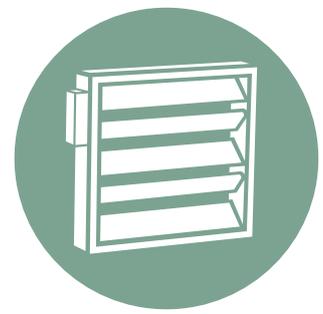
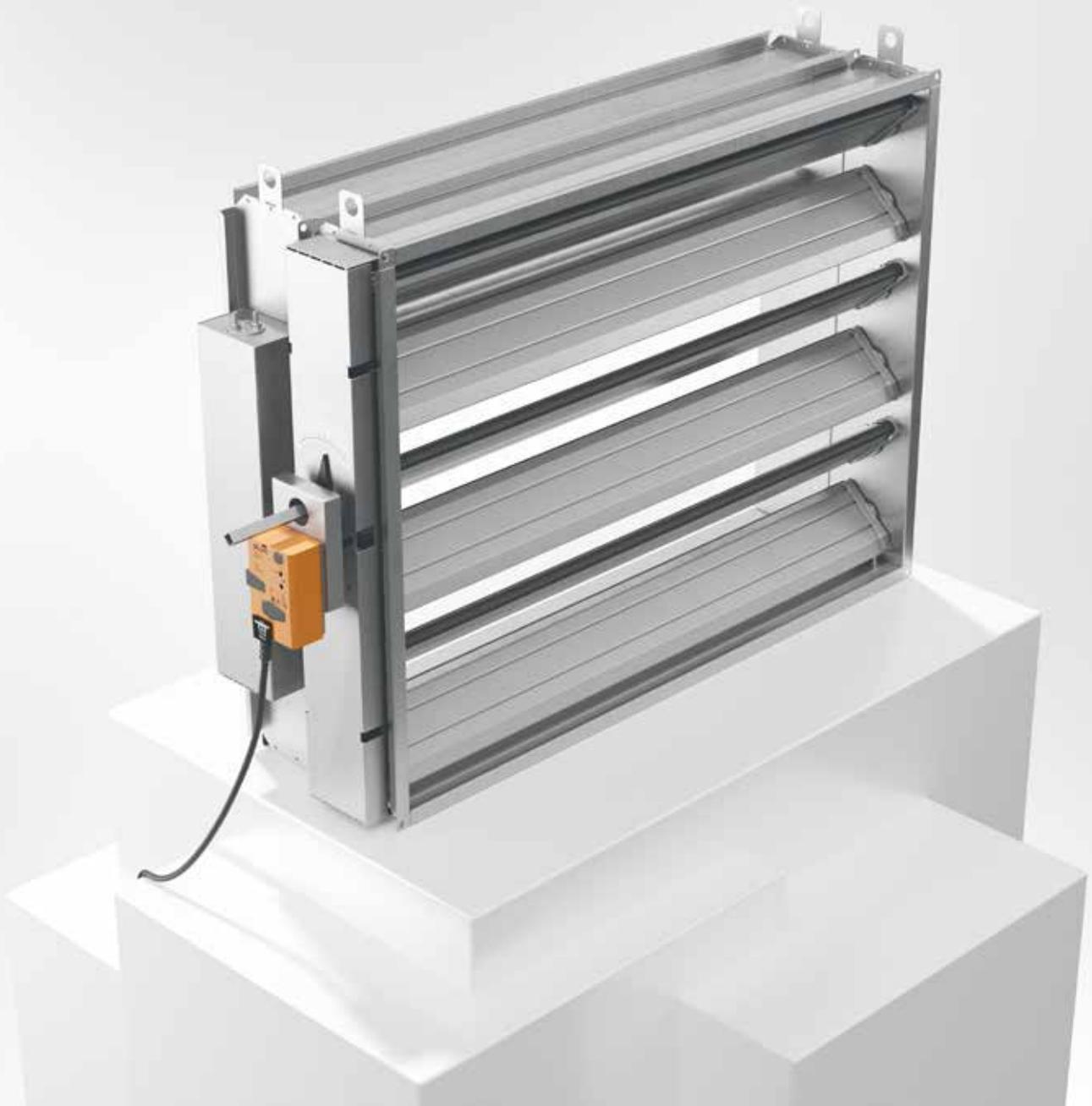


