

Pipeline and Transportation Solutions

Superior flow and density measurement



Pipeline and Transportation



Best-in-Class Measurement for Pipeline and Transportation only from Micro Motion®

Emerson's Micro Motion Coriolis flow and density meters deliver the world's best flow and density measurement for pipeline operations.



Improve pipeline flow measurement with best-in-class accuracy and reliability

- Simplify and improve pipeline leak detection with accurate, sustainable pipeline inventory management
- Reduce loss / gain uncertainty and resultant exposure with the tightest measurement repeatability
- Improve sustainability with long-term reliability and maintenance free technology
- Reduce transportation costs with reliable operations data and lower total cost of ownership

Inherent Advantages of Micro Motion Coriolis

- Measure all fluids, slurries and gases with one instrument
- Install anywhere with no flow conditioning or straight pipe run required
- Simple and fast installation and commission at start up
- In-situ meter verification eliminates the need for periodic and disruptive calibration checks
- Broad range of products provide fit for purpose measurement performance at lower total cost of ownership

Micro Motion Coriolis flow and density measurement is ideal for a range of applications

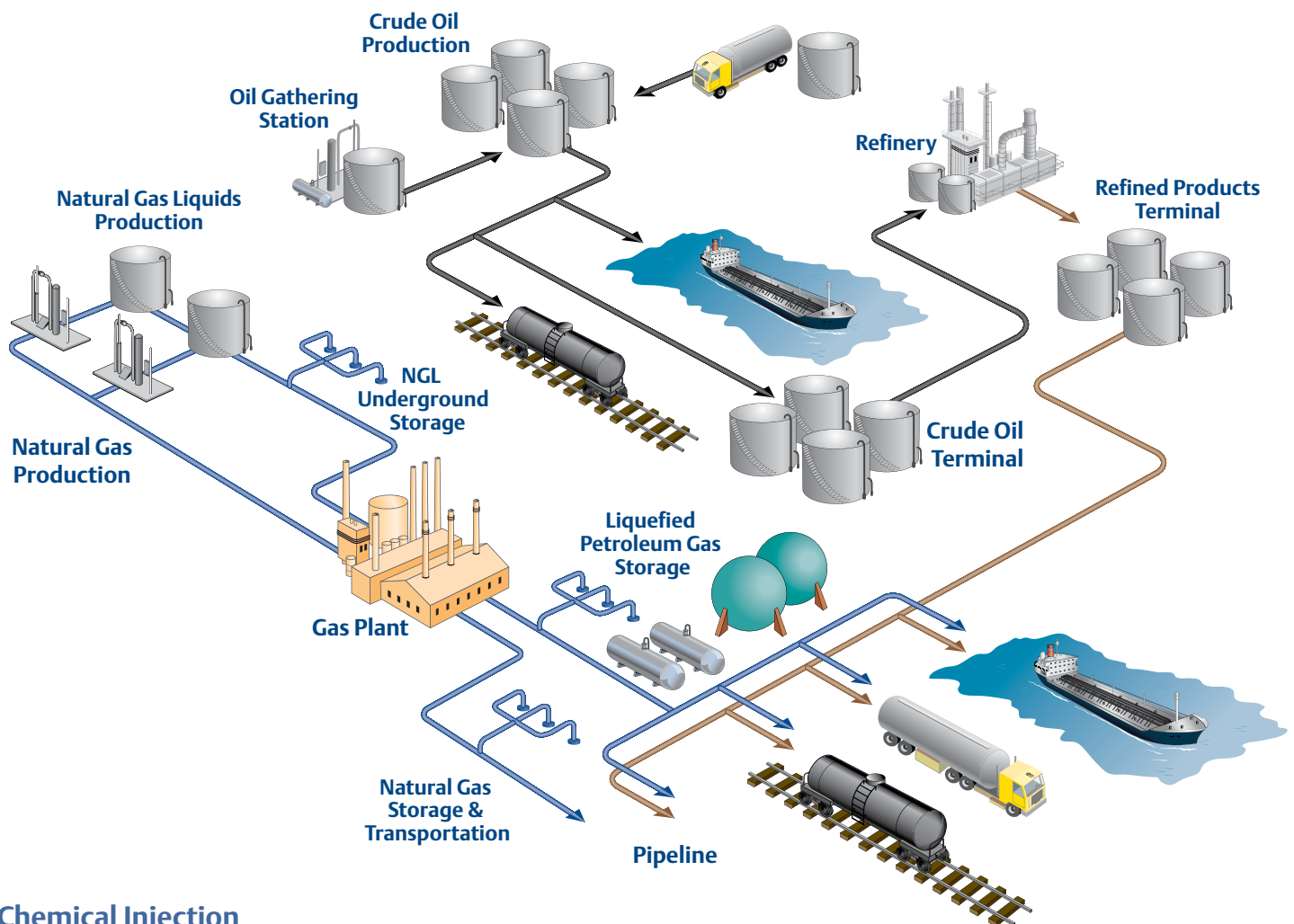
- Fiscal measurement and custody transfer
- Leak Detection
- Interface Detection
- Chemical Injection
- Loading/Un-loading



