

## 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

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#### 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

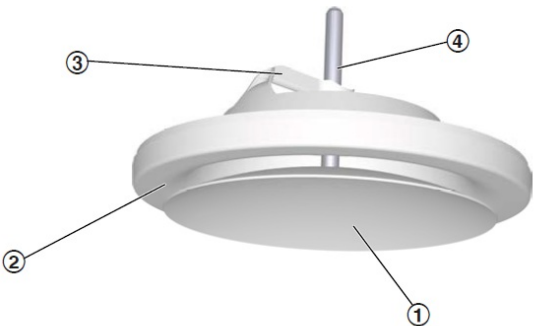
Function, Technical data, Quick sizing, Specification text, Order code

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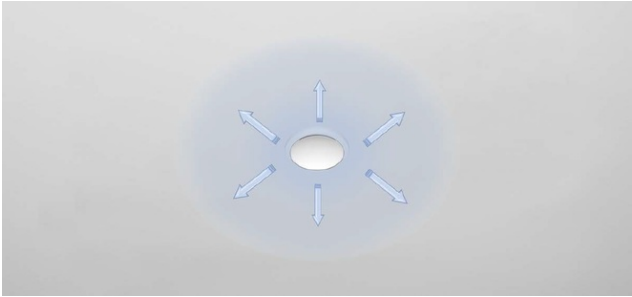
Supply air valves direct the air from air conditioning systems into the room. The resulting airflow induces high levels of room air, thereby rapidly reducing the airflow velocity and the temperature difference between supply air and room air. The result is a mixed flow ventilation in comfort zones, with 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 m³/h
Maximum volume flow rate	25 - 90 l/s from 90 - 324 m³/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 <sub>v</sub> [l/s]	q <sub>v</sub> [m³/h]	Δpt [Pa]	LWA [dB(A)]	Δpt [Pa]	LWA [dB(A)]	Δpt [Pa]	LWA [dB(A)]
<b>100</b>	10	36	9	<15	11	<15	14	<15
<b>100</b>	15	54	20	23	24	24	32	27
<b>100</b>	20	72	35	31	42	33	57	36
<b>100</b>	25	90	54	38	66	40	89	43
<b>125</b>	10	36	5	<15	7	<15	11	<15
<b>125</b>	15	54	10	<15	15	<15	24	17
<b>125</b>	20	72	18	17	27	21	43	26
<b>125</b>	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 <sub>v</sub> [l/s]	q <sub>v</sub> [m³/h]	Δpt [Pa]	LWA [dB(A)]	Δpt [Pa]	LWA [dB(A)]	Δpt [Pa]	LWA [dB(A)]
<b>160</b>	20	72	5	<15	8	<15	22	19
<b>160</b>	30	108	11	<15	19	21	49	32
<b>160</b>	40	144	20	24	34	30	87	42
<b>160</b>	50	180	31	31	53	38	135	49
<b>200</b>	30	108	4	<15	8	<15	14	<15
<b>200</b>	50	180	12	<15	21	19	40	26
<b>200</b>	70	252	24	25	41	30	78	36
<b>200</b>	90	324	40	33	68	38	129	44

Sizing example

Given data

q<sub>v</sub> = 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 nutSpigot 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

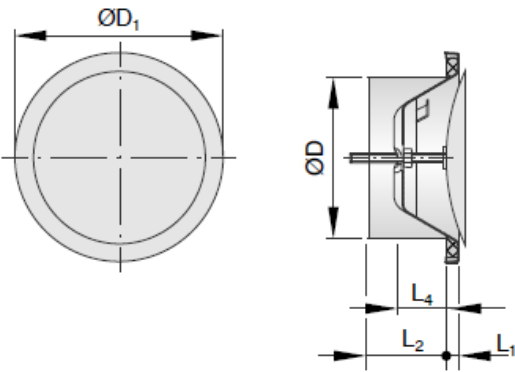
Sizing data

- Volume flow rate q<sub>v</sub> [m³/h] (information required for sizing)

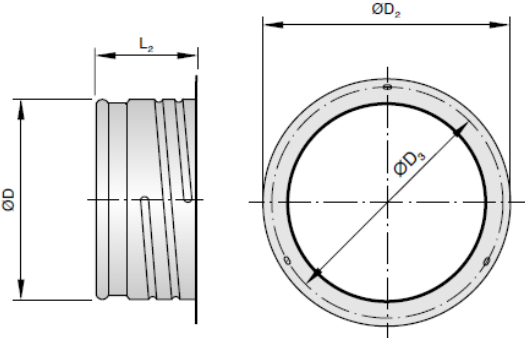
	Z-LVS	/	160
	1		2
1 Type			
Z-LVS Disc valve			
2 Nominal size [mm]			
100, 125, 160, 200			
Order example: Z-LVS/160			
Nominal size	160		

NS	ØD <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>4</sub>	ØD	ØD <sub>2</sub>	ØD <sub>3</sub>	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



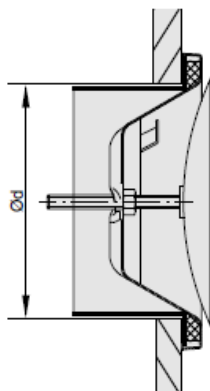
Installation and commissioning

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.

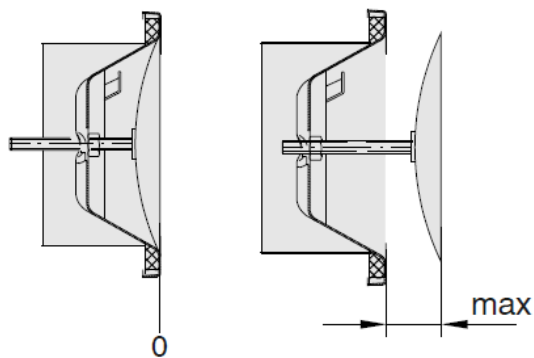
Installation flush with the wall or ceiling, with installation subframe



Installation opening

NS	old 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