# BVAFR

Measuring damper



DAMPERS &  
MEASURING DAMPERS



25/02/2020

[www.bevent-rasch.com](http://www.bevent-rasch.com)



**BEVENT RASCH**

AIR SOLUTIONS – FOR A BETTER TOMORROW



# Measuring damper BVAFR



### Example of actuators



SM 24 A, SM 230 A (SR)



SF 24 A (SR), SM 230 A

### Quick facts

- Pressure class A < 1000 Pa
- Air tightness class 1
- Hot dip galvanised sheet steel
- Bracket for actuator, handlever control or fitted electric actuator
- Available in MagiCAD

### Use

BVAFR is a rectangular measuring damper equipped with actuator, actuator bracket or lever control. The unit can be used in all types of ventilation systems where a simple method to boost or control the airflow is required. Selection of the actuator is done using the torque table or Dimensio, see [www.bevent-rasch.com](http://www.bevent-rasch.com)

### Material and surface finish

Casing and components in hot-dip galvanized sheet steel according to corrosivity category C3. The measurement tube is made of extruded aluminium. The unit is delivered as standard in pressure class A. Alternative casing and component materials available on request for higher pressures and environmental requirements. Air tightness class 1.

### Specification

Example:

**Measuring damper** BVAFR - 400 - 200 - 3

Size

Width x Height (W x H), mm, see Dimensions

Operation

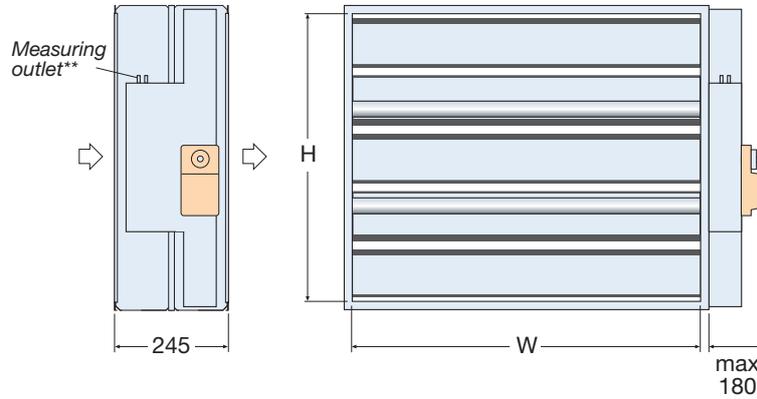
Bracket for actuator	= 1	}
Fitted handlever control	= 2	
Fitted actuator	= 3	

Accessories:

**Timer TEL**  
**Room thermostat TR24-M**  
**Silencer**



Dimensions and weight



\* Number of measurement tubes varies depending on the size of the damper.

Sizes and torque in Nm for control spindle

H	W															
	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	
200	3	3	5	5	5											
300	3	5	5	5	5	7	7	7								
400		5	5	5	7	7	7	10	10	10	10					
500		5	5	7	7	7	10	10	10	10	10	10	15			
600			7	7	10	10	10	10	10	10	10	10	15	15	15	15
700			7	10	10	10	10	10	10	10	15	15	15	15	15	15
800				10	10	10	10	10	15	15	15	15	15			
900				10	10	10	15	15	15	15	15					
1000					15	15	15	15	15	20						
1100						15	15	20	20							
1200						20	20	20								
1300							20									