Fiscal and Allocation Measurement

Micro Motion delivers best-in-class measurement in flow and density to meet your fiscal measurement requirements and reduce monetary and logistic exposure. From production streams to refined products; Micro Motion is the standard for fiscal measurement.

- Reduce loss/gain uncertainty and resultant exposure with the tightest measurement repeatability and accuracy
- Reduce total cost of ownership with long-term reliability, simplified installation, and maintenance free devices



Chemical Injection

Improve pipeline operations with reliable, accurate measurement of costly pipeline treatment chemicals and drag reducers.

- Ensure optimal treatment and pipeline integrity without overdosing
- Minimize the pipeline operational pump cost with viscosity measurement for the feedback and control of drag reducer dosing

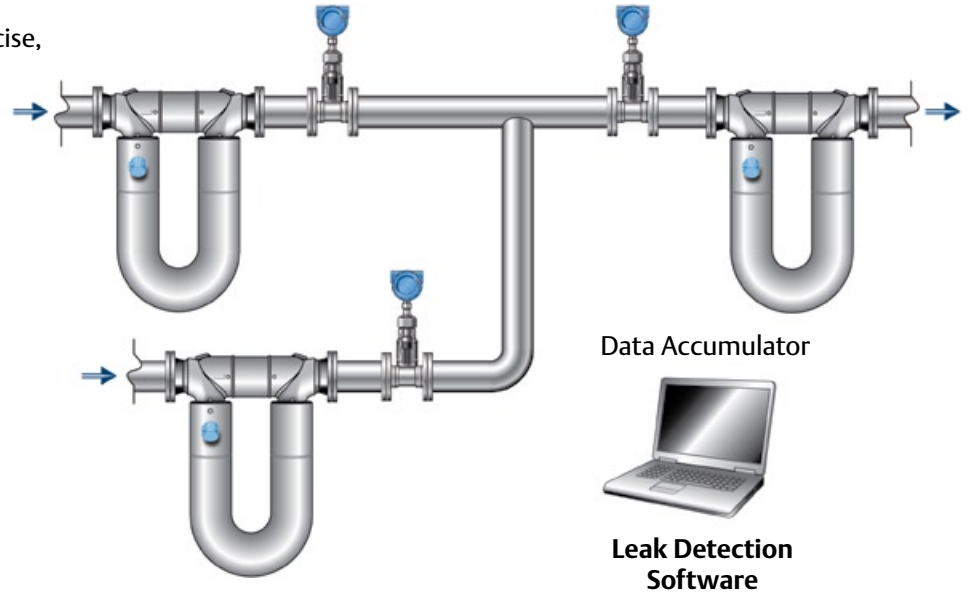
Leak Detection

Micro Motion Coriolis meters deliver best-in-class flow and density measurements to maximize the performance of your computational pipeline monitoring systems.

