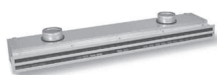


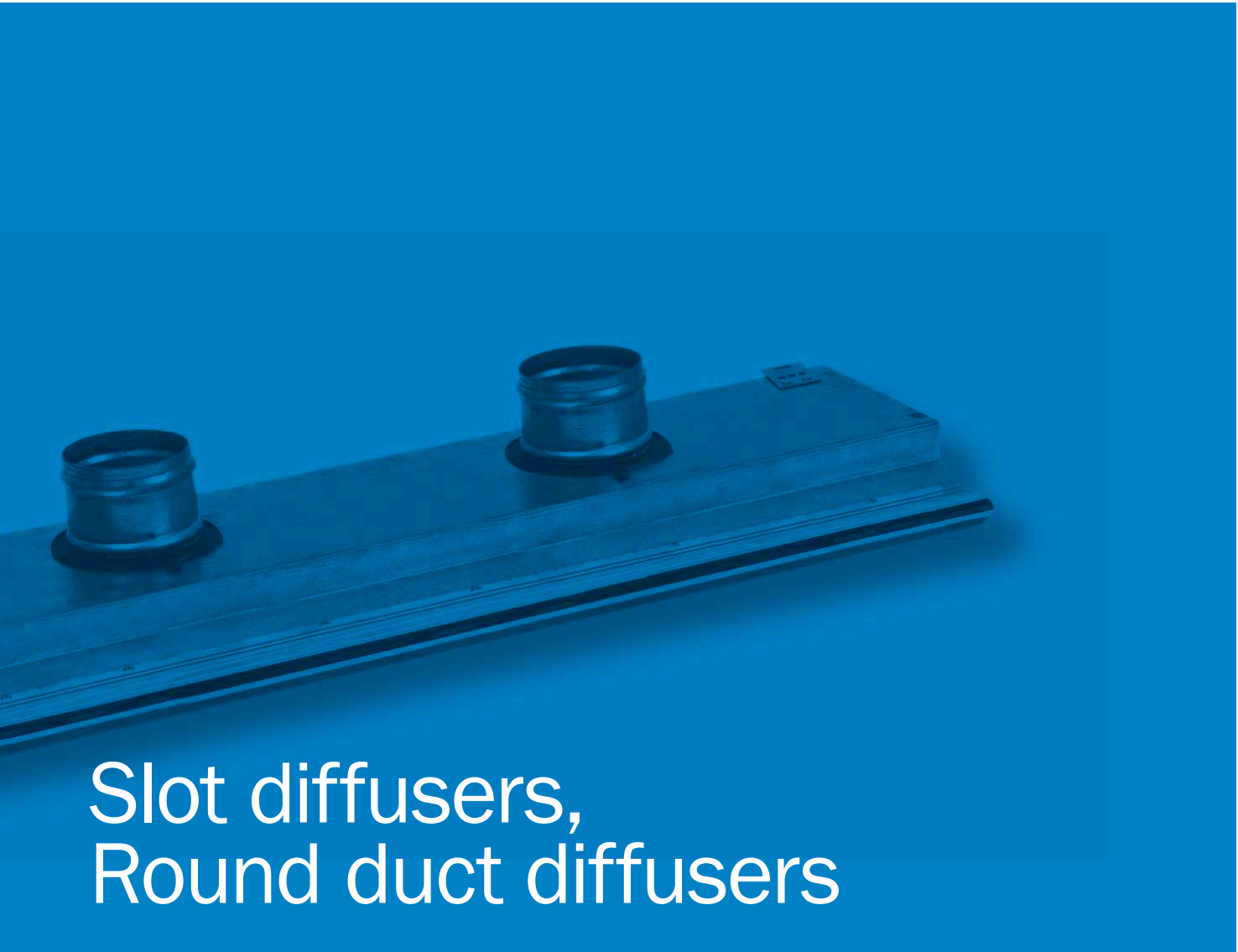
04



Slot diffusers



Round duct diffusers



Slot diffusers, Round duct diffusers

Slot diffusers are designed for air supply in rooms with floor to ceiling heights of 2.5 to 4 m. They are suitable for supplying either cold or warm air, in particular in applications where air conditioning comfort demands are stringent. Due to their high induction rate and rapid decrease of temperature difference, these diffusers are also suitable for variable systems.

