Alternative Fuels Measurement Solutions

Outstanding accuracy for unmatched results

Micro Motion®

EMERSON™
Process Management

Proven, High Accuracy Mass Measurement Technology

only from Micro Motion®

High-accuracy and reliable measurement of compressed or light gases, or gas at extremely low temperatures, is critical to the successful refining, processing, transporting and dispensing of CNG and LNG fuels. Emerson's Micro Motion Coriolis direct mass measurement technology is specially engineered for these challenging applications and has been used for over 20 years in the safe, accurate handling of CNG and LNG fuels.

Reduced costs

- Direct, inline measurement of mass flow, volume flow, density and temperature measurement from a single device reduces complexity and saves money
- High accuracy measurement ensures efficient handling and precise metering of expensive fuels
- MID-approved instrumentation eliminates the need for securing other approvals or accreditations

Maximize uptime

- Measurement devices with no moving parts result in minimal maintenance and reliable meter operation
- Excellent measurement in two-phase flow conditions improves the overall process and keeps the operation running
- Direct, inline density measurement provides further insight into operation and assurance during custody transfer

Increased safety

- Measurement that is immune to flashing ensures safety and environmental risks are minimized
- Field-proven performance in CNG and LNG measurement, backed by unmatched expertise and global support, delivers confidence in your system

World-leading Micro Motion is able to measure natural gas in liquid and gas forms, is not influenced by flashing, and delivers the same high accuracy regardless of the presence of entrained gas. Your process needs the performance Micro Motion measurement delivers in a range of LNG applications.

Your process needs high-performance measurement for a range of alternative fuels and applications:

- Trains, vessels, FPSOs
- Terminals
- Re-gasification plants
- Decentralized installations
- Dispenser and fueling stations

Alternative Fuels

Proven Performance in Tough Applications

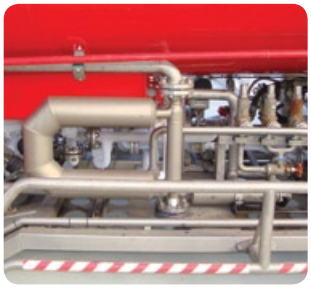
Many flow instruments have difficulty measuring alternative fuels, such as CNG, and few are able to measure at low temperatures or within the regulatory accuracies specified for LNG applications.

For CNG supply systems, precise measurement is critical for handling the entire distribution process - from pipelines to refueling stations. Overcoming the challenges of handling and measuring gas flows requires measurement that can compensate for changing pressure, temperature and composition while accurately measuring regardless of fluctuating flow rates.

LNG measurement has unique challenges, including large pressure drops and high compression, which can result in vaporizing or flashing. Both are extremely dangerous and increase the risk of handling LNG.

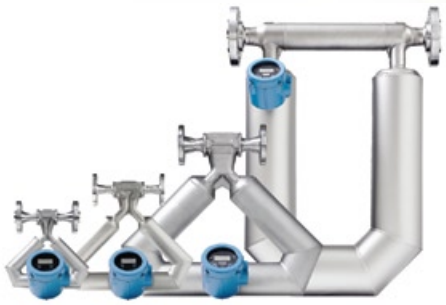
Emerson's Micro Motion Coriolis flow technology has delivered precision accuracy, mass-based measurement for CNG and LNG applications for decades, with thousands of installations operating worldwide. Micro Motion meters have no moving parts or other obstructions in the pipeline and are able to accurately measure temperatures down to -204°C.

With the broadest size of sensors available, Micro Motion Coriolis meters deliver a complete measurement solution with MID-approved meters and a wide range of materials. Micro Motion Coriolis meters are able to measure natural gas both in gas and liquid form and are not influenced by flashing in the line. In addition, they can handle the presence of entrained gas or two-phase flow conditions, which increase safety while ensure accurate measurement.



Micro Motion Products for Alternative Fuels Measurement

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



ELITE Coriolis Meters

• Liquid mass flow accuracy:	±0.1% of flow rate
• Gas mass flow accuracy:	±0.5% of flow rate
• Nominal line size:	6 to 75mm
• Flow range:	108 to 545,000 kg/h
• Pressure rating:	100 to 413 bar (on select line sizes)
• Temperature:	-204°C to +204°C

F-Series Coriolis Meters

• Gas mass flow accuracy:	±0.50% of flow rate
• Typical line size:	13 to 50mm
• Pressure rating:	100 bar (stainless steel); 148 bar (nickel alloy)

CNG Coriolis Meters

• Gas mass flow accuracy:	±0.50% of batch
• Typical line size:	13 to 25mm
• Pressure rating:	345 bar

Superior accuracy and measurement performance for:

- CNG
- LNG
- LPG
- Bio-fuels
- Gasoline
- Diesel
- Hydrogen

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 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

PlantWeb®

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