

Introduction

The Waterloo MC diffuser has been designed for both supply and exhaust applications requiring compact circular diffusers; unlike conventional high aspiration diffusers the MC has a small overall to neck size ratio. The diffusers are adjustable to produce horizontal or vertical air patterns.

Manufacture

The MC diffusers are constructed from steel spinings retained on aluminium spider braces.

Product Description

- MC** Small format circular diffuser
- LD** Butterfly type louvre damper
- ED&LD** Equalising deflector & louvre damper
- Blind Fix** Special blind fixing (see below)

Features

- Compact frame design
- Robust steel construction
- Adjustable for vertical or horizontal air patterns

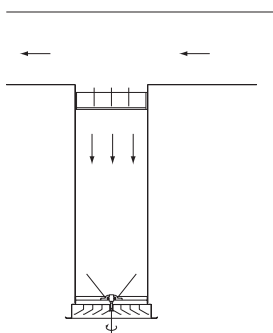
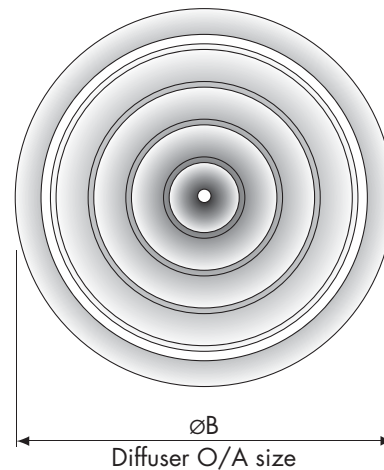
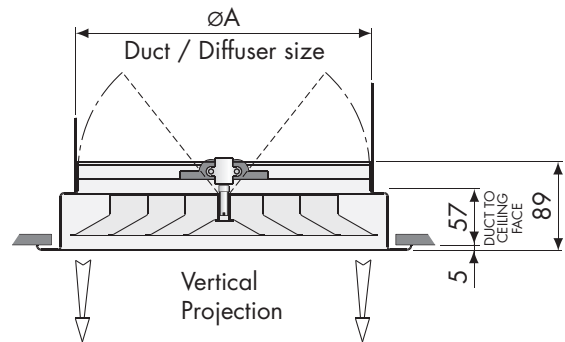
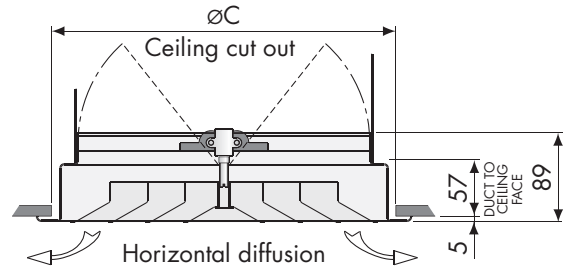
Finishes

- PPM9006 (RAL 9006 Matt Silver)
- PPM9010 (RAL 9010 20% Gloss White)
- PPG9010 (RAL 9010 Gloss White)
- Other colours available on request

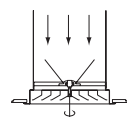
Weights

- MC/150 1.0 kg
- MC/200 2.1 kg
- MC/300 3.4 kg
- MC/450 4.8 kg

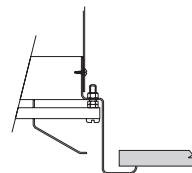
Accessories



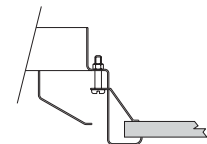
ED&LD - Equalisation at stub duct take off with volume control at diffuser face.



LD - Standard arrangement for supply ducts. Adjustable through diffuser face.



Standard
Screw through duct



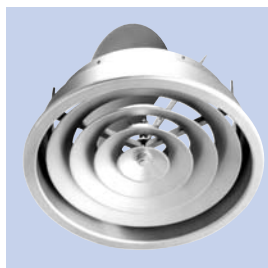
Special
Blind fixing
Specify when ordering

Order Example

MC/150/PPM9010/LD

- Type _____
- Diffuser Size _____
- Finish _____
- Extras _____

Diffuser & Duct Size	Overall Diameter	Ceiling Opening
$\varnothing A$	$\varnothing B$	$\varnothing C$
150	228	203
200	305	280
300	381	356
450	533	508



Selection Criteria

NC level: equal to the peak sound power level on an NC curve less 8dB for normal room absorption.