Round duct diffusers can be installed at various locations within the duct network. They are suitable for supplying either cold or warm air.

VENTILATING GRILLES,
VENTILATING VALVES

CIRCULAR DIFFUSERS,
SQUARE DIFFUSERS

SWIRL DIFFUSERS,
VARIABLE SWIRL
DIFFUSERS

SLOT DIFFUSERS,
ROUND DUCT DIFFUSERS

AIR DISPLACEMENT
UNITS

SUPPLY AIR NOZZLES

EXTERNAL ELEMENTS

AIR FLOW
CONTROL UNITS

SOUND ATTENUATORS,
SOUND ATTENUATING
LOUVRES

Overview

Slot diffusers

Slot diffusers are designed for air supply in rooms with floor to ceiling heights of 2.5 to 4 m. They are suitable for supplying either cold or warm air, in particular in applications where air conditioning comfort demands are stringent. Due to their high induction rate and rapid decrease of temperature difference, these diffusers are also suitable for variable systems.

Nozzle diffusers

Nozzle diffusers LD-19 are designed for supply of warm or cold air and can be mounted in the wall or in the ceiling. Adjustable deflectors allow us to set different directions of air discharge.

Nozzle diffusers LD-20 are designed to supply low quantities of air on big window surfaces to prevent condensation (ceiling installation near windows) or for big throws for cooling when wall installation (Coanda effect).

Panel design slot diffusers

A panel design slot diffuser consists of a face plate and a plenum box. Cylindrical air deflectors, equal to those in LD-13 and LD-14 diffusers, are installed in the slots, to allow continuous adjustment of discharged air direction within the 360° range. On order, diverse plate designs and slot patterns are available.

Floor slot diffusers

LD-16N floor slot diffusers are a suitable solution for swimming pools and similar rooms with large glass surfaces and windows. They are designed for installation in the floor. Warm air is supplied in the upwards direction, towards the window.

Round duct diffusers

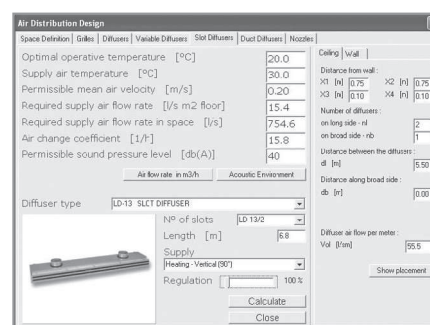
Round duct diffusers can be installed at various locations within the duct network. They are suitable for supplying either cold or warm air.

Software: KLIMA ADE

LD and SKD Software:

- available calculation and graphical display of air supply for slot diffusers LD-13, LD-14 and LD-15
- available calculation of technical specifications for the application of wall- or ceiling-mounted slot diffusers
- available calculation of ceiling-mounted multiple-diffuser configuration air supply
- application of vertical or horizontal slot diffuser air supply into the room, depending on the mode of operation – heating or cooling
- the package supports basic air supply mode models for the SKD-13 round duct diffuser
- available calculation of SKD-13 round duct diffusers cooling mode: single-side and two-side horizontal supply and alternating horizontal supply heating mode: vertical air supply

Software: Klima ADE



Slot diffusers



LD-13

LD-14



LD-15

LD-18

Nozzle diffusers



LD-19

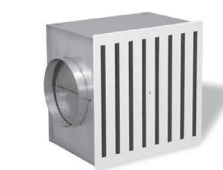
LD-20

Floor slot diffusers



LD-16N

Panel design slot diffusers



LDP-14

Round duct diffusers












SKD-13D

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Nozzle diffusers LD-20	219
Floor slot diffusers LD-16N	230
Panel design slot diffusers LDP-13, LDP-14	232
ROUND DUCT DIFFUSERS	234
Round duct diffusers SKD-13	234

