



Z-LVS

FOR SUPPLY AIR

Circular disc valves with manually adjustable annular gap

- Nominal sizes 100, 125, 160, 200 mm
- Volume flow rate range 10 – 90 l/s or 36 – 324 m³/h
- Diffuser face made of formed sheet steel, powder-coated
- For variable and constant volume flows
- For ceiling and wall installation
- Easy to install
- Volume flow rate balancing by simply turning the valve disc
- Inexpensive solution for small rooms

General information



Application

- Disc valves are used as supply air devices in small rooms
- Horizontal radial supply air discharge
- For variable and constant volume flows
- For room heights up to 4 m (lower edge of suspended ceiling)
- For walls and suspended ceilings

Special features

- Continuous volume flow rate balancing by turning the valve disc

- Easy to install

Nominal sizes

- 100, 125, 160, 200

Parts and characteristics

- Valve disc with threaded spindle and lock nut
- Valve casing including cross bar with orifice for the threaded spindle
- Installation subframe that accommodates the disc valve

Materials and surfaces

- Valve casing and valve disc made of sheet steel
- Installation subframe, threaded spindle and lock nut made of galvanised steel
- Foam seal
- Valve casing and valve disc powder-coated, similar to RAL 9010

Standards and guidelines

- Sound power level of the air-regenerated noise measured according to EN ISO 5135

Maintenance

- Low maintenance as construction and materials are not subject to wear
- Inspection and cleaning to VDI 6022

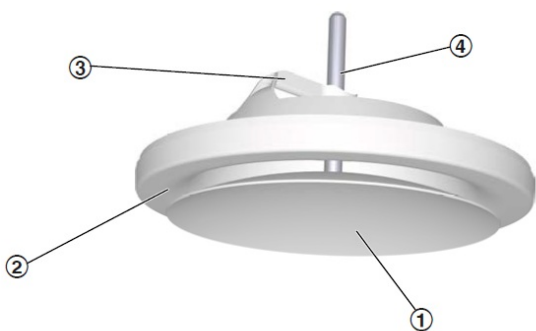
TECHNICAL INFORMATION

Function, Technical data, Quick sizing, Specification text, Order code



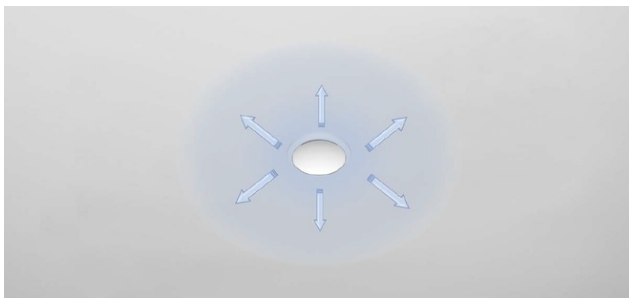
Supply air valves direct the air from air conditioning systems into the room. The resulting airflow induces high levels of room air, thereby rapidly reducing the airflow velocity and the temperature difference between supply air and room air. The result is a mixed flow ventilation in comfort zones, with good overall room ventilation, creating only very little turbulence in the occupied zone. Type Z-LVS disc valves have a valve disc that can be turned. Horizontal air discharge is radial. This valve disc facilitates volume flow rate balancing for commissioning.

Schematic illustration



- ① Valve disc
- ② Valve casing
- ③ Cross bar
- ④ Threaded spindle with lock nut

Horizontal air discharge



| | |
|---------------------------------|---|
| Nominal sizes | 100, 125, 160, 200 mm |
| Minimum volume flow rate | 10 - 30 l/s from 36 - 108 m ³ /h |
| Maximum volume flow rate | 25 - 90 l/s from 90 - 324 m ³ /h |

Quick sizing tables provide a good overview of the volume flow rates and corresponding sound power levels and differential pressures.

Z-LVS/100, Z-LVS/125, sound power level and total differential pressure

| NS | | | Airway width = 12 mm | | Airway width = 10 mm | | Airway width = 8 mm | |
|------------|----------------------|-----------------------|----------------------|-------------|----------------------|-------------|---------------------|-------------|
| | q _v [l/s] | q _v [m³/h] | Δpt [Pa] | LWA [dB(A)] | Δpt [Pa] | LWA [dB(A)] | Δpt [Pa] | LWA [dB(A)] |
| 100 | 10 | 36 | 9 | <15 | 11 | <15 | 14 | <15 |
| 100 | 15 | 54 | 20 | 23 | 24 | 24 | 32 | 27 |
| 100 | 20 | 72 | 35 | 31 | 42 | 33 | 57 | 36 |
| 100 | 25 | 90 | 54 | 38 | 66 | 40 | 89 | 43 |
| 125 | 10 | 36 | 5 | <15 | 7 | <15 | 11 | <15 |
| 125 | 15 | 54 | 10 | <15 | 15 | <15 | 24 | 17 |
| 125 | 20 | 72 | 18 | 17 | 27 | 21 | 43 | 26 |
| 125 | 25 | 90 | 28 | 23 | 43 | 28 | 67 | 33 |

