WATERLOO
A Swegon Group Company

Small Format Circular Diffusers

MC Small format circular diffuse

Small Format Circular Diffusers

MC

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.

Product Description

MC Small format circular diffuser
LD Butterfly type Louvre Damper
ED & LD Equalising Deflector & Louvre Damper
Blind Fix Available as standard (see drawing)

Features

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

Finishes

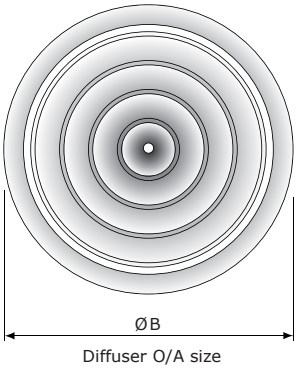
PPG9010 (RAL 9010 Gloss - 80% Gloss White)
PPM9010 (RAL 9010 Matt - 20% Gloss White)
PPM9006 (RAL 9006 Matt - 30% Gloss Silver)
Other colours available on request.
Not recommended to leave unpainted.

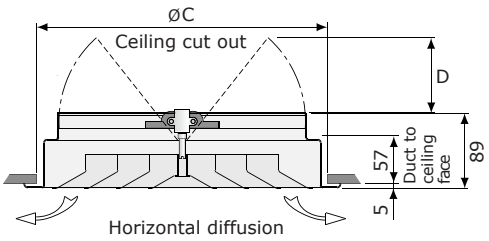
Weights

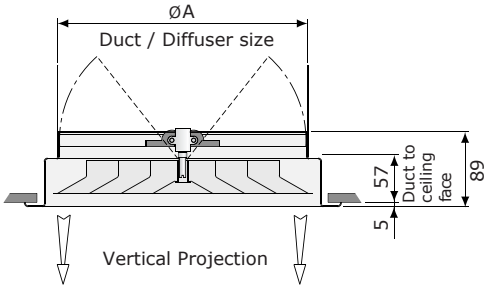
MC/150 1.0 kg
MC/200 2.1 kg
MC/300 3.4 kg
MC/450 4.8 kg

Manufacture

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

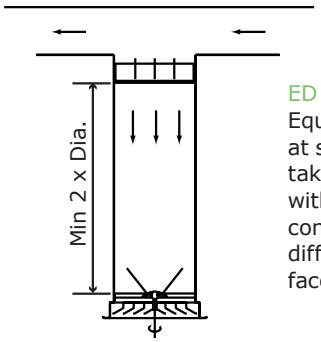




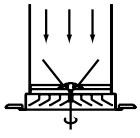


Ø A Diffuser & Duct Size	Ø B Overall Diameter	Ø C Ceiling Opening	D Maximum open LD height
150	228	203	75
200	305	280	100
300	381	356	150
450	533	508	225

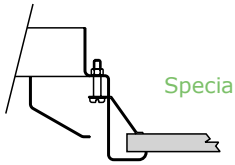
Accessories



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



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



Special Blind fixing

Order Example

MC-200/BLIND FIX/9010-Gloss/LD

Diffuser type
Diffuser diameter
Fixing
Finish
Butterfly damper

Small Format Circular Diffusers

MC

Selection Criteria

Noise level is based on diffuser sound power level less 8dB room absorption.
Pressure Loss (Pa): static pressure loss of the diffuser.
Throw: radius of diffusion and projection see individual tables

- 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

Selection Example MC/200

- Total air flow rate 94 l/s
- Horizontal Supply Application
  Throw Min - Max —1.5 - 3.0 m
  Noise Level — 26 dBA
  Pressure Loss — 21 Pa
- Exhaust Application
  Noise Level — 36 dBA
  Pressure Loss — 38 Pa