Legend of symbols

- | | | |
|--|---|---|
| Al Element is made of aluminium profiles, aluminium sheet or aluminium casting. |  Element is intended to be built in the wall. |  Element is suitable for the supply of cool air (cooling). |
| St Element is made of steel sheet. |  Element is intended to be built in the ceiling or in the wall. | M Element allows regulation by electric motor (Belimo electric motors). |
|  Element is powder painted in standard RAL 9010 colour. Other desired colour is to be specified in the order. |  Element for air conditioning of rooms with floor to ceiling heights room up to 4 m. | F Element is intended for air filtration. The filter of class ... is built in. |
|  Shady symbol means possibility of optional material, surface protection, motor version, ... |  Element for air conditioning of rooms with floor to ceiling heights from 6 to 15 m. | CD The possibility of the automatic selection and calculation of the technical characteristics of grilles and difusers in regard to the given conditions with the assistance of the Klima ADE program. |
|  Element is intended to be built in the floor. |  Element is suitable for the supply of warm air (heating). | INOX The element is made of stainless sheet steel AISI 304. |

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

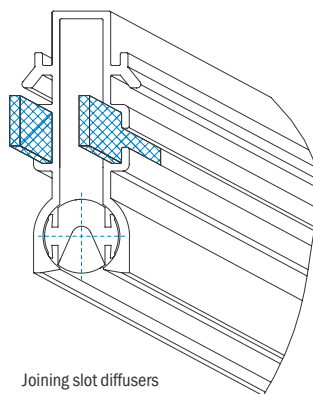
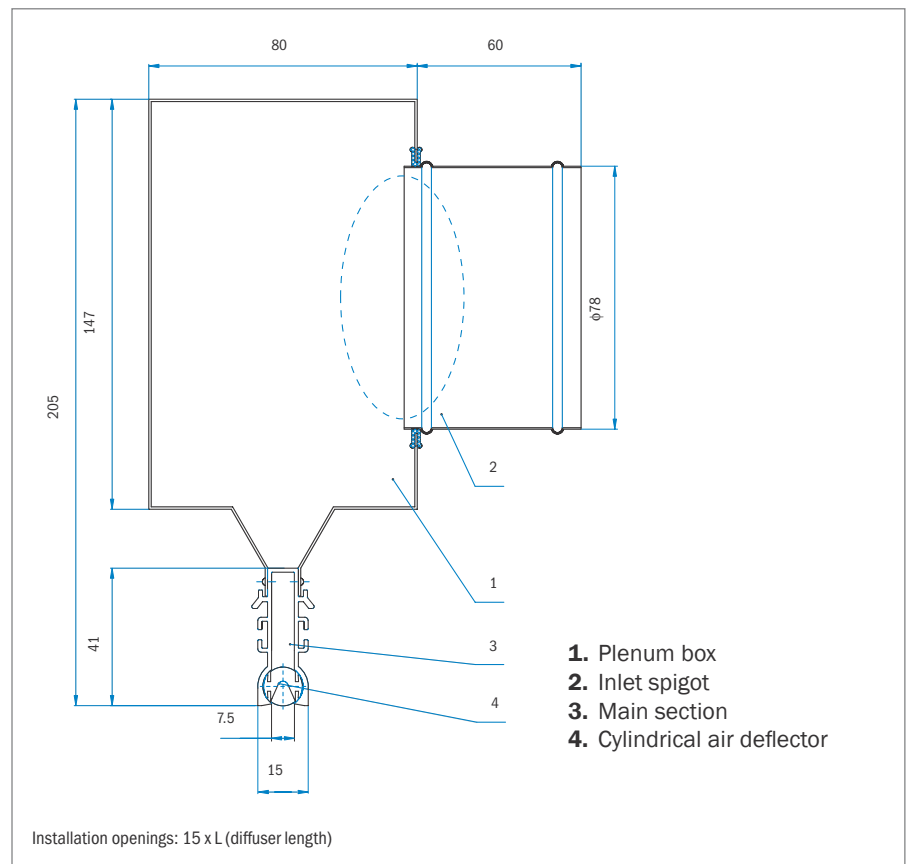
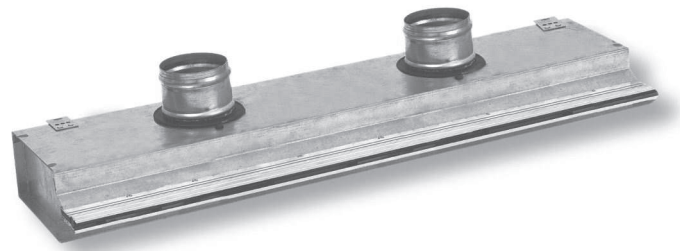
Slot diffuser face plates are made of linear or angular ended sections, which allow the diffusers to be joined at different angles. Angular ended sections are not fitted with air direction controls.

