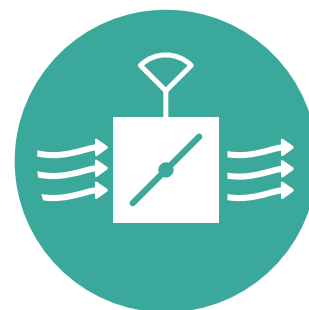


BVVMd-3

Rectangular measuring unit



VAV, CAV & FLOW
MEASURING DAMPERS



01/02/2022

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Quick facts

- Sizes from 200-200 mm to 2000-2000 mm
- Pressure sensor range 0-300 Pa
- Adjustment can be done at site.
- Display shows the current pressure
- Modbus communication is available as an option

Use

BVVMd is an electronic measuring unit for flow measurement in all types of ventilation installations. The air flow can be read on the display or read remotely with a linear output signal 2-10 V or 0-10 V between 0 and a nominal flow. Modbus communication is available as an option.

Materials and surface treatment

Casing and components of hot-dip galvanized sheet steel according to corrosion class C3. The damper is supplied as standard in pressure class A and leakage class 1. Alternative casing and component materials available on request for higher pressures and environmental requirements.

Specification

Example:

Flow measurement unit **BVVMd - 3 - 400 - 200**

Type:

Rectangular = 3

Size:

W x H mm

Electrical data

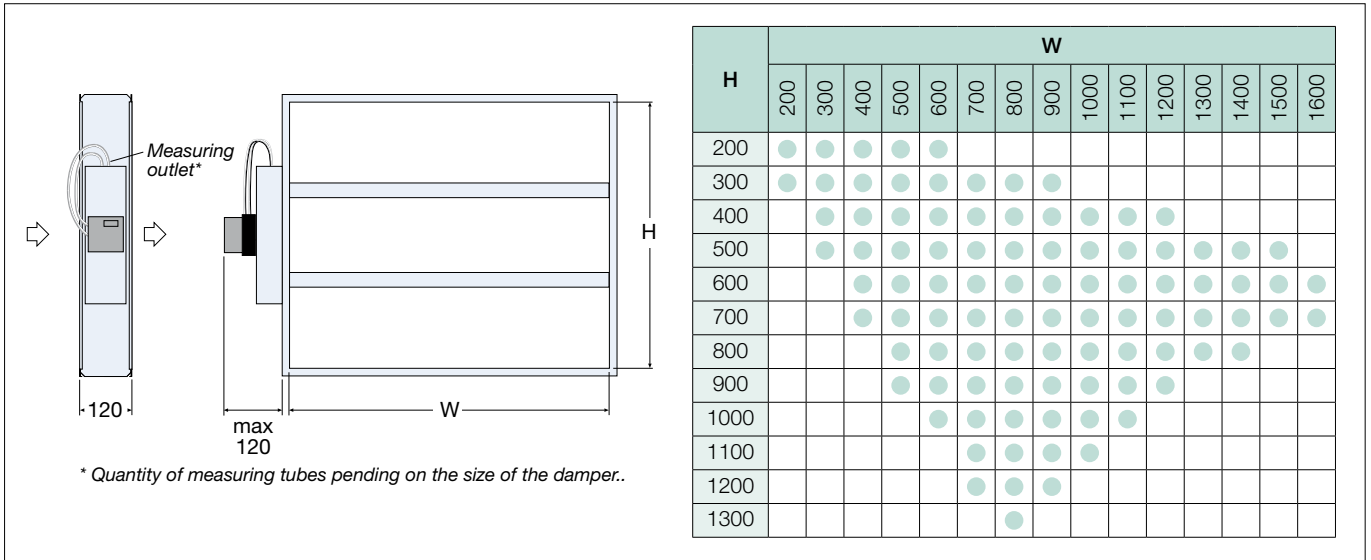
Supply voltage: 24V AC/DC +-20%

Output: 0,5 W (1,5 VA)

