BRMR

Measuring unit

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BEVENT RASCH

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Measuring unit BRMR

Quick facts

- Sizes Ø100-Ø630
- Hot galvanized steel alt. stainless
- Spiro connection only
- Available in MagiCAD

Use

BRMR is intended for measuring of the air flow in circular ducts. The differential pressure obtained over the measuring output is used to determine the air flow. The air flow is obtained by using diagrams or by calculating the flow coefficient.

Testing and reporting of the flow coefficients has been conducted at the Swedish National Testing & Research Institute in Borås.

Material and surface treatment

Housing in galvanised sheet steel as per environmental class M2. The measuring tube is always manufactured of extruded aluminium.

Alternative materials are available for higher environmental requirements.

Specification

Example: **Measuring unit BRMR - 160 - 1**

Size
Nom. diameter, Ød mm

Material
Hot galvanized steel = 1
Stainless AISI 316L – EN 1.4404 = 3
Special = 9

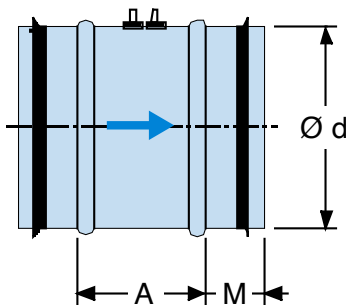Accessory: **Union piece BRSM - 160 - 1**

Size, Nom. diameter, Ød mm

Material
Hot galvanized steel = 1
Stainless AISI 316L – EN 1.4404 = 3
Special = 9

Size and weight

Size Ø d	A	M	Weight kg
100	115	40	0,5
125	115	40	0,6
160	115	40	0,7
200	115	40	0,8
250	115	40	1
315	115	40	1,4
400	115	40	1,9
500	115	40	3,2
630	115	40	4,2

Measurement

Measurement with K-coefficient

The following formula is applicable:

$$q = K \times \sqrt{p}$$
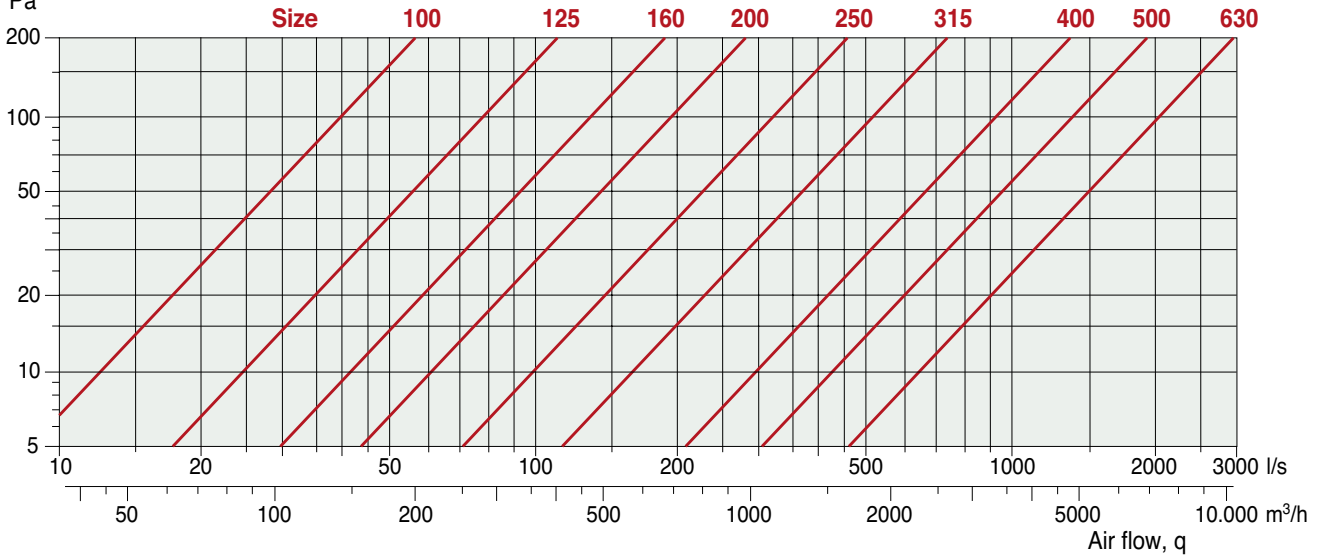
q = air flow, l/s
p = signal-output pressure, Pa
K = flow coefficient

Size	K-coefficient
100	4
125	7,8
160	12,8
200	19,8
250	33
315	52,2
400	92,9
500	140,4
630	205,3

NOTE!
At air velocities < 2 m/s the measuring accuracy is reduced.

Measurement diagram

Signal-Output pressure, p
Pa

Air flow, q

Installation

Before installation please ensure that a minimum of 2 diameters of straight duct is provided upstream of the product and 2 diameters downstream. Where the installation is not as shown in the figures below, a minimum of 5 diameters upstream and 2 diameters downstream will be required to provide accurate flow measurement.

The duct's nom. diameter = ØD
Method error, $m_2 = 5\%$

NOTE!

– The measuring tube should be installed at 90° to the bend plane.

– Measuring tubes should not be placed after two 90° bends in per-pendicular alignment.

– In clean-out versions the measuring unit is installed with two union pieces.

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