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.



Joining slot diffusers together in length

VENTILATING GRILLES,
VENTILATING VALVES

CIRCULAR DIFFUSERS,
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SWIRL DIFFUSERS,
VARIABLE SWIRL
DIFFUSERS

SLOT DIFFUSERS,
ROUND DUCT DIFFUSERS

AIR DISPLACEMENT
UNITS

SUPPLY AIR NOZZLES

EXTERNAL ELEMENTS

AIR FLOW
CONTROL UNITS

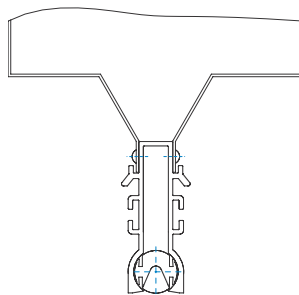
SOUND ATTENUATORS,
SOUND ATTENUATING
LOUVERES

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

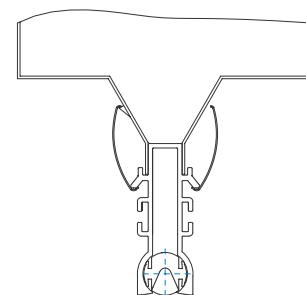
- With self-tapping screws (designation **U**)
- With spring clamps (designation **S**)

Installation methods

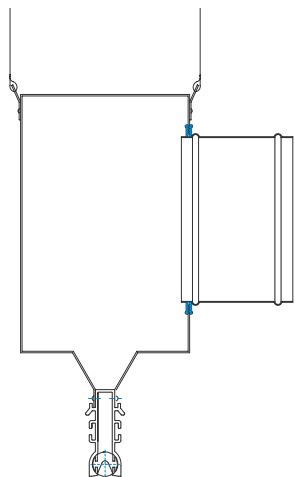
- Installation with suspension brackets on the plenum box (designation **P**)
- Installation with suspension brackets on the main section (designation **R**)



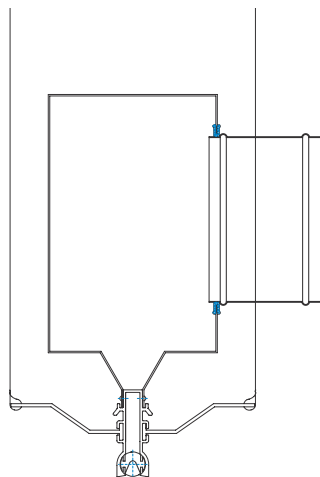
Fixing of the diffuser to the plenum box with self-tapping screws (U)



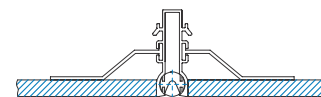
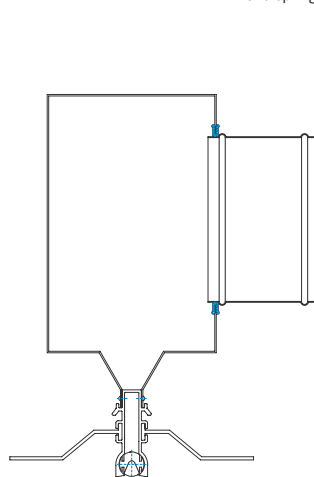
Fixing of the diffuser to the plenum box with a spring clamps (S)



