Linear Diffusers
DSL DSL-D

Waterloo

Introduction
The Waterloo large format linear diffusers series DSL are ideal for most commercial supply and exhaust systems and integrate well with ceiling tile and lighting layouts. The clear design provides an extremely low air resistance characteristic and this makes the diffuser ideal for any fan coil or induction system which is pressure sensitive. Single or multislot diffusers are available with fixed 1 or 2 way air patterns; multislot 2 way diffusers may be adjusted to suit site conditions by changing vanes. The diffusers are constructed from aluminium alloy extrusions fixed or clipped to cross stays. Internal vanes are removable for installation, access or cleaning.

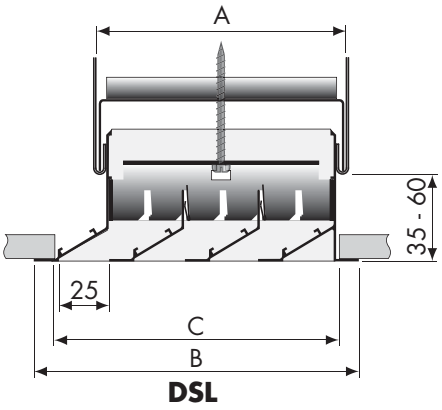
Product Description
DSL	Large format one way discharge
DSL-D	Large format two way discharge
Ends	End caps
OBSS	Allen key operated opposed blade damper
ED	Equalising deflector

Features
- Ultra low pressure loss characteristics suited to fan coil and induction supply systems
- Single or multislot to suit most air handling requirements
- Clean design for practical integration with lighting or ceiling systems
- Fixed 1 or 2 way pattern to prevent unwanted adjustment of air diffusion

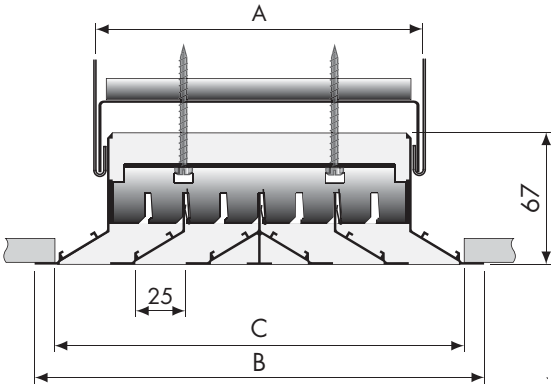
Finishes
PPM9006 (RAL 9006 Matt Silver)
PPM9010 (RAL 9010 20% Gloss White)
PPG9010 (RAL 9010 Gloss White)
Other colours available on request

Weights
0.4N + 0.6 kg/m
N = number of slots

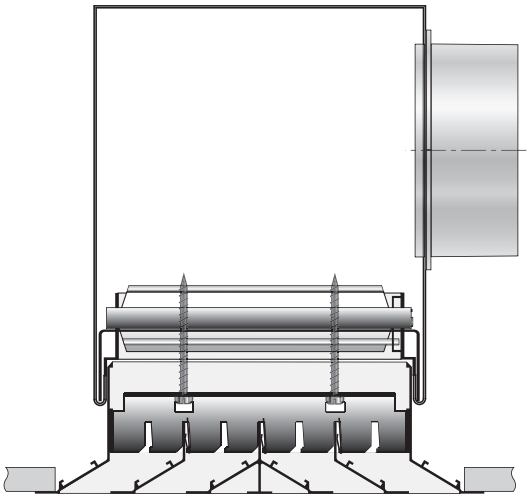
Sizes
From 1 to 8 slots wide
1500mm long (excluding ends)
Continuous diffuser lengths are supplied in sections for butt jointing on site (Alignment plates supplied)



DSL



DSL-D

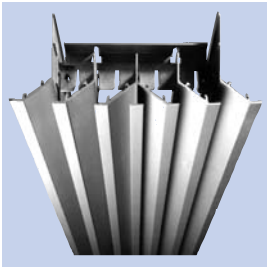

DSL-D + OBSS + Plenum

Order Example
DSL/3000/S1/PPM9010/ENDS
Type
Length
N° of slots
Finish
End caps

Type	A	B	C
DSL-1	46	89	70
DSL-2	84	127	108
DSL-3	122	165	146
DSL-4	160	203	185
DSL-5	198	241	222
DSL-6	237	279	260
DSL-7	275	317	298
DSL-8	313	355	336

Type	A	B	C
DSL-D11	84	154	137
DSL-D12	122	192	175
DSL-D22	160	230	213
DSL-D23	198	268	251
DSL-D33	237	306	289
DSL-D34	275	345	327
DSL-D44	313	382	365

*Please specify number of slots in each direction



Selection Criteria

From a ceiling height of 3.0m, increase throw by 300mm for each 300mm increase in ceiling height.

Horizontal diffusion is based on a cooling differential of 11°C

NR is sound pressure level based on a room absorption of 8dB.

V_r = mean room air velocity (m/s)

V_t = terminal velocity of supply air jet (m/s)

Selection Example DSL/2000/S4

Total air flow rate 400 l/s
Air flow rate per metre = 200 l/s/m
Minimum throw 6.8m (8.5 x 0.8 factor)
Maximum throw 12m (15.0 x 0.8 factor)
Pressure drop 13Pa
Noise level NR22 (NR25 - 3db length correction)

DSL Exhaust Corrections
Pressure Loss Multiply x 2
Noise Level +5 dB

Equalizing Deflector Corrections				
Diffuser Length (m)	0.5	0.75	1.0	1.5
Throw Multiplier using ED blades	0.33	0.42	0.48	0.54

Length Corrections					
Active Length (m)	0.5	1.25	2.0	2.5	3.0
NR Correction	-8	-5	-3	-2	0
Throw Multiplier	0.45	0.65	0.8	0.9	1.0

Performance Nomogram