

# VFF MF30

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|  | 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. Kalrez®, 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