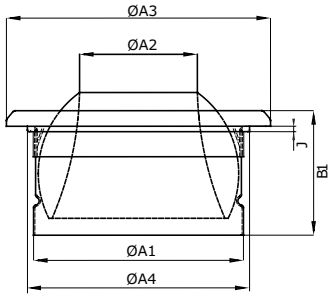
Supply Air Nozzles

EBD



EBD

Introduction

Waterloo EBD supply nozzles are capable of delivering air to spaces where long distance penetration and low noise levels are required. Suitable for cold and warm air supply applications, these versatile adjustable units are ideal for providing focussed ventilation or where precision is required. When grouped, penetration can be considerably enhanced.

EBD supply nozzles are made of pressed and spun aluminium, painted RAL 9010 20% gloss as standard although other colours are available upon request. Available in 7 sizes to suit standard duct dimensions. EBD's are manually adjusted to their chosen position, although a motorised option is available. Adjustment of up to 30° from the major axis is possible.

Product Description

EBD Supply Air Nozzle
B1 Belimo LM24 motor, 24v - 2 position or continuous
B2 Belimo LM230 motor, 230v - 2 position or continuous
DMPR Damper

Features

- 360° directional adjustment
- Excellent throw penetration
- High capacity
- Low noise levels
- Motorised version available

Finishes

PPM 9010 as standard
Other colours available on request

Selection Criteria

Temperature differential – 0 C (Isothermal)
Terminal velocity – 0.25 m/s
Noise level is sound power (L_w) in dBA less room absorption of 8 dB

Selection Example

EBD/P/-/100
Airflow Rate = 15 l/s
Temperature differential = -5° C
Throw = 14 m
Noise level = <20 dBA
Pressure Loss = 75 Pa
Fall = 4 m

Thermal effects resulting in rise and fall of plume	
Δt = -10	See Performance Table
Δt = -5	See Performance Table
Δt = 0	See Performance Table
Δt = +5	See Performance Table
Δt = +10	See Performance Table

Angle of discharge effect on rise and fall of plume	
Angle of Discharge	Throw Multiplier
+10	1.08
+20	1.21
+30	1.35

Weights

Dimensions	Weights kg
100	0.6
125	0.8
160	1.0
200	1.4
250	1.9
315	2.0
400	2.6

Dimensions

Dimensions	ØA1	ØA2	ØA3	ØA4	J	B1
100	98	50	135	105	2	79
125	123	64	169	130	0	89
160	148	72	196	162	5	118
200	199	108	255	215	5	138
250	248	136	300	260	8	178
315	313	174	384	325	10	195
400	398	230	462	408	10	214

Order Example

EBD/125/B1/2-Pos/DMPR/PPM9010

Type
Nominal size
Motor Type (if required)
Motor Option
Damper
Finish

Performance Table

EBD	Flow Rate	Throw	Pressure Loss	Lw	Rise/Fall Δt = 0	Rise/Fall Δt = ±5	Rise/Fall Δt = ±10
Size	l/s	m	Pa	dBA	m	m	m
100	10	9	35	<20	0.4	2.5	4.8
	15	14	75	<20	0.8	4	8.5
	20	19	150	20	1.2	6	-
125	15	9	12	<20	0.7	3.9	7
	20	11	23	<20	0.9	4	7.2
	30	17	50	20	1.2	4.3	8.5
	50	29	150	35	2.4	5.2	-
160	20	9	8	<20	1.1	3.8	-
	30	13	20	<20	1.4	5.8	-
	50	22	52	24	2.5	8.2	-
	70	30	100	34	3	-	-
200	30	10	5	<20	1.3	3.4	-
	50	17	18	<20	1.8	4.1	-
	70	23	33	21	2.9	6.8	-
	100	31	80	32	3.5	-	-
250	50	13	7	<20	2.5	4.2	-
	70	18	14	<20	3	5.8	-
	100	25	30	21	4	-	-
	150	33	70	32	5.8	-	-
315	70	15	<5	<20	3.6	4.4	-
	100	21	10	<20	4.8	5.6	-
	150	30	28	20	6	-	-
400	70	12	<5	<20	4	5	-
	100	17	8	<20	6.4	7.4	-
	150	24	15	<20	8.2	-	-
	200	32	30	25	9.8	-	-

Table content for terminal velocity of 0.25 m/s