REVOLUTIONIZE YOUR ONLINE VISCOSITY MEASUREMENT TECHNOLOGY

Micro Motion Fork Viscosity Meter
INTRODUCING EMERSON’S MICRO MOTION® FORK VISCOSITY METER

Viscosity and Density Measurement with Performance and Confidence

The combination of our industry-leading technology, wide breadth of products, unparalleled application expertise and customer support allows us to deliver unbeatable performance and value, time and time again.

Our Fork Viscosity Meter (FVM) delivers accurate, online viscosity and density measurement using a direct insertion tuning fork design. This rugged and reliable meter raises the standard for inline viscosity and density monitoring and enhances the product quality, blending operations, and efficient combustion of process liquids as diverse as lube oils, asphalts and refined products.

The Micro Motion Fork Viscosity Meter Delivers:

**Superior Measurement Capabilities**
- A rugged, multi-variable direct insertion sensor that provides the best, real-time measurement of viscosity (±1% of calibrated range max) and density (±1.0 kg/m³)
- Application flexibility with pipeline, bypass (fast) loop and tank installation support

**A World-Class Leading Electronics Platform**
- Local display and user interface that allows for a simplified device management, minimizing maintenance requirements
- Simple integration into DCS, PLC and flow computers (Analog 4-20mA, HART, Modbus RS485 and FOUNDATION fieldbus)
- Revolutionary device diagnostics and verification methods

**Robust and Flexible Measurement**
- Application-specific measurement and output configurations to ensure simple set-up and commissioning
- Optimized design; insensitive to vibration, temperature and pressure variations
**Application-Specific Configurations**
Automatic, application-specific measurement and output configurations ensure simple set-up and commissioning

**Meter Diagnostics**
Built-in diagnostics for real-time monitoring and automated meter verification systems

**Unrivalled Density Performance**
A choice of installation options for replacement solutions give you the performance you need

**Interconnectivity**
Integral HART I/O allows direct input of external temperature, pressure and flow measurements for enhanced outputs
KEY APPLICATIONS

Combustion Control
• Oil Fired Heater and Boiler Control
  Improved fuel atomization consistency with varying feed stock quality
• Maintenance and Emissions
  Reduced fiscal exposure through optimized maintenance cycles and reduced NOx/SOx levies

Refining & Petrochemical
• Product Detection and Quality
  Optimize product uniformity and consistency while minimizing manual sampling
• Product Blending
  Minimize cutter-stock costs for accurate multi-grade Heavy Fuel Oil (HFO) production

Pipeline & Terminals
• Interface and Product Detection
  Improve cut-over accuracy and product quality determination to reduce scrap, waste or down-grading of multi-product pipelines
• Volumetric Flowmeter Viscosity Correction
  Improved inventory accuracy through reduced K-factor and volumetric flow errors
YOUR SOLUTION FOR THE
MOST DEMANDING PROCESS
APPLICATIONS

MICRO MOTION

For over 30 years, Emerson’s Micro Motion has been a technology leader delivering the most precise flow, density and concentration measurement devices for fiscal applications, process control and process monitoring. Our passion for solving flow and density measurement challenges is proven through the highly accurate and unbeatable performance of our devices.
Fork Viscosity Meter Specifications

Viscosity Measuring Range  0-20,000cP
Viscosity Accuracy  ±0.2cP (0-10cP) then ±1%
                          Full scale of calibrated range max
                          ±1cP (10-100cP), ±10cP (100-1000cP),  
                          ±125cP (1000-12,500cP)
Density Measuring Range  0-3000 kg/m³ (0-3 g/cc)
Density Accuracy  ±1.0 kg/m³ (±0.0001 g/cc)
                          Equivalent to: ±0.5° API, ±0.1% Conc.
Temperature Accuracy  BS1904, DIN 43760 Class ‘B’ (±0.30 ±0.005 X T)°C
Safety Approvals  ATEX, CSA, IECEx  
                            (Explosion/Flame-Proof) – Zones 1 & 2
Display  Two-line, LCD screen
          Optical switch configuration
Outputs  Standard: 4-20mA, HART, Modbus RS-485
          Optional: FOUNDATION™ fieldbus, WirelessHART™
Protection Class  Ingress Protection: IP66/67, NEMA4
                            EMC compliant with EN61326
Dimensions  355 mm (h) x 163 mm (w) x 163 mm (d)  
                            (Typical short stem version)
Weight (Typical)  6.7 kg (15 lbs)