Installation with suspension brackets on the plenum box (P)

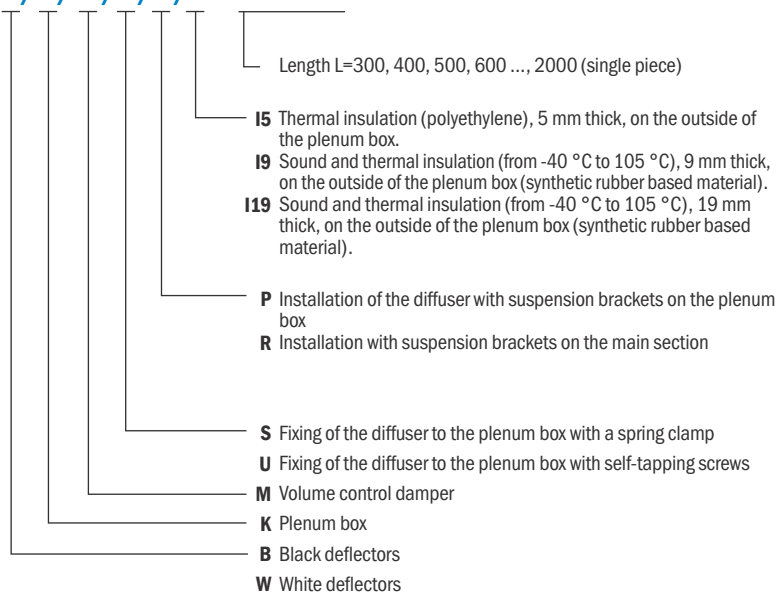


Installations with suspension bracket on the main section (R)



Ordering key

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



Note:

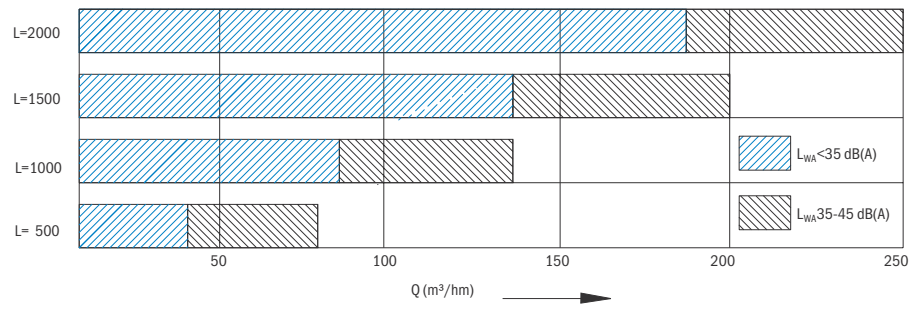
- Please specify the deflector colour in your order.
- Standard eloxal colour of the aluminium section is the original aluminium colour. Other colours shall be specified in the order.
- When installing in cooling ceilings, consult the manufacturer.
- Versions with insulation on the inside of the plenum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

Technical data

Free surface, per 1 m of length:
A_{ef}=0.004559 m².

