	6.5
	PROJECTION (m)	12.3	13.3	14.2	15.2	16.1	17.1	18.0
	P.DROP (Pa)	4	6	7	9	11	14	16
	NOISE (NR)	25	30	34	38	41	44	47
610	AIR VOL (l/s)	875	1020	1170	1315	1460	1600	1750
	THROW (m)	3.7	3.3	5	5.6	6.2	6.9	7.5
	PROJECTION (m)	13.3	14.7	15.7	17.1	18.0	19.0	20.4
	P.DROP (Pa)	6	9	10	13	15	19	22
	NOISE (NR)	28	32	36	39	43	45	48

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