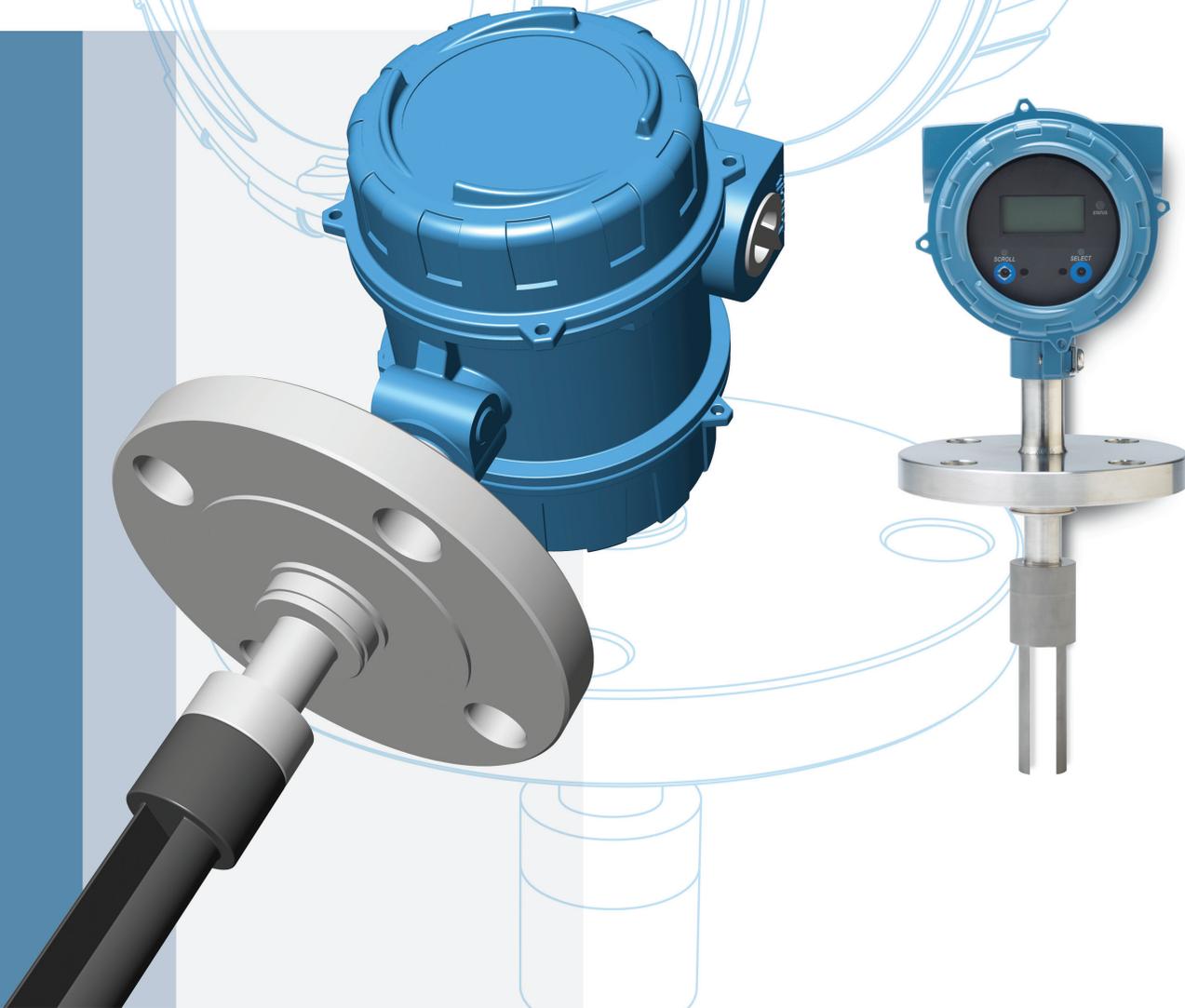


# REVOLUTIONIZE YOUR DENSITY AND CONCENTRATION MEASUREMENT TECHNOLOGY



Micro Motion Fork Density Meter

# INTRODUCING EMERSON'S MICRO MOTION® FORK DENSITY METER

Our Fork Density Meter (FDM) delivers accurate online density and concentration measurement using a direct insertion tuning fork design. This rugged and reliable meter raises the standard for inline density and concentration monitoring and enhances the interface detection, concentration control and blending operations of process fluids as diverse as refined hydrocarbons, mineral slurries and corrosive liquids such as acids and alkalis.

