

HEAVY FUEL VISCOSITY METER (HFVM) VISCOMASTER

Emerson's Micro Motion® has launched the new HFVM Viscomaster, the next generation of the 7829 Viscomaster. Making use of the same rugged and reliable tuning fork design as its predecessors, HFVM incorporates a new robust low friction Diamond-like Carbon (DLC) coating that is ideal for tackling the most demanding of process applications such as Marine HFO combustion control, Marine Gas Oil (MGO) viscosity control and land-based fired heaters.



FEATURES

- Continuous, accurate, multi-variable measurement of viscosity, density, and temperature
- Hazardous-area approved, head-mounted transmitter that supports local configuration and display
- Simultaneous 4-20 mA, HART and Modbus protocol connections to control systems and external devices

BENEFITS

- Maximize fuel efficiency irrespective of fuel quality variations
- Fast-response kinematic viscosity measurement optimizes HFO/MGO cut-over times
- Reduce fiscal exposure through improved NO_x/SO_x management

HEALTH DIAGNOSTICS

- Checks for measurement alarm conditions
- Verifies sensor integrity
- Reveals erosion, corrosion or coating

DIAMOND-LIKE CARBON (DLC) COATING

Micro Motion has selected DLC as the new standard sensor coating for the HFVM. Traditionally used PFA has proven non-stick properties, but in aggressive environments can be vulnerable to peeling as a result of chemical and mechanical damage. In contrast to this, DLC coating provides the following advantages:

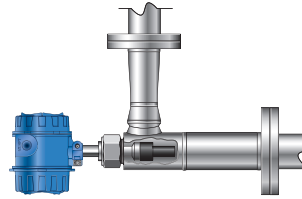
- Very low coefficient of friction (2X improvement over PFA)
- Excellent durability and resistance to impact and mechanical damage
- Improved resistance to peeling caused by aggressive chemicals, such as Hydrogen Sulfide found in low quality HFO



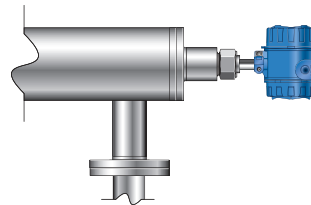
VISCOSITY METER RETROFIT SOLUTIONS

Micro Motion simplifies the migration from other technologies to the new HFVM through a variety of retrofit adapters, including:

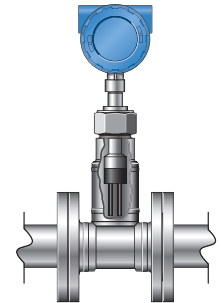
- Simple quick changes to more reliable technology, improving up-time
- No customer pipework changes, reducing installation costs
- World leading diagnostic capabilities, providing measurement confidence
- Communication and configuration flexibility, simplifying system integration and reducing start-up costs



782791 Flow Through Chamber



782994 Capillary Viscosity Meter Adapter



782992 In-line Viscosity Meter Adapter

VISCOMASTER COMPARISON CHART - HFVM & 7829

Features	HFVM (Calibration Code "B")	7829 Kinematic	HFVM (Calibration Code "R")	7829 Dynamic
Viscosity range	2 calibration ranges 0.5-100 cP		2 calibration ranges 5-50cP	
Viscosity measurement	Dynamic cP Kinematic cSt		Dynamic cP Derived Kinematic cSt	
Density measurement	Direct		Density calculated from API tables	
Output variables	cSt, cP, kg/m ³ , °C referred viscosity (ASTM D341) mass flow (with flowmeter)	live cSt, cP, kg/m ³ , °C referred viscosity (ASTM D341)	cSt, cP, kg/m ³ , °C	
CII/CCAI ignition index	✓	✓	✗	✗
Marine approvals	✓	✓	✓	✓
Process connectivity	1.5" cone seat fitting		1.5" cone seat fitting	
Wetted Parts	316L and DLC	316L and PFA	316L and DLC	316L and PFA
Communication	2x mA, HART, RS485, LOI	2x mA, RS485	2x mA, HART, RS485, LOI	2x mA, RS485
Display	✓	✗	✓	✗
KDV Health Diagnostic	✓	✗	✗	✗
Retrofit solutions	✓	✓	✓	✓



For more information, visit www.MicroMotion.com

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