

High Performance Coriolis Measurement Systems

Simple, reliable and compact integrated solutions



High Performance Coriolis Measurement Systems – only from Micro Motion®

Utilizing the world's best Coriolis measurement devices, Micro Motion Measurement Systems deliver unbeatable performance in a compact, simplified design.

Micro Motion Measurement Benefits

Reduce Costs

- Compact, overall system size reduces engineering, fabrication and installation cost and enables shipping in standard size containers
- No straight pipe runs required making the total system more compact
- Easily integrated into standard prover systems such as small volume provers and pipe/ball provers
- No mechanical rotating components reduces the need of strainers from overall system design
- Inherent immunity to entrained air means reliable performance in a wide range of standard applications

Increase Reliability

- Sustained fiscal measurement performance and repeatability over time
- System uncertainty improved from multiple measurement streams running in parallel

Increase Uptime

- In-situ meter verification diagnostics eliminate the need to remove meters from service
- Ability to plan maintenance according to ongoing meter health tracking
- Quicker, lower-cost troubleshooting on demand

Expand Applications

- Use a single measurement system for multiple fluids (e.g. gasoline, diesel or jet fuel) without the need to adjust the flow calibration factor



Micro Motion Coriolis Measurement Systems are ideal for a range of challenges that require reliable, compact measurement solutions:

- Ship /Truck /Rail car loading and unloading
- Refined hydrocarbon transfers
- Crude oil pipeline measurement
- Biofuel metering
- Multi-product pipeline measurement
- Custody transfer of light hydrocarbons (e.g. LPG, NGL, E-P mix)
- Ethylene
- Refineries
- Offshore oil platforms
- Floating production, storage and offloading (FPSO)

Inherent Advantages of Micro Motion Coriolis

- No moving parts result in no maintenance or repair
- Install anywhere with no flow conditioning or straight pipe run required
- Accuracy over a wide flow range from a single meter to optimize fiscal measurement performance
- Repeatable, direct mass flow measurement to eliminate problems of volume measurement
- Improved startup and turnover with simple commissioning and reduced risk





Coriolis Measurement Systems

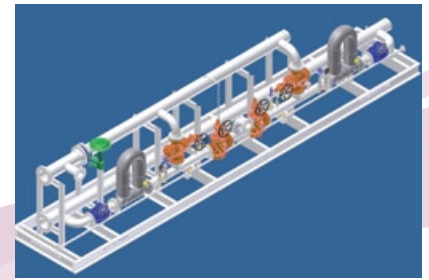
deliver simplicity and *results*

Designed for Reliability and Ease-of-Use

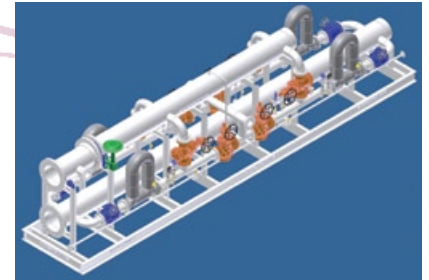
Traditionally measurement systems are built around mechanical turbine or PD meters. These system designs require separate devices for flow and density measurement as well as independent air eliminators and strainers for each flow meter to prevent damage to the moving parts within the measurement devices.

Emerson's integrated measurement systems use Micro Motion Coriolis Flow and Density meters at the heart of the design delivering unbeatable flow and density accuracy in a reliable and cost effective measurement solution that uses no moving parts.

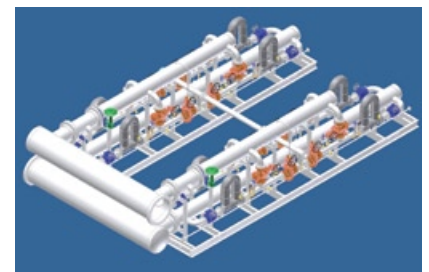
- Designed to reduce complexity while delivering superior measurement performance
- Multi-variable measurement with high accuracy flow (0.05%) and density (0.0002 g/cc) output from a single device
- Exceptional measurement performance identifies entrained air conditions and minimizes the impact on custody transfer applications
- No straight pipe run or flow condition requirements enable a simplified in-line header design that delivers a system with minimal footprint and maximum flexibility for installation in tight spaces such as ship topside, loading jetty, or plant floor.
- Unique ability to detect changes in structural integrity and verify calibration factor without proving or shutting down the process.



Total system size (m): 11.9L x 2.2W x 2.8H
Nominal flow capacity: 2000 m³/h



Total system size (m): 11.9L x 2.2W x 2.8H
Nominal flow capacity: 4000 m³/h



Total system size (m): 13.8L x 6.6W x 2.9H
Nominal flow capacity: 8000 m³/h

Compact Micro Motion Coriolis systems from Emerson are designed for a range of measurement applications

Key Specifications

Measurement systems utilize Micro Motion ELITE[®] Coriolis meters to deliver unbeatable performance for entire measurement system.

	ELITE
Liquid flow accuracy	+0.05%
Gas flow accuracy	+0.35%
Volume flow accuracy	+0.15%
Liquid density accuracy	+0.0002 g/cc

Process temperature capabilities

Measurement Systems can be designed for a wide range of processes from cold fluids (e.g. LNG and refrigerated hydrocarbons) to hot fluids (e.g. molten sulfur)

Maximum flow capacity of measurement system within required pressure drop.





Emerson's Micro Motion is known globally in over 85 countries for its quality and reliability. As part of the Emerson PlantWeb® digital plant architecture, Micro Motion enables increased plant availability, decreased costs and enhanced safety. With over 750,000 meters installed around the world, Micro Motion delivers application expertise, service and technical support not available elsewhere.



Benefit from the wide range of Micro Motion solutions available

- In-line meter verification of electronics and sensor – without the need for tools or down-time
- Exceptional measurement and operating performance in entrained gas conditions
- World-leading dedicated density measurement devices
- Solutions for high and extreme temperature applications
- Best-in-class compact and drainable Coriolis
- TÜV Safety-certified Coriolis for SIL-2 and SIL-3 applications



www.micromotion.com

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