## 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.



## The Micro Motion Fork Density Meter Delivers:

### Superior Measurement Capabilities

- A rugged direct insertion sensor that provides the best, real-time measurement of density ( $\pm 1.0 \text{ kg/m}^3$ ) and concentration ( $\pm 0.1\%$ )
- Multiple corrosion resistant materials for the most demanding process conditions
- 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 simplified device management, minimizing maintenance requirements
- Simple integration into DCS, PLC and flow computers (Frequency/Time Period, Analog 4-20mA, HART, Modbus RS485, and FOUNDATION Fieldbus)
- Revolutionary device diagnostics and verification methods

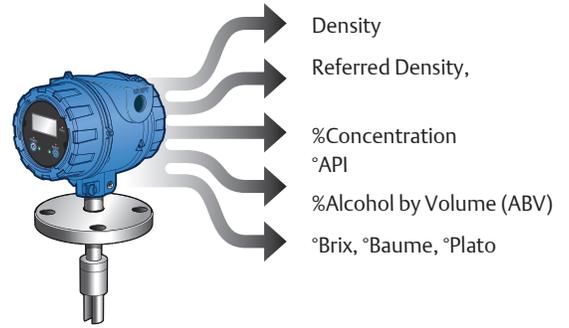
### Robust and Flexible Measurement

- Application-specific measurement and output configurations to ensure simple set-up and commissioning
- Optimized design; insensitive to vibration, temperature and pressure variations

PRODUCT HIGHLIGHTS

**Application-Specific Configurations**

Automatic, application-specific measurement and output configurations ensure simple set-up and commissioning



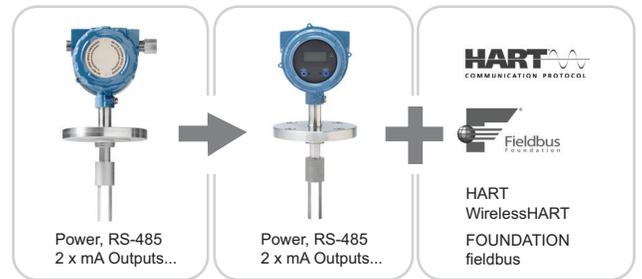
**Meter Diagnostics**

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



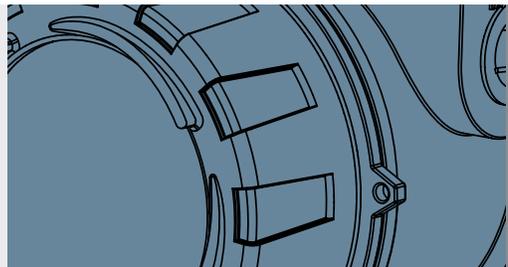
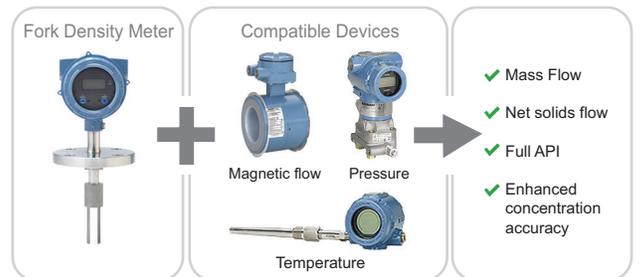
**Unrivalled Density Performance**

A choice of installation options for replacement solutions give you the performance you need



**Interconnectivity**

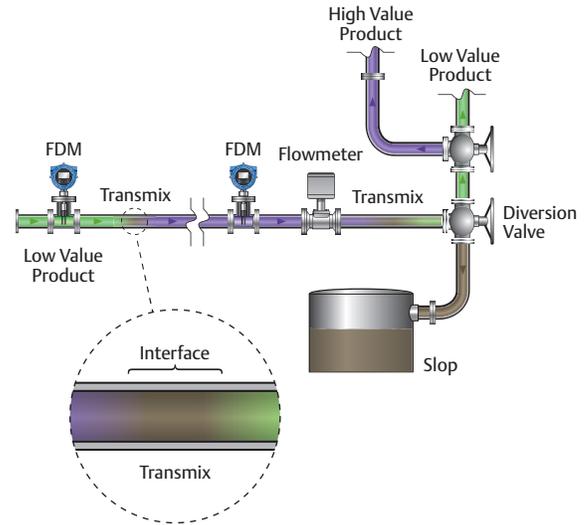
Integral HART I/O allows direct input of external temperature, pressure and flow measurements for enhanced outputs



# KEY APPLICATIONS

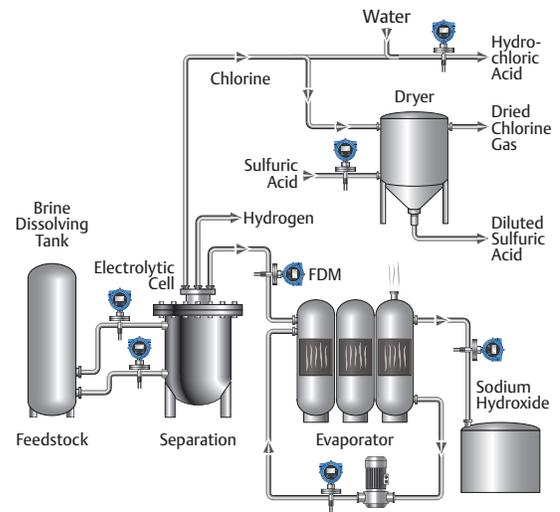
## Pipeline & Terminals

- Interface and Product Detection**  
 Improve cut-over accuracy and product quality determination to reduce scrap, waste or down-grading of multi-product pipelines
- Leak Detection**  
 Improve leak detection thresholds and reduce false alarms