Ambient temp: 0°C - 50°C



Dimensions



Technical data

Sound data

Correction of sound power level, L_w , for different sizes

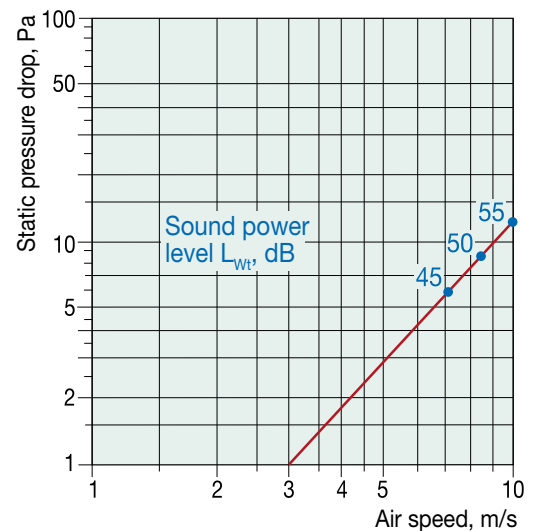
$$L_w = L_{wt} + K_1$$

Damper-area, m ²	0,12	0,25	0,5	1,0	2,0	3,0	4,0
K_1	-3	0	3	6	9	10,5	12

Correction of sound power level, L_{wok} , in octave band

$$L_{wok} = L_w + K_{ok}$$

Mid frequency Hz	125	250	500	1000	2000	4000	8000
K_{ok}	-3	-6	-9	-12	-17	-16	-25





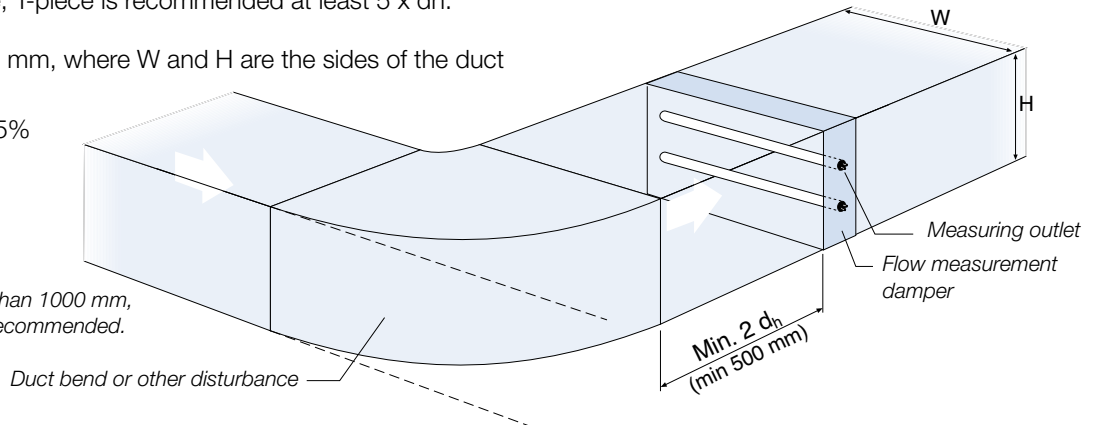
Installation

The VAV damper must be mounted with a distance of at least 2 hydraulic diameters (d_h), however not less than 500 mm after a disturbance source, see the figure below. For other disturbance sources, for example, T-piece is recommended at least 5 x d_h .

$$d_h = \frac{2 \times W \times H}{W + H} \text{ mm, where W and H are the sides of the duct}$$

Method error, $m2 < 5\%$

NOTE! At width greater than 1000 mm, use of guide vanes are recommended.



NB:
The BVVMd-3 should always be placed in the same plane as a duct bend or bifurcation and with the measuring tube turned outwards.

Function, Connection

Damper actual value signal 2-10 V or 0-10 V corresponds to a flow between zero and the nominal flow of the damper. For rectangular dampers, nominal flow is equivalent to 8 m/s in the duct. At air velocity below 1.5 m/s, measurement uncertainty increases.

Wiring diagram