Z-LVS/160, Z-LVS/200, sound power level and total differential pressure

| NS | | | Airway width = 20 mm | | Airway width = 15 mm | | Airway width = 10 mm | |
|------------|----------------------|-----------------------|----------------------|-------------|----------------------|-------------|----------------------|-------------|
| | q _v [l/s] | q _v [m³/h] | Δpt [Pa] | LWA [dB(A)] | Δpt [Pa] | LWA [dB(A)] | Δpt [Pa] | LWA [dB(A)] |
| 160 | 20 | 72 | 5 | <15 | 8 | <15 | 22 | 19 |
| 160 | 30 | 108 | 11 | <15 | 19 | 21 | 49 | 32 |
| 160 | 40 | 144 | 20 | 24 | 34 | 30 | 87 | 42 |
| 160 | 50 | 180 | 31 | 31 | 53 | 38 | 135 | 49 |
| 200 | 30 | 108 | 4 | <15 | 8 | <15 | 14 | <15 |
| 200 | 50 | 180 | 12 | <15 | 21 | 19 | 40 | 26 |
| 200 | 70 | 252 | 24 | 25 | 41 | 30 | 78 | 36 |
| 200 | 90 | 324 | 40 | 33 | 68 | 38 | 129 | 44 |

Sizing example

Given data

q_v = 20 l/s (72 m³/h)

Supply air valve

Maximum sound power level 32 dB(A)

Quick Sizing

Type Z-LVS

Selectable nominal sizes: 100, 125, 160

Selected: Z-LVS/125

Specification text

Circular disc valves as supply air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.

Special features

- Continuous volume flow rate balancing by turning the valve disc
- Easy to install

Materials and surfaces

- Valve casing and valve disc made of sheet steel
- Installation subframe, threaded spindle and lock nut made of galvanised steel
- Foam seal
- Valve casing and valve disc powder-coated, similar to RAL 9010

Technical data

- Nominal sizes: 100, 125, 160, 200 mm
- Minimum volume flow rate: 10 – 30 l/s or 36 – 108 m³/h
- Maximum volume flow rate: 25 to 90 l/s or 90 to 324 m³/h

Sizing data

- Volume flow rate q_v [m³/h] (information required for sizing)

Z-LVS
|
1

/

160
|
2

1 Type
Z-LVS Disc valve

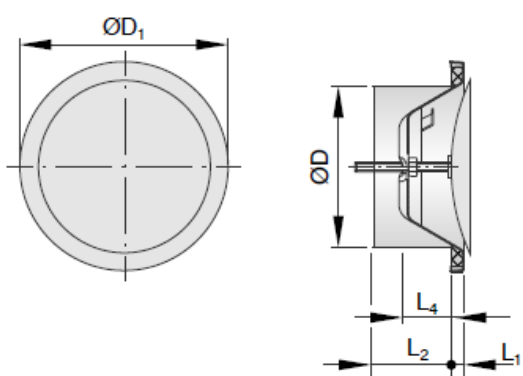
2 Nominal size [mm]
100, 125, 160, 200

Order example: Z-LVS/160

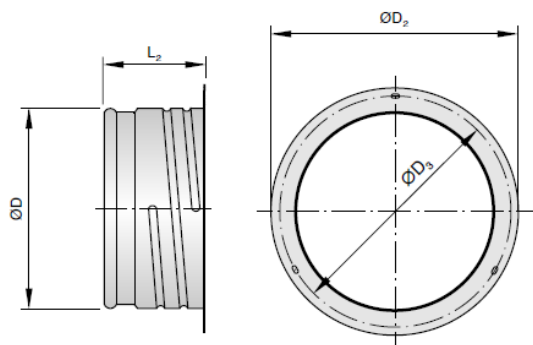
Nominal size 160

| NS | $\varnothing D_1$ | L ₁ | L ₂ | L ₄ | $\varnothing D$ | $\varnothing D_2$ | $\varnothing D_3$ | m |
|-----|-------------------|----------------|----------------|----------------|-----------------|-------------------|-------------------|------|
| | mm | mm | mm | mm | mm | mm | mm | kg |
| 100 | 132 | 8 | 50 | 32 | 99 | 122 | 114 | 0.23 |
| 125 | 162 | 9 | 50 | 38 | 124 | 148 | 140 | 0.32 |
| 160 | 192 | 10 | 50 | 43 | 159 | 184 | 176 | 0.5 |
| 200 | 245 | 11 | 50 | 52 | 199 | 225 | 217 | 0.67 |

Z-LVS



Installation subframe for LVS and Z-LVS



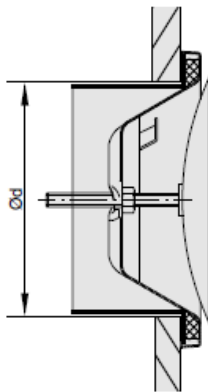
Installation and commissioning

Installation flush with the wall or ceiling

Perform volume flow rate balancing by turning the valve disc, then tighten the lock nut to fix the valve disc in the required position

These are only schematic diagrams to illustrate installation details.

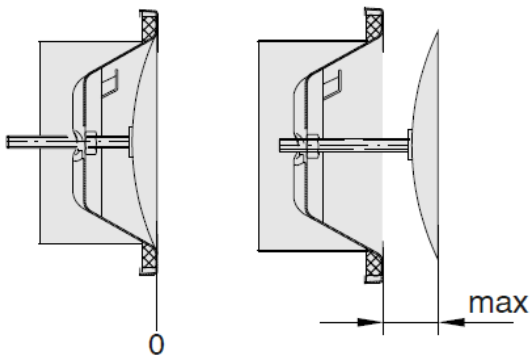
Installation flush with the wall or ceiling, with installation subframe



Installation opening

| NS | Ød mm |
|-----|----------|
| 100 | 104 |
| 125 | 129 |
| 160 | 164 |
| 200 | 204 |

Setting range



Nominal size 100: max = 12 mm
Nominal size 125: max = 15 mm
Nominal size 160, 200: max = 20 mm