Pressure Loss (Pa): static pressure loss of the diffuser.

Throw: radius of diffusion and projection — see individual tables

Selection Example

MC/200

Total air flow rate 94 l/s

Horizontal Supply Application

Throw Min - Max — 1.5 - 3.0m

Noise Level — NC21

Pressure Loss — 21Pa

Exhaust Application

Noise Level — NC23

Pressure Loss — 31Pa

Supply Horizontal Diffusion

Radius of diffusion.

Minimum — space covered by one diffuser which results in a mean room air movement of 0.25 m/s

Maximum — space covered by one diffuser which results in a mean room air movement of 0.10 m/s

Supply Vertical Projection

Projection — downward throw to a terminal velocity

$v_t = 0.5$ m/s

Performance Tables

MC		Air Volume				
150 Dia	m ³ /h	65	126	191	252	317
	l/s	18	35	53	70	88
	Min - Max (m)	0.5-1.0	0.8-1.5	1.0-2.1	1.5-3.0	2.0-4.0
	Lw	-	-	18	26	34
	Ps	2	9	21	37	58
200 Dia	m ³ /h	112	227	338	454	565
	l/s	31	63	94	126	157
	Min - Max (m)	0.5-1.0	0.9-1.8	1.5-3.0	2.0-4.0	2.5-5.0
	Lw	-	-	21	31	40
	Ps	2	9	21	37	58
300 Dia	m ³ /h	256	508	763	1016	1271
	l/s	71	141	212	282	353
	Min - Max (m)	0.7-1.5	1.4-2.8	2.1-4.2	2.8-5.6	5.0-10
	Lw	-	18	29	39	46
	Ps	2	9	21	37	58
450 Dia	m ³ /h	572	1145	1717	2290	2862
	l/s	159	318	477	636	795
	Min - Max (m)	1.3-2.5	2.5-5.0	3.8-7.6	5.0-10	6.0-12
	Lw	-	21	35	45	53
	Ps	4	18	41	72	112

MC		Air Volume				
150 Dia	m ³ /h	65	126	191	252	317
	l/s	18	35	53	70	88
	Projection (m)	0.9	1.5	2.5	3.5	4.6
	Lw	-	17	28	36	43
	Ps	4	14	33	56	91
200 Dia	m ³ /h	112	227	338	454	565
	l/s	31	63	94	126	157
	Projection (m)	1.3	2.1	3.0	4.3	5.2
	Lw	-	19	31	39	46
	Ps	4	17	38	65	105
300 Dia	m ³ /h	256	508	763	1016	1271
	l/s	71	141	212	282	353
	Projection (m)	2.0	3.1	4.6	6.3	7.8
	Lw	-	22	34	43	49
	Ps	5	20	48	80	125
450 Dia	m ³ /h	572	1145	1717	2290	2862
	l/s	159	318	477	636	795
	Projection (m)	3.2	5.0	7.6	10.1	14.2
	Lw	-	27	40	48	55
	Ps	8	32	75	128	200

Exhaust

MC		Air Volume				
150 Dia	m ³ /h	65	126	191	252	317
	l/s	18	35	53	70	88
	Lw	-	-	18	26	35
	Ps	3	11	23	38	56
200 Dia	m ³ /h	112	227	338	454	565
	l/s	31	63	94	126	157
	Lw	-	-	23	33	41
	Ps	4	15	31	51	76
300 Dia	m ³ /h	256	508	763	1016	1271
	l/s	71	141	212	282	353
	Lw	-	17	32	42	50
	Ps	6	23	49	80	120
450 Dia	m ³ /h	572	1145	1717	2290	2862
	l/s	159	318	477	636	795
	Lw	-	27	42	52	-
	Ps	10	35	74	120	180