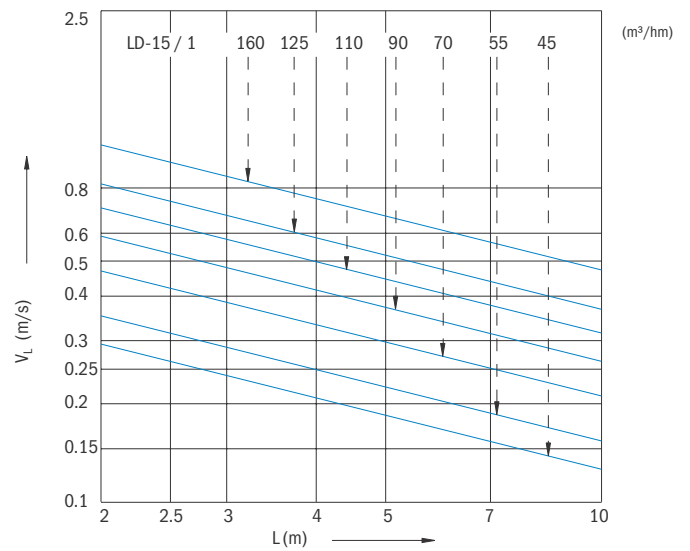
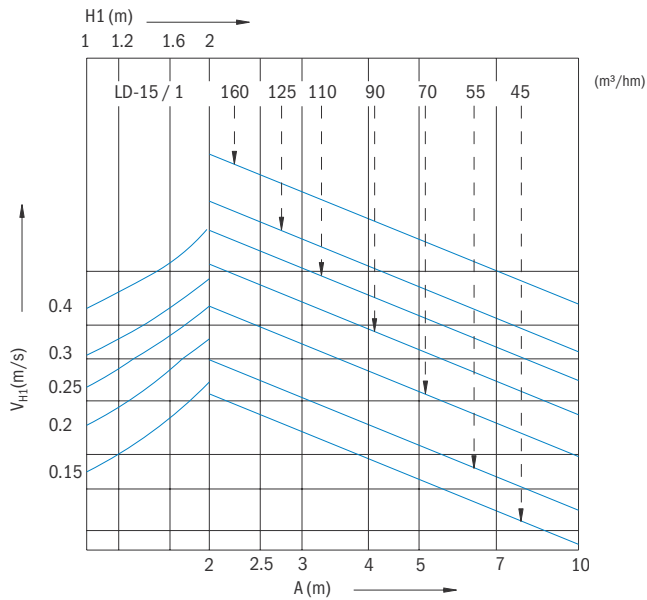
Air flow rate per 1 m of length:
Q=20-70 m³/hm.

Fast selection diagram

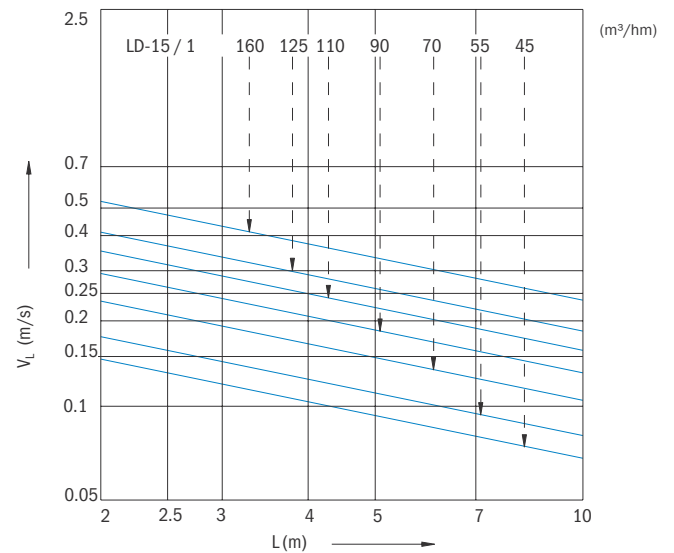
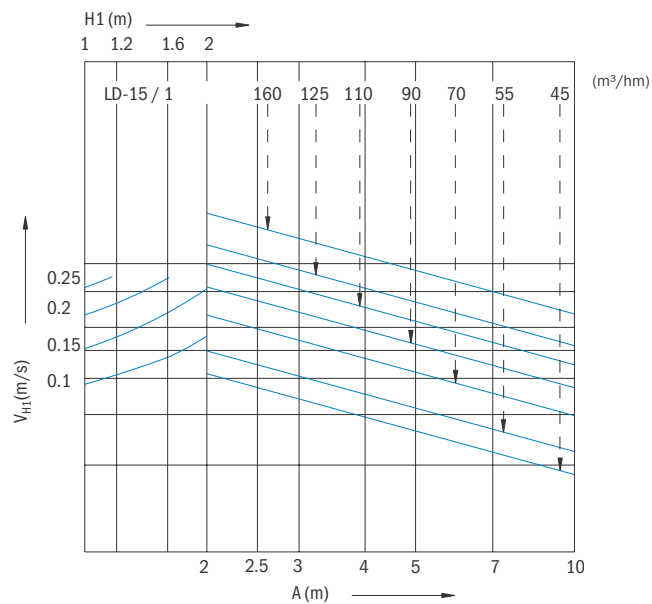


