Slot diffuser LD-15

Application
Slot diffuser LD-15 is designed to supply air in rooms with floor to ceiling heights from 2.5 to 4 m. They are primarily designed for the supply of cold air in applications with high comfort demands.

Description
LD-15 slot diffuser is of a one-slot construction. The diffuser face plate consists of aluminium sections with built-in cylindrical deflectors made of recycled plastics. Individually adjustable deflectors allow continuous adjustment of discharge angle within the 360° range, as well as adjustment of air flow rate. The diffuser air flow can be completely shut by means of the cylindrical deflectors. The plenum box is made of galvanised sheet steel.

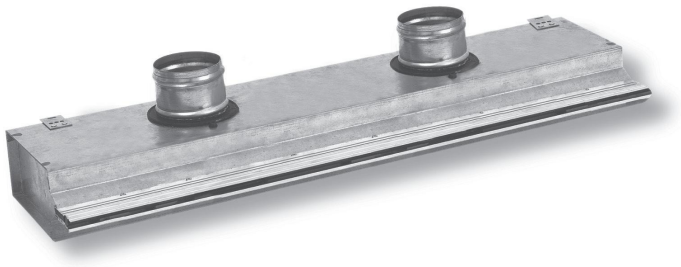
No. of spigots	Standard lengths (L)
1	300, 400, 500, 600, 700, 800, 900, 1000
2	1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000

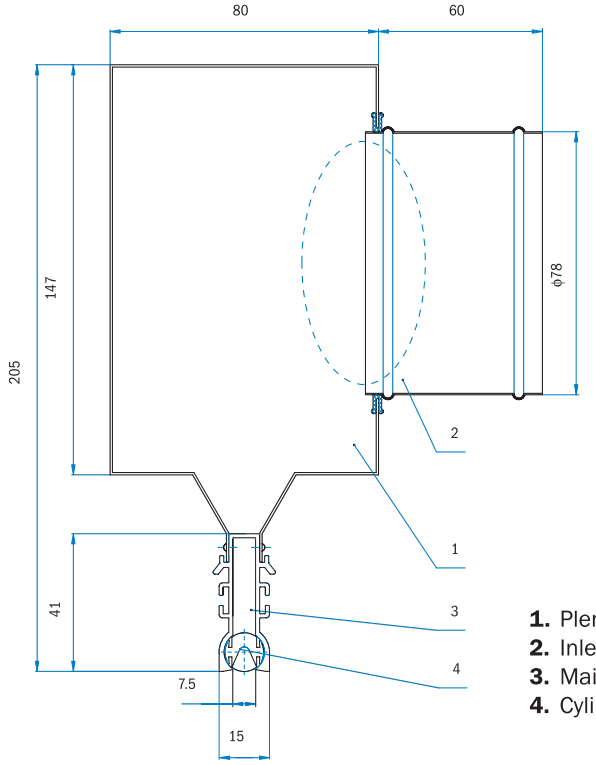
Position of inlet spigots
The positions of inlet spigots are equal to those of LD-13 and LD-14 slot diffusers. See drawing and table on page 182.

Slot diffuser face plate designs
Slot diffuser face plates are made of linear or angular ended sections, which allow the diffusers to be joined at different angles. Angular ended sections are not fitted with air direction controls.

Cylindrical air deflectors
Cylindrical deflectors are the most important components of a slot diffuser. They allow free adjustment of the air flow rate.

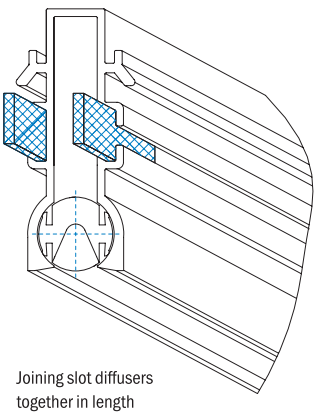
Joining slot diffusers together in length
Sections can be joint together by means of connecting plates. Total length of so joint sections is not limited.