- Improve leak detection threshold and reduce false alarms with unparalleled accuracy
- Simplify leak detection systems with precise, direct fluid inventory



Multipoint receipts, delivery, and pipeline inventory



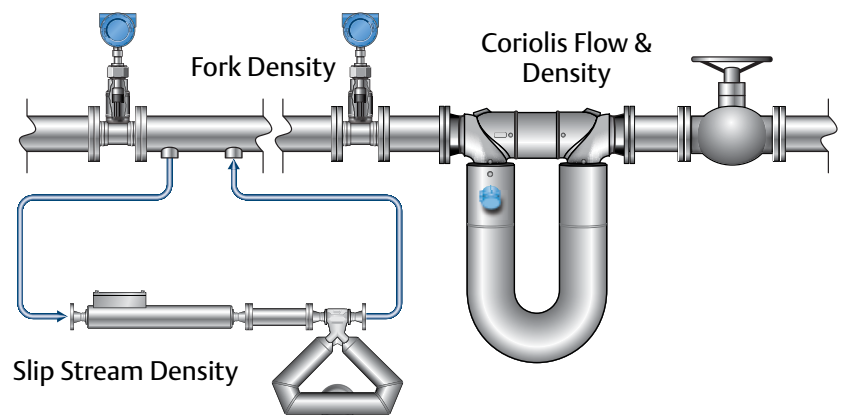
Interface Detection

Micro Motion Coriolis meters and densitometers eliminate the challenge of implementing an interface detection system to identify, isolate and transport hydrocarbon liquids in multi-product pipelines.

- Reduce interface downgrading volumes with best-in-class density measurement
- Minimize transmix and potential re-processing with tighter batch control
- Improve reliability and uptime of pipeline interface management



Upstream and receiving interface detection



Micro Motion Products for Pipeline and Transportation Applications

For a complete product specifications, visit MicroMotion.com in the Products link or contact your sales representative

Flow and Density Meters

- Fiscal and Allocation
- Gathering, receipts, shipments
- Inventory transfer
- Leak Detection
- Batch Tracking

Micro Motion ELITE® Sensors

+/- 0.05% Liquid Mass Flow Accuracy
+/-0.0002 g/cc Liquid Density Accuracy
Line Sizes from 0.1" to 16"

Micro Motion High Performance Measurement Systems

Large line size skids (12-48") with built in validation, redundancy, and minimal uncertainty



Density Meters

- Fiscal and Allocation
- Net volume
- Product quality
- Mass flow conversion
- Interface detection

Micro Motion Tube Density Meters

Industry standard Density Meters for fiscal measurement
+/-0.0001 g/cc Density Accuracy
+/-0.005 Kg/m3/°C Temperature Stability

Micro Motion Fork Density Meters

Flexible installation with compact design and hot-tap retractor fork option
+/-0.001 g/cc Density Accuracy



Viscosity Meters

- Meter factor correction
- Pipeline efficiency
- Leak detection

Micro Motion Fork Viscosity Meters

Viscosity, density, and temperature from a single device
Compact, rugged design with flexible installation options



Chemical Injection Meters

- Corrosion Control
- Pipeline capacity
- Diluents blending

Micro Motion ELITE CMFS Sensors

+/- 0.05% Liquid Mass Flow Accuracy
+/-0.0002 g/cc Liquid Density Accuracy
Line Sizes from 0.1" to 1"
Pressures up to 6,000 psi (400 bar)



Micro Motion Coriolis Performance for Pipeline and Transportation

- Accurate, repeatable measurement performance under changing fluid properties, process conditions and high turndown helps unlock your pipeline potential
- Reliable, sustainable performance eliminates time consuming maintenance or pipeline down-time
- Superior and reliable density measurement capabilities for product quality validation and simplified interface detection
- Device and measurement application diagnostics for improved confidence in operations



Micro Motion, a division of Emerson Process Management, 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 600,000 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

- Superior, out-of-the-box flow and density accuracy
- Simple installation and reduced cost
- No straight-run piping or special supports required
- Multivariable outputs (mass flow, volumetric flow, density/concentration, temperature)
- Direct PLC interface with digital protocols (DeviceNet, Profibus, Modbus, HART)
- 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
- Solutions for high and extreme temperature applications
- Best-in-class compact and drainable Coriolis
- Exida Safety-certified Coriolis for SIL-2 and SIL-3 applications
- EPA 40 CFR75 calibration capability



www.micromotion.com

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