



## TYP VMR

### FOR THE MEASUREMENT OF VOLUME FLOW RATES IN DUCTS

Circular volume flow rate measuring units for the recording or monitoring of volume flow rates

- Manual volume flow rate measuring
- Permanent volume flow rate measuring
- Recording of measured values and use for slave controllers
- Pressure transducer for the automatic recording of measured values, factory-assembled and complete with wiring and tubing
- Casing air leakage to EN 15727, class C

Optional equipment and accessories

- With flanges on both ends
- Lip seal
- Dynamic or static differential pressure transducers

## Application

Application

- Circular volume flow rate measuring units Type VMR for the manual recording or automatic measuring of volume flow rates
- Simplified commissioning, approval and maintenance
- Suitable for permanent installation because of low differential pressure
- Optional static differential pressure transducer for systems with polluted air

Besondere Merkmale

- Messgenauigkeit  $\pm 5\%$
- Geringe Druckdifferenz von ca. 10 – 25 % vom gemessenen Wirkdruck

## Description



### Variants

- VMR: Volume flow rate measuring unit
- VMR-FL: Volume flow rate measuring unit with flanges on both ends

### Construction

- Galvanised sheet steel
- P1: Powder-coated, silver grey (RAL 7001)
- A2: Stainless steel

### Parts and characteristics

- Ready-to-commission unit which consists of the mechanical parts and an optional pressure transducer
- Averaging differential pressure sensor for volume flow rate measurement
- Optional factory-assembled pressure transducers complete with wiring and tubing
- High measurement accuracy (even with upstream bend  $R = 1D$ ).

### Anbauteile

- Dynamischer Differenzdrucktransmitter
- Statischer Differenzdrucktransmitter
- Optional LON BUS oder EASYLAB Plug & Play System
- TM0 Statischer Differenzdrucktransmitter mit LON BUS Kommunikation, Einbindung über Lonworks Technologie
- ELAB - EC/SC Statischer Differenzdrucktransmitter mit Intergartionsmöglichkeit ins EASYLAB System, Einbindung über 0 – 10 V DC Signale oder über Erweiterungskarten (LON, BACNET MS/TP, MODBUS-RTU)

### Zubehör

- Beidseitig mit Lippendichtung (werkseitig aufgebracht)
- Beidseitig mit Gegenflansch

### Construction features

- Circular casing
- Spigot suitable for circular ducts to EN 1506 or EN 13180
- Spigot with groove for lip seal
- Connecting nipple for tubes with 6 mm inside diameter
- VMR-FL: Circular flanges to EN 12220

### Materials and surfaces

- Casing made of galvanised sheet steel
- Aluminium sensor tubes

## INFORMACJE TECHNICZNE

### Functional description

The measuring unit is fitted with an effective pressure sensor for measuring the volume flow rate.

The effective pressure is either measured and evaluated manually, or transformed into an electric signal by a pressure transducer.

<b>Nominal sizes</b>	100 – 400 mm
<b>Volume flow rate range</b>	10 – 1680 l/s
<b>Volume flow rate range</b>	36 – 6048 m <sup>3</sup> /h
<b>Measurement accuracy</b>	$\pm 5\%$ of the measured value
<b>Effective pressure range</b>	approx. 5 – 250 Pa
<b>Differential pressure</b>	Approx. 10 – 25 % of the measured effective pressure
<b>Operating temperature</b>	10 – 50 °C

Circular volume flow rate measuring unit for the measurement of volume flow rates in air conditioning systems, available in 7 nominal sizes.

For the manual volume flow rate measuring or for the permanent monitoring of the actual value signal.

Ready-to-commission unit which consists of the casing with an averaging differential pressure sensor.

Differential pressure sensor with 3 mm measuring holes, thus resistant to dust and pollution.

Both ends spigot with groove for lip seal, suitable for connecting ducts to EN 1506 or EN 13180.

Casing air leakage to EN 1751, class C.

#### Besondere Merkmale

- Messgenauigkeit  $\pm 5\%$
- Geringe Druckdifferenz von ca. 10 – 25 % vom gemessenen Wirkdruck

#### Materials and surfaces

- Casing made of galvanised sheet steel
- Aluminium sensor tubes

#### Construction

- Galvanised sheet steel
- P1: Powder-coated, silver grey (RAL 7001)
- A2: Stainless steel

#### Technical data

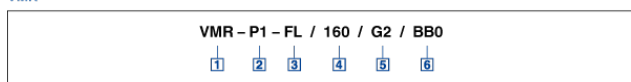
- Nominal sizes: 100 – 400 mm
- Volume flow rate range: 10 to 1680 l/s or 36 to 6048 m<sup>3</sup>/h
- Effective pressure range: approx. 5 – 250 Pa

#### Anbauteile

Volumenstrommessung mit statischem Differenzdrucktransmitter mit Istwertsignal zur Einbindung in die Gebäudeleittechnik.

- Versorgungsspannung 24 V AC/DC
- Signalspannungen 0 – 10 V DC oder 2 – 10 V DC
- TM0 Einbindung über Lonworks Technologie
- ELAB über 0 – 10 V DC Signale oder über Erweiterungskarten (LON, BACNET MS/TP, MODBUS-RTU)

#### VMR



<b>1 Type</b>	<b>4 Nominal size [mm]</b>
<b>VMR</b> Circular volume flow rate measuring unit	100
	125
<b>2 Material</b>	160
No entry: galvanised sheet steel	200
<b>P1</b> Powder-coated, silver grey (RAL 7001)	250
<b>A2</b> Stainless steel	315
	400
<b>3 Flange</b>	<b>5 Accessories</b>
No entry: none	No entry: none
<b>FL</b> Flanges on both ends	<b>D2</b> Lip seals on both ends
	<b>G2</b> Matching flanges for both ends
	<b>6 Differential pressure transducer</b>
	No entry: none
	<b>B10</b> Dynamic differential pressure transducer
	<b>BB0</b> Static differential pressure transducer