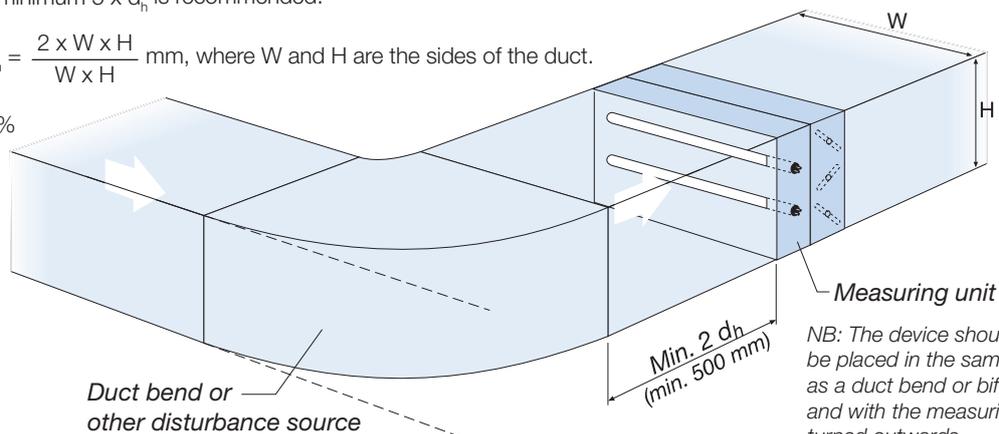
NB: The measuring outlet is placed on the H-side

Installation

When installing the measuring unit a linear distance corresponding to minimum 2 hydraulic diameters ( $d_h$ ), is required after a disturbance source (min. 500 mm), see below. At other disturbance sources, for example T-piece, minimum  $5 \times d_h$  is recommended.

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

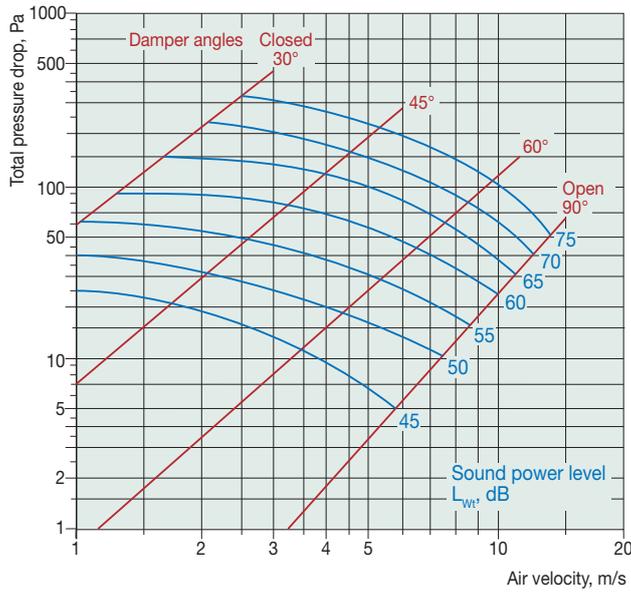
Method error,  $m_2 < 5\%$



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



Technical data



Correction of sound power level, L<sub>w</sub>, for different sizes

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

Damper-area, m <sup>2</sup>	0,04	0,2	0,36	0,64	1
K <sub>1</sub>	-2	-1	0	2,5	5

Correction of sound power level, L<sub>wok</sub>, in octave band

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

Correction, K<sub>ok</sub>

Opening angle	Centre frequency Hz							
	63	125	250	500	1000	2000	4000	8000
90°	-2	-7	-15	-18	-18	-23	-29	-33
60°	-2	-8	-14	-18	-19	-22	-28	-34
45°	-4	-8	-10	-13	-18	-22	-26	-32
30°	-5	-7	-9	-11	-14	-19	-22	-29
Tol. ± dB	3	2	3	4	5	5	6	4

Commissioning

Commissioning with K-factor

For commissioning with K-factor, use the formula:

$$q = a \times K \times \sqrt{\Delta p}$$

q = airflow, l/s

Δp = differential pressure, Pa

K = measurement unit's K factor = 680

a = area of the measuring unit, m<sup>2</sup>

NB: Measurement uncertainty increases at air velocities < 2 m/s.