

# Disc valves

## Type LVS



### For extract air

Circular disc valves with manually adjustable annular gap

- Nominal sizes 100, 125, 160, 200 mm
- Volume flow rate range 10 – 50 l/s or 36 – 180 m<sup>3</sup>/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

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## Application

### Application

- Type LVS disc valves are used as extract air devices in small rooms
- For variable and constant volume flows
- For walls and suspended ceilings

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

### Nominal sizes

- 100, 125, 160, 200

### Special characteristics

## Description

### 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

- Valve casing and valve disc powder-coated RAL 9010, pure white

### Standards and guidelines

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

### Materials and surfaces

- Valve casing and valve disc made of galvanised sheet steel
- Installation subframe, cross bar, threaded spindle and lock nut made of galvanised steel
- Foam seal

### Maintenance

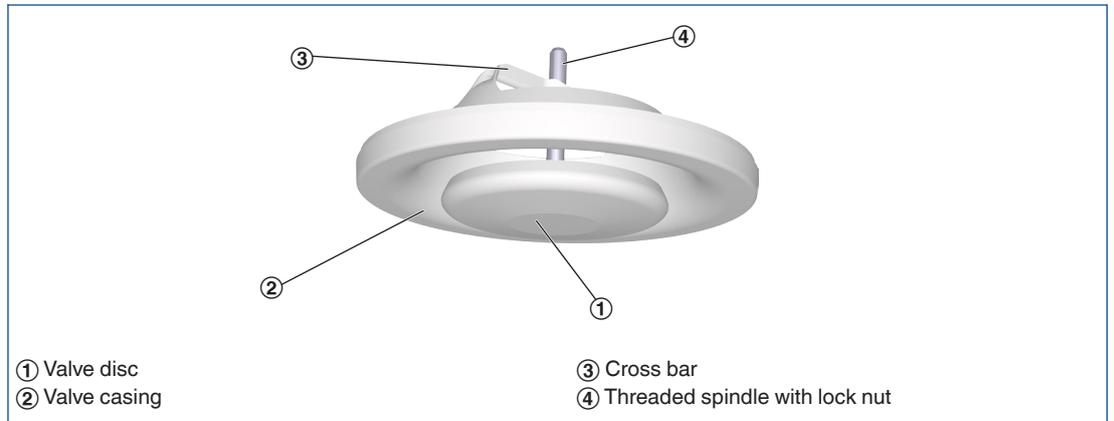
- Maintenance-free as construction and materials are not subject to wear
- Inspection and cleaning to VDI 6022

## Functional description

Extract air valves extract air from rooms and lead it into the extract air part of the air conditioning system.

Type LVS disc valves have a valve disc that can be turned. This valve disc facilitates volume flow rate balancing for commissioning.

## Schematic illustration



<b>Nominal sizes</b>	100, 125, 160, 200 mm
<b>Minimum volume flow rate</b>	10 – 25 l/s or 36 – 90 m <sup>3</sup> /h
<b>Maximum volume flow rate</b>	25 – 50 l/s or 90 – 180 m <sup>3</sup> /h

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

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

Nominal size	$\dot{V}$	$\dot{V}$	Gap width					
			5 mm		0 mm		-5 mm	
			$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$
			l/s	m <sup>3</sup> /h	Pa	dB(A)	Pa	dB(A)
100	10	36	8	<15	14	<15	30	16
	15	54	19	<15	32	19	67	26
	20	72	33	22	56	27	119	33
	25	90	52	28	88	32	186	39
125	15	54	9	<15	13	<15	22	<15
	20	72	15	<15	23	<15	40	19
	25	90	24	<15	36	18	62	24
	30	108	35	18	52	23	90	29

**LVS/160, sound power level and total differential pressure**

Nominal size	$\dot{V}$	$\dot{V}$	Gap width					
			5 mm		-5 mm		-10 mm	
			$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$
			l/s	m <sup>3</sup> /h	Pa	dB(A)	Pa	dB(A)
160	20	100	9	<15	24	<15	43	17
	25	90	14	<15	38	18	67	24
	30	108	20	<15	55	23	96	29
	35	126	27	16	75	27	131	34

**LVS/200, sound power level and total differential pressure**

Nominal size	$\dot{V}$	$\dot{V}$	Gap width					
			5 mm		-5 mm		-15 mm	
			$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$	$\Delta p_t$	$L_{WA}$
			l/s	m <sup>3</sup> /h	Pa	dB(A)	Pa	dB(A)
200	25	90	4	<15	9	<15	21	<15
	35	126	9	<15	17	<15	41	20
	45	162	14	<15	28	16	68	27
	50	180	18	<15	34	19	84	30

**Sizing example**

**Given data**

$\dot{V} = 25$  l/s (90 m<sup>3</sup>/h)

Extract air valve

Maximum sound power level 30 dB(A)

**Quick sizing**

Type LVS

Selectable nominal sizes: 125, 160, 200

Selected: LVS/125

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design programme.

Circular disc valves as extract 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.

Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.