Air velocity diagrams, at different throw distances

One or two sided horizontal discharge:



Alternate sided horizontal discharge:



VENTILATING GRILLES,
VENTILATING VALVES

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ROUND DUCT DIFFUSERS

AIR DISPLACEMENT
UNITS

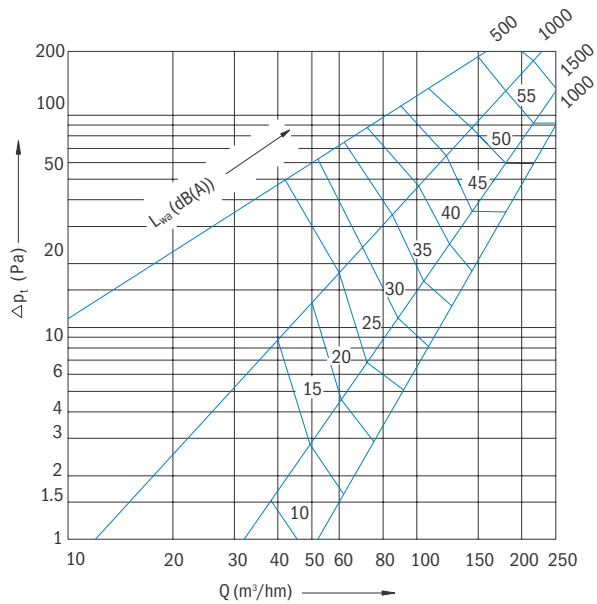
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SOUND ATTENUATING
LOUVRES

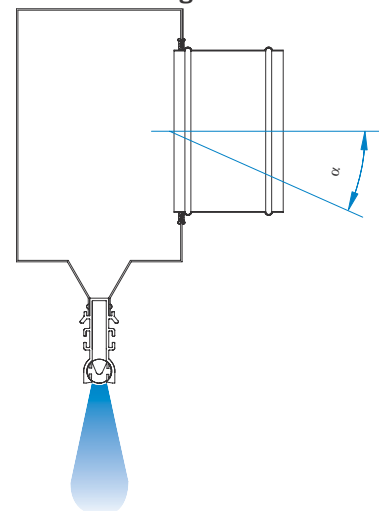
Sound power level and pressure drop



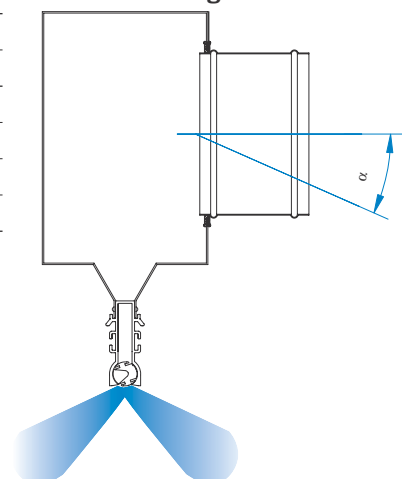
Q (m³/h)	α=0°			α=45°			α=90°		
	100	150	200	100	150	200	100	150	200
L=500	Data in the diagram			+5	+7	+10	+15	+32	+35
L=1000	Data in the diagram			+10	+12	+15	+33	+62	+100
L=1500	Data in the diagram			+4	+4	+8	+32	+63	+106
L=2000	Data in the diagram			+1	+2	+3	+27	+55	+81

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



Q (m³/h)	α=0°			α=45°			α=90°		
	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