



Operating and Maintenance

DSL Linear Diffusers





DSL Diffuser Installation

Product Description

DSL Large format one way discharge

DSL-D Large format two way discharge

Tools Required

- 1 x Medium Cross Head Screwdriver

Note: Power tools are not recommended for this installation due to the risk of damage caused by the over-tightening of the hanging bracket screws.

Plenum Box Installation

1- Align centerline of plenum/duct with centerline of ceiling opening.

2- Install the plenum chamber as shown in **(Figure 1)** using the hanging brackets provided at each corner.

3- Ensure the plenum chamber is firmly retained on the drop rods (supplied by others) with the locknuts above and below the hanging brackets.

4- Finally check that the plenum is level and is aligned with the ceiling opening. The bottom of the plenum should be within 35-60mm from the underside of the ceiling for the DSL.

Note: It is essential that all plenums are secured in the ceiling void before the final fix diffuser installation. We strongly recommend for continuous diffuser runs, longitudinal angles (supplied by others) are attached to the sides of the plenum runs to ensure linear alignment.

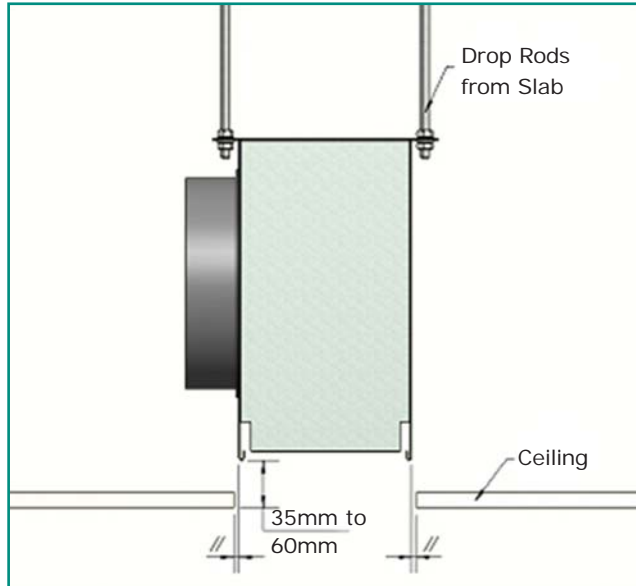


Figure 1- Plenum installation detail



DSL Diffuser Installation

Diffuser Installation

- 1- Remove any 'inner vanes' that coincide with 'cross stay' fixing hole centres and store to avoid damage.
- 2- Position 'mounting brackets' within the plenum/ duct return hem to coincide with the diffuser cross stay centres.
- 3- Offer diffuser into ceiling opening and locate the 50mm screws through cross stays into mounting brackets, taking care not to dislodge the mounting brackets from the plenum hems during this procedure.
- 4- With diffusers flange approximately 25mm below ceiling surface, fix alignment strips into extruded tracks of 'outer frame' and 'inner vanes'. Install adjoining diffuser sections, and slide alignment strips into adjacent section.
- 5- Progressively tighten the hanging screws until the diffuser section(s) is/are pulled up to the ceiling surface.
- 6- Replace flow control vanes and inner vanes exercising care to ensure that these are inserted to the correct side of the stay bracket spring (item 10 on **Figure 2**).

7- DSL Single Slot (DSL-1)

Due to the angled bladed design of a 1 slot diffuser it is impossible to use the components as mentioned above for fixing onto the plenum. Our recommendation is to use a straight sided plenum (ie No Hem) and to drill and rivet through the diffuser side stack. Obviously before selecting a DSL-1 customers should ensure there is access available to the ceiling void for fixing purposes.