#### Special characteristics

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

#### Materials and surfaces

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

#### Technical data

- Nominal sizes: 100, 125, 160, 200 mm
- Minimum volume flow rate: 10 – 25 l/s or 36 – 90 m<sup>3</sup>/h
- Maximum volume flow rate: 25 to 50 l/s or 90 to 180 m<sup>3</sup>/h

#### Sizing data

- $\dot{V}$  \_\_\_\_\_  
[m<sup>3</sup>/h]

LVS



**1** Type

LVS Extract air valve

**2** Nominal size [mm]

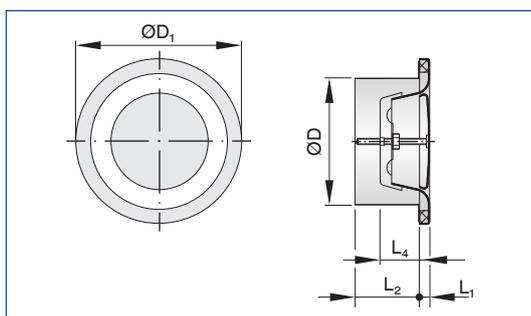
100  
125  
160  
200

**Order example: LVS/160**

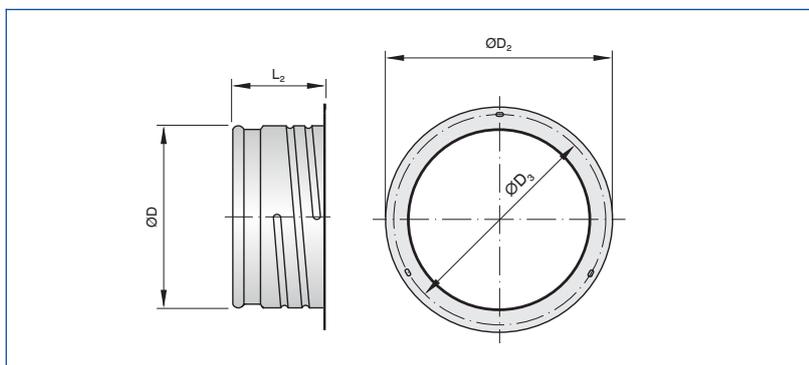
Nominal size

160

LVS



Installation subframe for LVS and Z-LVS



LVS

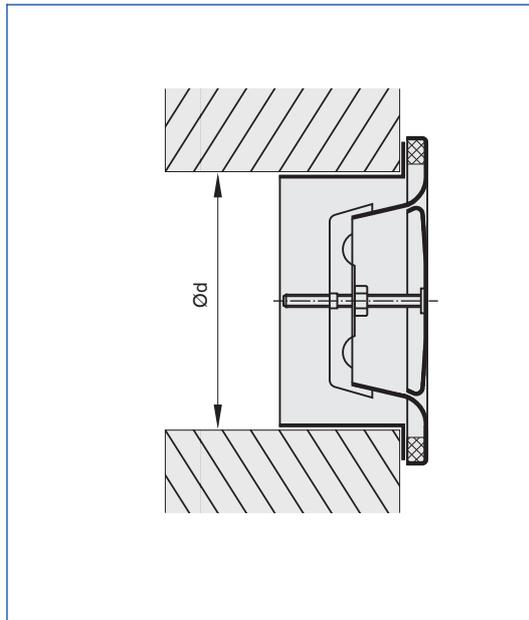
Nominal size	$\text{ØD}_1$	$L_1$	$L_2$	$L_4$	$\text{ØD}$	$\text{ØD}_2$	$\text{ØD}_3$	m
	mm	mm	mm	mm	mm	mm	mm	kg
100	132	8	50	32	99	122	114	0.20
125	162	9	50	38	124	148	140	0.29
160	192	10	50	43	159	184	176	0.44
200	245	11	50	52	199	225	217	0.59

**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.

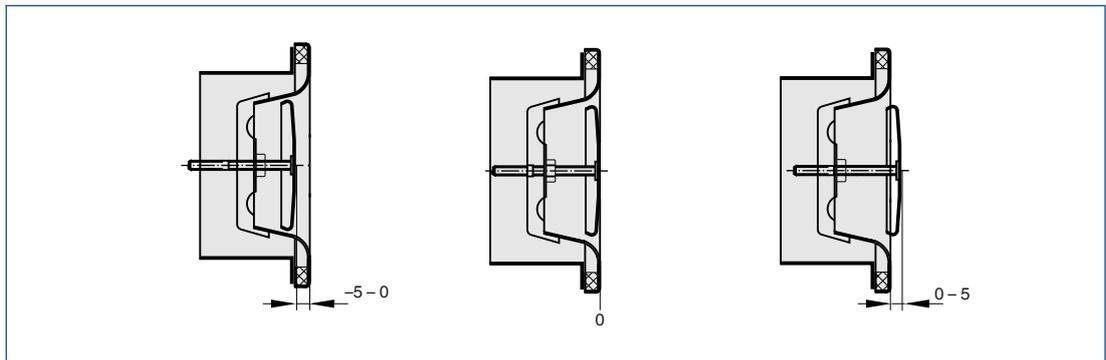
**Installation flush with the wall or ceiling, with installation subframe**



**Installation opening**

Nominal size	Ød	
	mm	
100		104
125		129
160		164
200		204

Adjustment range



**Principal dimensions**

**$\varnothing D$  [mm]**

Outer diameter of the spigot

**$\varnothing D_1$  [mm]**

Outer diameter of the diffuser face

**$L_1$  [mm]**

Length of the face cover ring

**$L_2$  [mm]**

Installed length

**$m$  [kg]**

Weight

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**Nomenclature**

**$L_{WA}$  [dB(A)]**

A-weighted sound power level of air-regenerated noise

**$\dot{V}$  [m<sup>3</sup>/h] and [l/s]**

Volume flow rate

**$\Delta t_z$  [K]**

Supply air to room air temperature difference

**$\Delta p_t$  [Pa]**

Total differential pressure

All sound power levels are based on 1 pW.