VFF MF30

LITREMETER
Specialist flow measurement engineering

Model:	VFF/MF30/SS/414 bar VFF Rotary Piston Positive Displacement Flowmeter
Body:	414bar (6000 psi) body provided in 316 stainless steel with ½" NPT female process connections in-line. Higher pressure versions available with connections to suit e.g. AE MP 3/8"OD tube. Alternate materials are available such as titanium, duplex, super duplex and 17-4PH steel.
Rotor:	The rotor is provided in either anti galling stainless steel (AG, Nitronic 60), Brass (B) or Carbon graphite (C), with a 316SS encapsulated magnet depending on the application. Part code becomes VFF/LF15/SS/414/AG etc. An optional coating is available on the AG rotor & chamber which doubles the maximum flow rate (AGPVD).
Seal:	There is a single FPM O-ring seal between the top cap and body. Other elastomers are available e.g. FFKM, FEP covered silicon and in higher pressure versions PTFE and Inconel.
Pick-up/Transmitter:	There is one reed switch installed in a SS housing which is O-sealed to the meter body providing a rating of IP68. The optional Ex ia or Ex d display is mounted on the housing. Typical reed switch life is 30 years at continuous maximum operating flow rate.
Pressure rating:	414, 690, 1035, 1380, 2500 and 4000 bar. Lower pressure ratings are all served by the 414bar version. (6000, 10000, 15000, 20000, 36000 and 60000 psi). Part code becomes VFF/MF30/SS/690 etc.
Temperature rating:	-40°C to +150°C (subject to chemical compatibility, pressure rating and location of the display), higher temperature sensor available.
Pulse output:	The unit provides a reed switch output with 270 pulses per litre (1020 pp USG).
Viscosity range:	0.8 to 2000 cSt or greater. The normal meter maximum flow rate applies for viscosities from 1.2 to 30 cSt. For higher viscosities up to 2000 cSt a reduced maximum flow rate may apply.
Flow rate range:	Normal flow rate range 0-90 l/hr (0-1500 ml/min, 23.6 USG/hr, 567 USGPD). Minimum flow rate repeatably measured relates to application viscosity and rotor type; for example less than 12 ml/min for 3 cSt. Consult Litre Meter for rangeability at specific viscosities with specific rotor materials. 0-180 l/hr (0-3 l/min, 47.2 USG/hr, 1134 USGPD) available with AGPVD option.
Filtration:	A 100 micron filter is advisable for 100% long life serviceability. If filtration is not possible, consult Litre Meter.
Accuracy:	A calibration certificate is provided based on a representative viscosity fluid for the application. The calibration certificate confirms the flowmeter accuracy. Improved system accuracy can be provided typically to ±1% of actual reading where the linearisation signal processing facility of the display instrument is employed.
Optional Display, remote or head mounted:	Display of rate and total (as shown), battery, loop powered, 24 Vdc, 110 Vac, 240 Vac, optional flow alarms. GRP or Aluminium. See separate F112 or F118 data sheet.
	Exia display of rate and total (as shown), battery or loop-powered, optional flow alarms, ATEX. GRP or coated aluminium. See separate F112 or F118 data sheet.
	Exd display of rate and total, 24Vdc, 3 or 4 wire with Optional HART, MODBUS or Fieldbus comms. ATEX or UL. Coated aluminium or stainless. See separate FPodExd data sheet.

Documentation:

Operating & Maintenance Manual	LM0333 with Quick Start Info on LM0548
Installation Drawing	C6086 with Exia display, C5830 with Exd. Flanged versions: C6087 & C5826 respectively. If in doubt ask factory advice.
Conformity:	These products conform to PED and EMC. Hazardous Area approved as standard.

Flowmeter Specification Sheet

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