



VPFlowMate in-line

Description

The VPFlowMate® combines state of the art silicon sensor technology with ease of use.

Because of the high turndown ratio and low pressure drop, the VPFlowMate® is suitable for many applications.

With a RS232 and 4..20 mA output, the VPFlowMate® can be connected directly to a PC and most industrial equipment.

The VPFlowMate® in-line has removable in- and outlet piping for convenient installation and service.



Applications

Compressed air metering, energy monitoring, testing of pneumatic systems, quality inspection and testing, purge metering.

Benefits

- Versatile: Large measurement range, low pressure drop
- Universal: Flow data in any application via RS232, 4..20 mA and pulse
- Easy: straightforward installation and use
- Integrated, detachable up and downstream piping minimizes installation errors without significant increase of pressure drop.

Features

- Solid state flow sensor
- Flow and totalizer read out via RS232
- Built-on 8 x 2 LCD display
- 12..24 Volt wide range power input
- Removable in- and outlet piping

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Features and benefits

Built-on display

Features flow and totalizer read out

- Direct read out of flow
- Direct read out of total consumption
- Clear back-lit display

Versatile outputs

RS232, 4..20 mA (linear), pulse

Rugged, modular design

IP55 housing design
Fixed cable or connector output
Optional LCD display module

Low maintenance

No moving parts
Long re-calibration interval

Optimal flow path

Straight tube design
Up and downstream piping
integrated and detachable





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Technical Specifications

Measurement specifications

- Accuracy : <0.5% of full scale. Only when used with up- and downstream piping delivered by VPInstruments. A calibration report is issued with each flow meter
- Ranges : See range table below. Ranges specified at 20 deg C
- Zero cutoff point : Depends on model; typically 1% of full scale (1:100 range)
- Temperature range** : 0..50 °C
- Pressure limit : Designed to 16 bar maximum pressure***
- Humidity range : Up to 95% Relative Humidity. Non condensing
- Gases : Compressed air, non corrosive gases

NOTE:
Specifications are subject to change without prior notice.

**** NOTE:**
The temperature error is typically less than 0.2% of reading per degree Celsius. Optional temperature calibration can be specified.

Mechanical specifications

- Connections : See table below
- Dimensions : See the technical drawings; The up- and downstream pipes are integrated. Dimensions are at least 15*D upstream and 5*D downstream. The maximum total length is limited to 1 meter for convenient transport and handling.
- Protection type : Designed to meet IP55. Not for outdoor use.
- Wetted materials : Epoxy, glass, stainless steel 316, anodised aluminium
- Corrosion resistance : Avoid highly corrosive or acid environments

***** NOTE:**
The pressure error is typically 0.3% of full scale per bar deviation of the calibration pressure. The pressure error of the VPFlowMate® is specified for a range of +/- 3 bar around the calibration pressure. Ask for custom calibration when using the VPFlowMate® at atmospheric or low line pressure.

Electrical specifications

- Outputs : RS232, 4..20 mA, pulse ; multi connector
- Power supply : 12..24 Volt DC

Approvals/ conformity

- CE : EN 61326-1
- CE : EN 50082-1



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Range table				For larger diameters, we recommend to use the VPFlowMate® insertion probe.			
MODEL	Qmin (m³ _n /hr)*	Qmax (m³ _n /hr)*	Qmin (l _n /min)*	Qmax (l _n /min)*	G (inch)	DN (mm) indicative	Process Connection
VPF-R0030-M050	0.32	30	5.3	500	0.5 "	15	0.5 " BSP
VPF-R0120-M100	0.88	120	14.7	2000	1 "	25	1 " BSP
VPF-R0750-M200	3.53	750	58.9	12500	2 "	50	2 " BSP

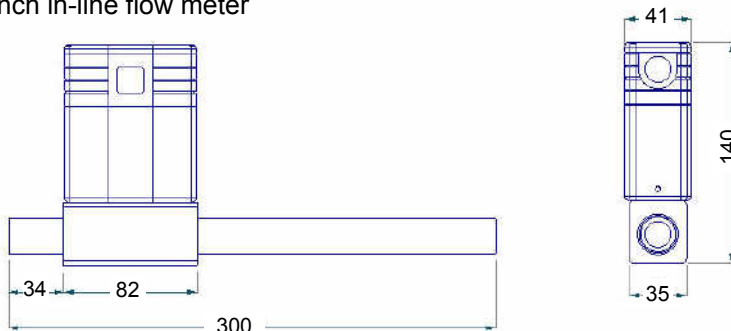
*m_n and l_n are referenced to 0° Celsius, 1013.25 mbar



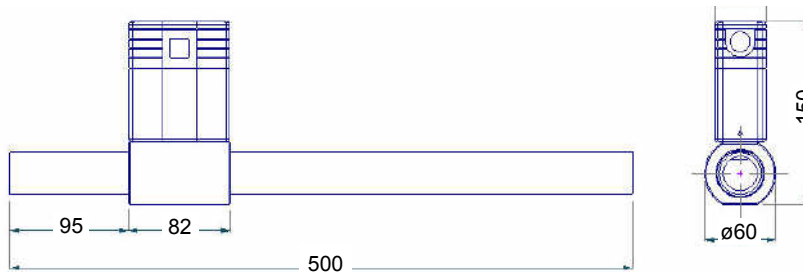
VPFlowMate in-line

Technical drawings: Installation

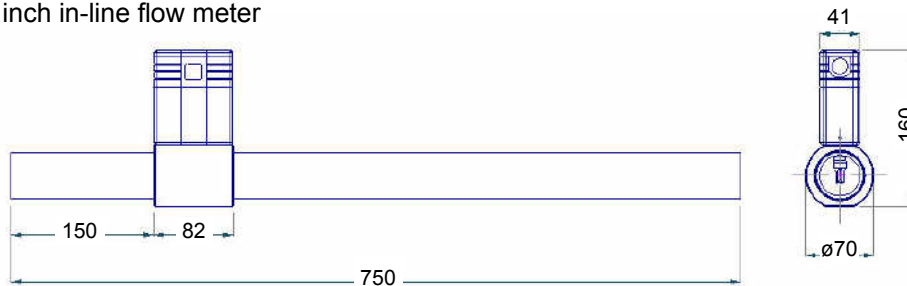
0,5 inch in-line flow meter



1 inch in-line flow meter



2 inch in-line flow meter



Notes:

Dimensions are indicative. The overall length may vary +/- 5 mm

Meter run upstream length of 15* Diameter is integrated.

Please see the installation guidelines as outlined in ISO 14511(2001) for additional upstream length requirements in case of elbows, diameter changes and other upstream objects.



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Order configuration table

1. Group	2. Range	3. Diameter
VPF	R120	M100

A. LCD	B. Outputs	C. Connector
D1	S110	E200

No.	Item	Code	Description
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Measurement:

1.	Product group	VPF	VPFlowMate® in-line mass flow meter
2.	Range	R030-M050	0...30 m ³ _n /hr [500 l _n /min]*
		R120-M100	0...120 m ³ _n /hr [2000 l _n /min]
		R750-M200	0...750 m ³ _n /hr [12500 l _n /min]
3.	Tube diameter	M***	Is shown in combination with range code M050 = 0.5", M100 = 1", M200= 2"

Outputs:

A.	Display option	D1	LCD display, flow and totalizer (standard)
B.	Outputs	S110	4..20 mA linear output + pulse output (standard)
C.	Connector option	E200	Multipole connector on housing (standard)

* some of the l_n/min values may be rounded

VPFlowMate® is a registered trademark of Van Putten Instruments B.V. Patents have been applied for and are pending.