1. Plenum box
2. Inlet spigot
3. Main section
4. Cylindrical air deflector

Installation openings: 15 x L (diffuser length)



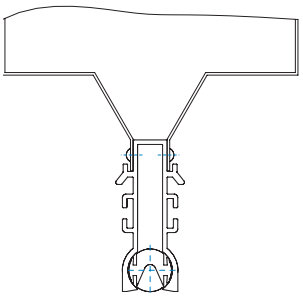
Joining slot diffusers together in length

Fixing of the plenum box onto a LD-15 slot diffuser

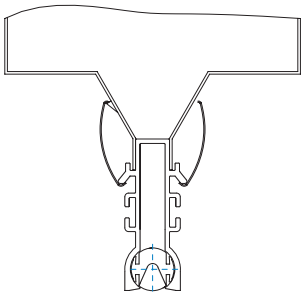
- With self-tapping screws (designation **U**)
- With spring clamps (designation **S**)

Installation methods

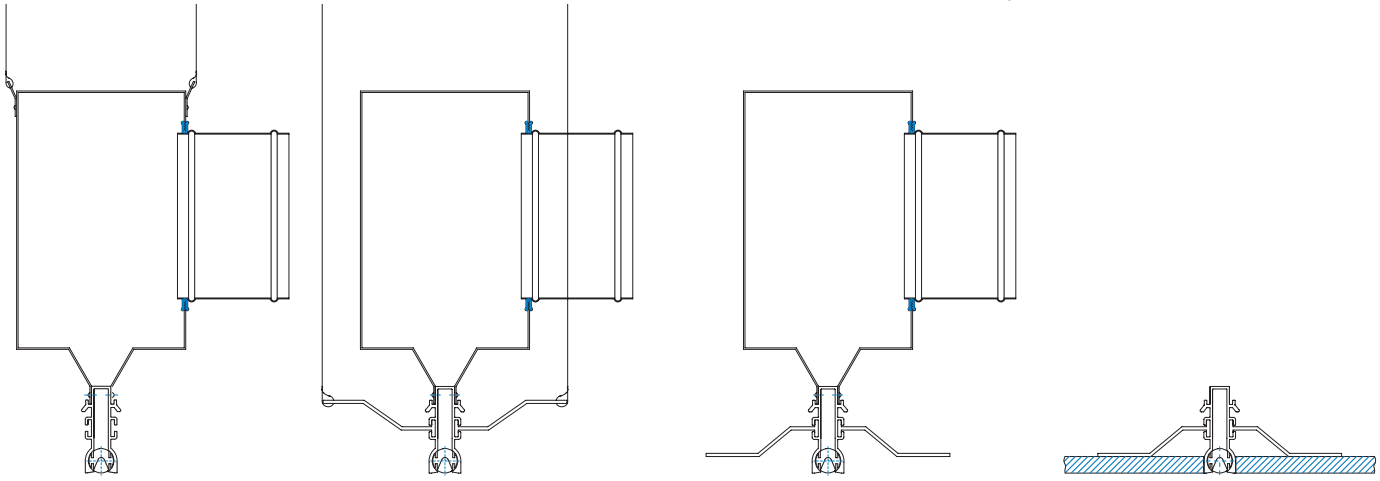
- Installation with suspension brackets on the plenum box (designation **P**)
- Instalaltion with suspension brackets on the main section (designation **R**)



Fixing of the diffuser to the plenum box with self-tapping screws (U)



Fixing of the diffuser to the plenum box with a spring clamps (S)



Installation with suspension brackets on the plenum box (P)

Installations with suspension bracket on the main section (R)

Ordering key

LD-15/B/K/M/S/P/I L=1500

Length L=300, 400, 500, 600 ..., 2000 (single piece)

I5 Thermal insulation (polyethylene), 5 mm thick, on the outside of the plenum box.
I9 Sound and thermal insulation (from -40 °C to 105 °C), 9 mm thick, on the outside of the plenum box (synthetic rubber based material).
I19 Sound and thermal insulation (from -40 °C to 105 °C), 19 mm thick, on the outside of the plenum box (synthetic rubber based material).

P Installation of the diffuser with suspension brackets on the plenum box
R Installation with suspension brackets on the main section

S Fixing of the diffuser to the plenum box with a spring clamp
U Fixing of the diffuser to the plenum box with self-tapping screws

M Volume control damper
K Plenum box
B Black deflectors
W White deflectors

Note:

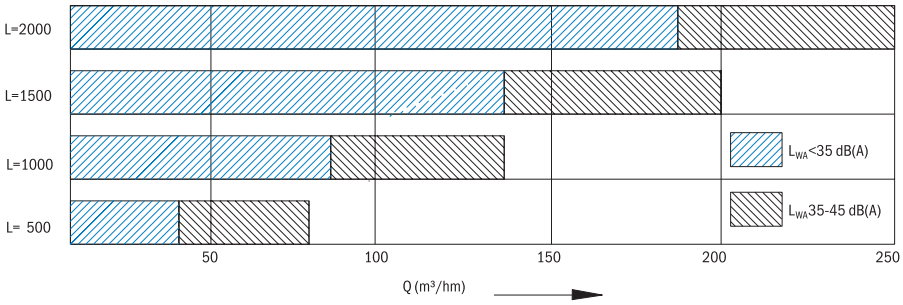
- Please specify the deflector colour in your order.
- Standard eloxal colour of the aluminium section is the original aluminium colour. Other colours shall be specified in the order.
- When installing in cooling ceilings, consult the manufacturer.
- Versions with insulation on the inside of the plenum box are also available.