Performance Table

MC		Air Volume (Vertical)			
150 Dia	m^3/h	65	126	191	252
	l/s	18	35	53	70
	Projection (m)	0.9	1.5	2.5	3.5
	L_w	-	22	32	41
	P_s	4	14	33	56
200 Dia	m^3/h	112	227	338	454
	l/s	31	63	94	126
	Projection (m)	1.3	2.1	3.0	4.3
	L_w	-	24	36	45
	P_s	4	17	38	65
300 Dia	m^3/h	256	508	763	1016
	l/s	71	141	212	282
	Projection (m)	2.0	3.1	4.6	6.3
	L_w	-	27	39	48
	P_s	5	20	48	80
450 Dia	m^3/h	572	1145	1717	2290
	l/s	159	318	477	636
	Projection (m)	3.2	5.0	7.6	10.1
	L_w	19	32	45	53
	P_s	8	32	75	128

MC		Air Volume (Horizontal)				
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
	L_w	-	-	23	31	39
	P_s	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
	L_w	-	18	26	36	45
	P_s	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
	L_w	-	23	34	44	51
	P_s	2	9	21	37	58
450 Dia	m^3/h	572	1145	1717	2290	-
	l/s	159	318	477	636	-
	Min - Max (m)	1.3-2.5	2.5-5.0	3.8-7.6	5.0-10	-
	L_w	-	26	40	50	-
	P_s	4	18	41	72	-

Exhaust

MC		Air Volume				
150 Dia	m^3/h	65	126	191	252	317
	l/s	18	35	53	70	88
	L_w	-	18	23	31	40
	P_s	3	11	23	38	56
200 Dia	m^3/h	112	227	338	454	565
	l/s	31	63	94	126	157
	L_w	-	19	28	38	46
	P_s	4	15	31	51	76
300 Dia	m^3/h	256	508	763	1016	-
	l/s	71	141	212	282	-
	L_w	-	22	37	47	-
	P_s	6	23	49	80	-
450 Dia	m^3/h	572	1145	1717	-	-
	l/s	159	318	477	-	-
	L_w	18	32	47	-	-
	P_s	10	35	74	-	-

LD Butterfly-style Louvre Damper

Introduction

Designed to adjust the airflow in our Format Circular Diffusers MC, WR and Perforated faced diffusers LF, CPD, KRCP the LD butterfly dampers allow for the air to be regulated prior to distribution through the terminals.

They are adjustable from the front of the Diffuser with a screwdriver and are made in aluminium.

They allow for the airflow to be left fully open, or restricted to closed low-leakage configuration when the damper is in the shut-off position.

Product Description

LD Butterfly-style Louvre Damper, Screwdriver operated

Features

- Screwdriver operated from terminal face

Finish

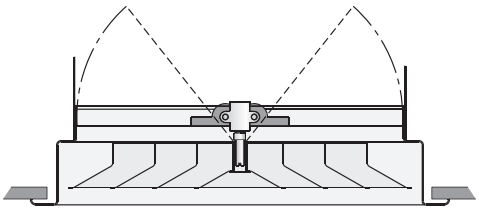
LD Aluminium blades

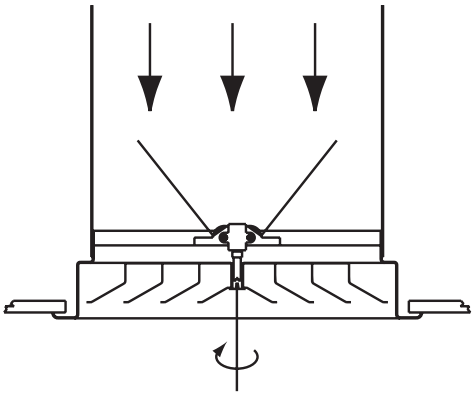
Dimensions

MCØ 150 / 200 / 300 / 450mm
WRØ 150 / 200 / 250 / 300 / 375 / 450 / 525 / 600mm
Also sizes to suit standard circular spigots.