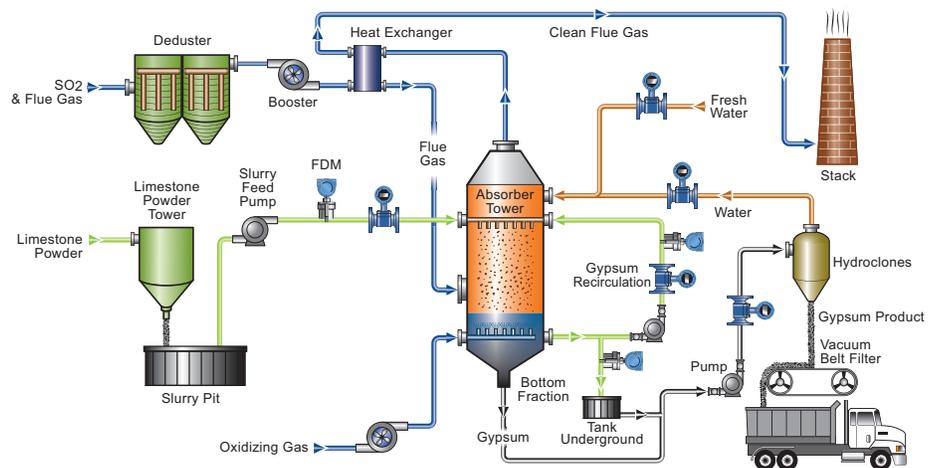
## Refining, Chemical & Petrochemical

- Product Quality and Process Control**  
 Optimize residence/cycle time while minimizing energy usage in condensers, contactors and reactors
- Blending and Concentration Control**  
 Reduce waste, rework and giveaway with optimal feed and production fluid quality measurement



## Power, Metals, Mining & Minerals

- Flue Gas Desulfurization (FGD)**  
 Minimize raw material costs for optimized emissions and taxation reduction, and increased safety
- Mineral Slurries**  
 Optimize end product efficiency through characterized slurry composition



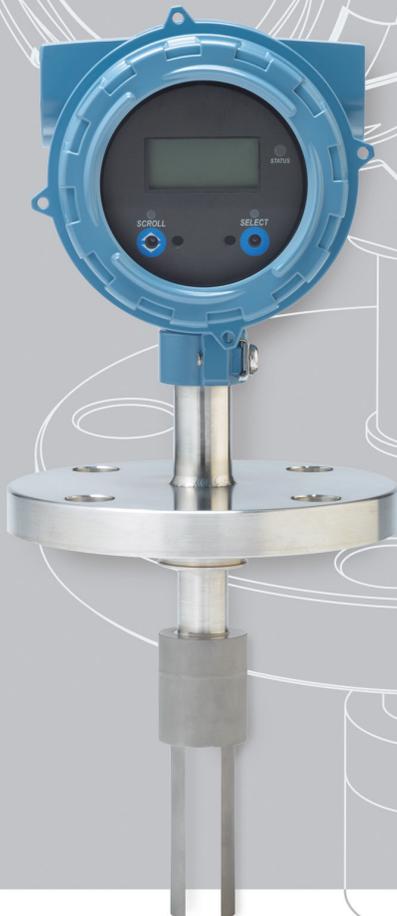


**YOUR SOLUTION** FOR THE  
MOST DEMANDING PROCESS  
APPLICATIONS



## 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 Density Meter Specifications

Measuring Range	0-3000 kg/m <sup>3</sup> (0-3 g/cc)
Density Accuracy	±1.0 kg/m <sup>3</sup> (±0.001 g/cc) Equivalent to: ±0.5° API, ±0.2° Brix, ±1.0% ABV, ±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: Time Period, 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)



					
Compact Density Meter Peak Performance Precision Density Meter	<b>Fork Density Meter</b> Direct Insertion Density Meter	Gas Density Meter Fiscal Gas Density Meter	Specific Gravity Meter Gas Specific Gravity /BTU Meter	Fork Viscosity Meter Multi-Variable Viscosity Meter	Heavy Fuel Viscosity Meter Multi-Variable Marine & Power HFO Viscosity Meter

For more information, please visit: [www.MicroMotion.com/density](http://www.MicroMotion.com/density)

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