Technical data

Free surface, per 1 m of length:
Aef=0.004559 m².

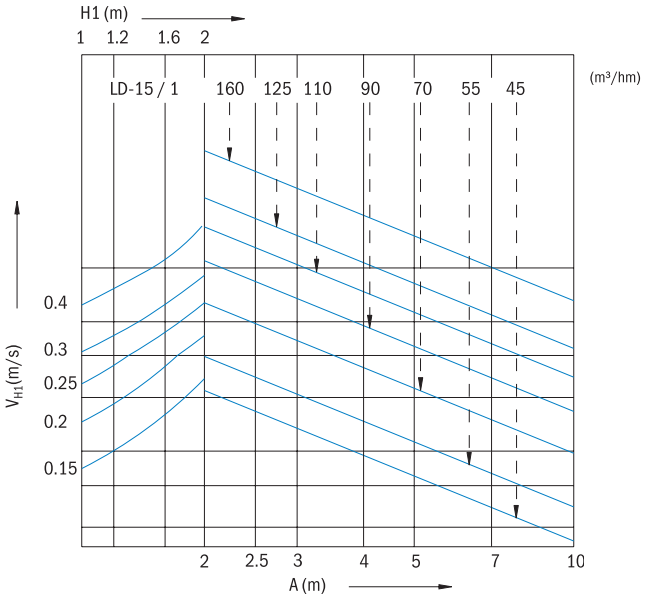
Air flow rate per 1 m of length:
Q=20-70 m³/hm.

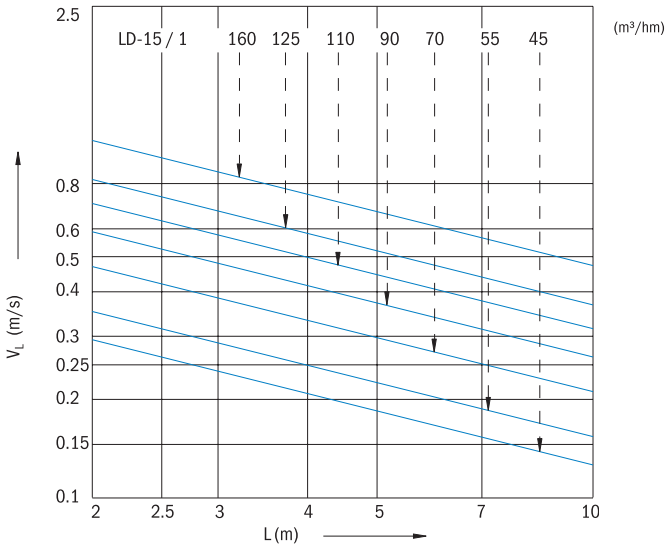
Fast selection diagram



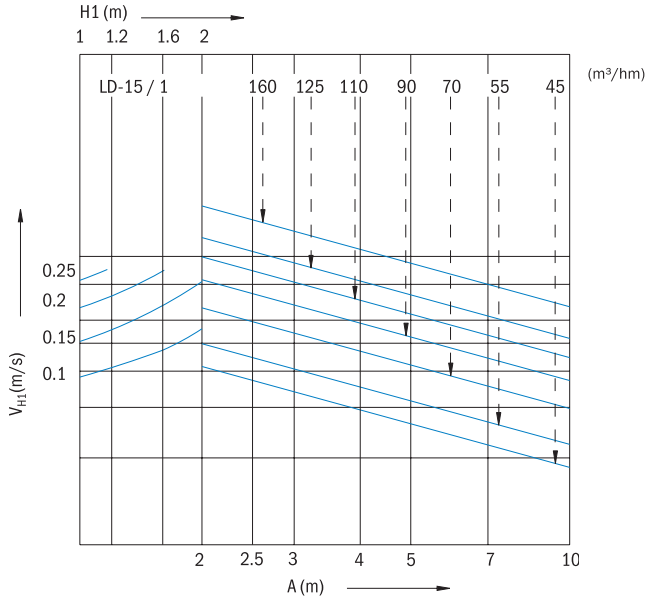
Air velocity diagrams, at different throw distances