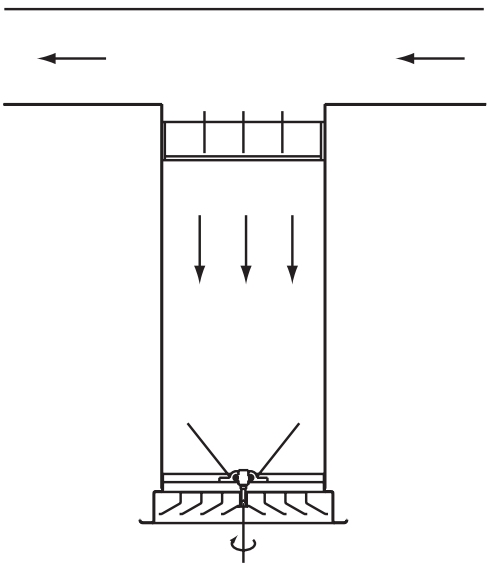
Note – the LD can only be selected with the MC or WR Circular Diffusers and the KRCP, CPD, LF perforated diffusers

MC / LD





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



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

Order Example

LD to suit MC-200/BLIND FIX/9010-Gloss/LD

- Diffuser type
- Diffuser diameter
- Fixing
- Finish
- Butterfly damper

Waterloo Product Range

GRILLES

A complete range of products suitable for all wall, ceiling and floor applications. Most grilles are made from aluminium and have a range of fixed or moveable blades designed to give performance whilst remaining aesthetically pleasing to the eye. Grilles are made to customer specified sizes and colours (PPM/G); standard colour PPM9010 (20% Gloss White). The range is complemented by the Aircell range of polymer Grilles.

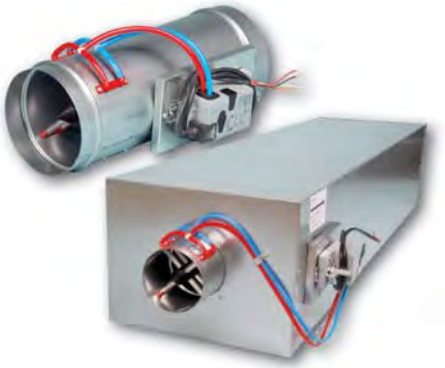
DIFFUSERS

Designed to be installed in various ceiling systems, we have a complete range to suit both performance and aesthetical requirements. Most diffusers are made from aluminium and can be ordered with or without plenum boxes for easy duct work. Diffusers can be ordered in customer specified colours (PPM/G); standard colour is PPM 9010 (20% Gloss White). This range is complemented by the Aircell range of polymer Diffusers.

ACTIVE AND PASSIVE CHILLED BEAMS

The finest quality range of high output active beams, used for ventilated heating and cooling applications. These units have 4 pipe coils to allow heating and cooling circuits to run simultaneously, giving constant and responsive control. The design allows a large optimum capacity and also allows the customer to specify the nozzle type and pitch for individual circumstances.

Active beams are made from steel to a large range of customer specified sizes and as such are suitable for various different ceiling systems. Standard finish is PPM 9010, however other (PPM/G) colours are available on request.



AIR VOLUME CONTROL DAMPERS

Pressure independent Variable Air Volume and Constant Air Volume dampers made from zintec plate. Most volume dampers are regulated with an electronic motor and sensors and are calibrated to customer specifications before delivery.

The Constant Air Volume damper requires no power source as it is controlled via a mechanical device and calibrated before delivery. All volume dampers can be ordered with a single or double (insulation) skin.

EXTERNAL LOUVRES

A quality range of products for external wall applications. Made from aluminium, with birdscreen or insect screen options. All louvres are made to customer specified sizes and (PPM/G) colours; standard colour is PPM 9006.

DISPLACEMENT

A full range of recessed, semi-recessed, floor, wall and corner units providing high ventilation efficiency and excellent comfort. The very low pressure involved also offer quiet installations. Displacement units are available as wall or floor mounted, or indeed integrated within the architectural design.

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Waterloo declare that, at the time of print, all products are in accordance with relevant directives, as identified by HEVAC and other European Organisations and will display the CE Marking where required.

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