Note: 2 HANGING BRACKETS ARE SUPPLIED FOR DIFFUSER LENGTHS UP TO 900mm

3 HANGING BRACKETS ARE SUPPLIED FOR DIFFUSER LENGTHS 900-1500mm

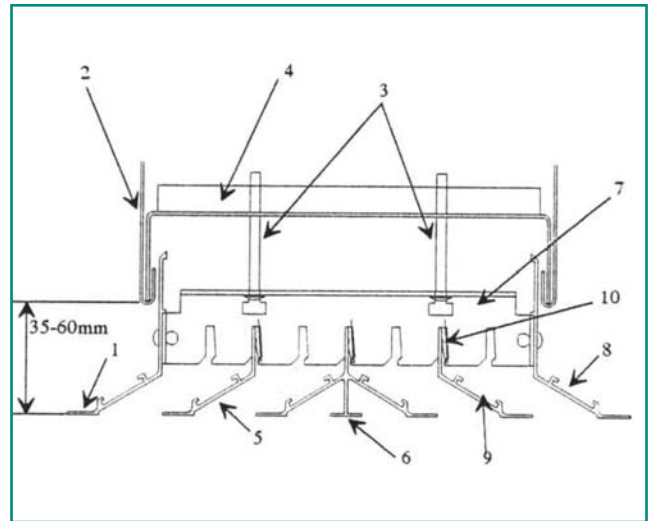


Figure 2- DSL Diffuser

ITEM	DESCRIPTION
1	DSL DIFFUSER
2	PLENUM BOX
3	RETAINING SCREW
4	MOUNTING BRACKET
5	REMOVABLE INNER VANE
6	CENTRE VANE (2 WAY ONLY)
7	DSL STAY BRACKET
8	OUTER ALIGNMENT SLOTS
9	INNER ALIGNMENT SLOTS
10	STAY BRACKET SPRING



DSL Diffuser Installation

Dummy Sections

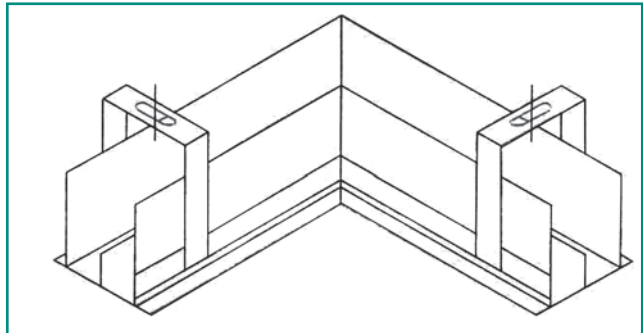
1- Fit and install, as shown in **Figure 3**, using dummy hanging brackets at each end of diffuser. (Note - dummy hanging brackets are supplied to order).

2- Alternatively the diffuser sections can be installed by using support wires or straps (supplied and fitted by others).

3- Fit alignment strips as described in diffuser Installation.

DSL - Straps can be provided to the rear of the dummy section with a hole located centrally for drop rod fixing from the slab.

Figure 3- Installation detail



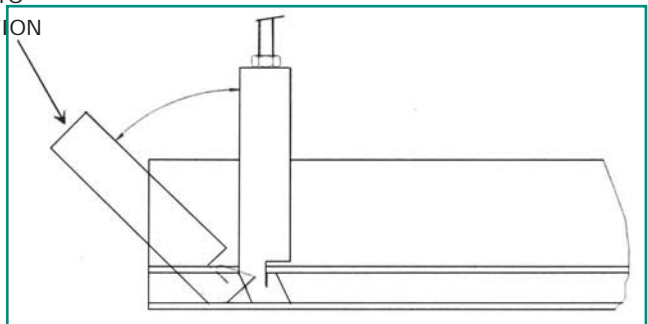
MITRE SECTION
(2 OFF DUMMY HANGING BRACKETS)

Mitre Sections

1- It is recommended that mitres are installed before straight sections of live or dummy diffusers.

2- Install as shown in **Figure 3** using hanging brackets in positions indicated, fit alignment strips as described in Diffuser Installation.

ROTATE TO 45 DEG &
SLIDE ALONG DIFFUSER TO
REQUIRED FIXING POSITION



Note:

- 1- INSERT BRACKETS (2 PER DIFFUSER LENGTH OF 1 METRE)
- 2- SLIDE TO DESIRED POSITION
- 3- FIX TO DROP RODS



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

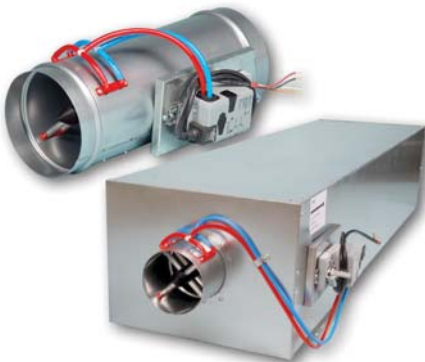
Designed to be installed in various ceiling systems, we have a complete range to suit both performance and aesthetic requirements. Most diffusers are made from aluminium and can be ordered with or without plenum boxes for easy duct work. Diffusers can be ordered in customer specified colours (PPM/G); 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.

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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.

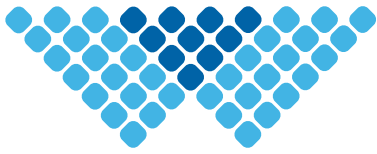
EXTERNAL LOUVRES

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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