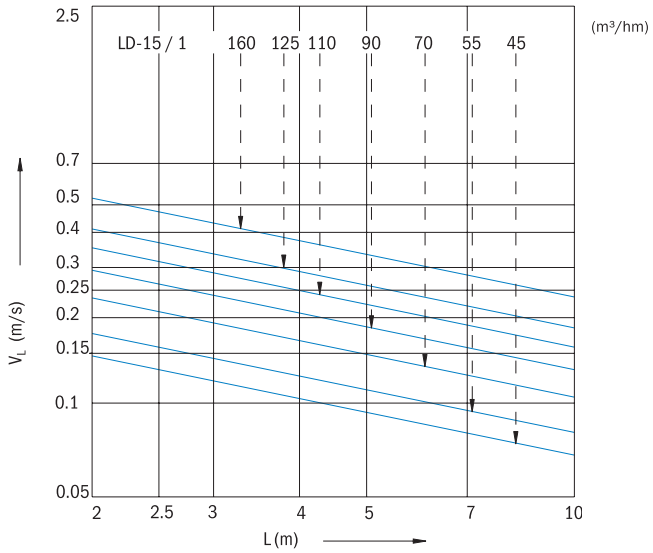
One or two sided horizontal discharge:



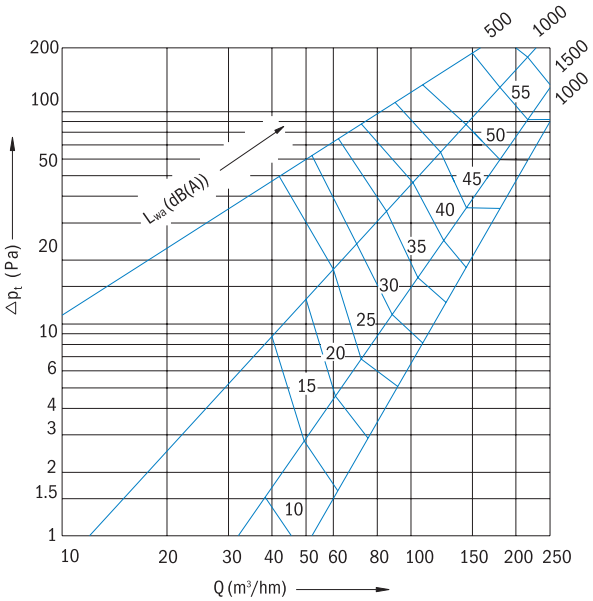


Alternate sided horizontal discharge:





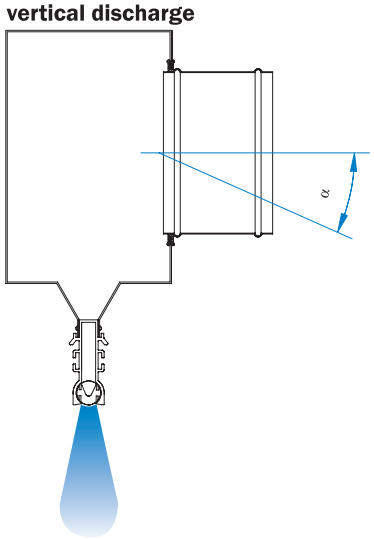
Sound power level and pressure drop



	α=0°			α=45°			α=90°		
Q (m³/h)	**100**	**150**	**200**	**100**	**150**	**200**	**100**	**150**	**200**
L=500	Data in the diagram			+5	+7	+10	+15	+32	+35
L=1000	Data in the diagram			+10	+12	+15	+33	+62	+100
L=1500	Data in the diagram			+4	+4	+8	+32	+63	+106
L=2000	Data in the diagram			+1	+2	+3	+27	+55	+81

α = 0° Control damper in the inlet spigot is fully opened
α = 45° Control damper in the inlet spigot is half opened
α = 90° Control damper in the inlet spigot is fully closed

ΔP_t correction (in Pa) in cases of vertical discharge



ΔP_t correction (in Pa) in cases of inclined discharge

	α=0°			α=45°			α=90°		
Q (m³/h)	**100**	**150**	**200**	**100**	**150**	**200**	**100**	**150**	**200**
L=500	Data in the diagram			+5	+7	+5	+12	+28	+60
L=1000	Data in the diagram			+8	+25	+33	+29	+66	+116
L=1500	Data in the diagram			+4	+11	+14	+29	+63	+101
L=2000	Data in the diagram			+1	+5	+7	+23	+52	+87

α = 0° Control damper in the inlet spigot is fully opened
α = 45° Control damper in the inlet spigot is half opened
α = 90° Control damper in the inlet spigot is half opened