

# Low Flow Coriolis

Superior measurement accuracy and reliability  
for low flow applications



# Superior Performance Coriolis for Low Flow Applications – only from Micro Motion®

Micro Motion Coriolis meters for low flow rates deliver world-class measurement performance for a wide range of challenging applications.

## Industries & Applications

## Attributes & Benefits

### ELITE® Coriolis Meters

Oil & Gas Chemical Food & Beverage	<ul style="list-style-type: none"> <li>The most stable and robust Coriolis meter for low flow applications</li> <li>Best-available performance with drainability</li> <li>Lightweight design eliminates the need for special mounting support</li> </ul>
Filling Life Science Personal Care	<ul style="list-style-type: none"> <li>Drainable design for easy cleaning and product changeover</li> <li>Highly polished, 316L housing available and rounded corners make it easy to clean</li> <li>High turndown maximizes fill size per machine</li> <li>Slim profile means more heads per machine and increased throughput</li> </ul>
Chemical Injection	<ul style="list-style-type: none"> <li>Pressure rating 6,000 psi for high pressure injections</li> <li>316L exterior delivers superior corrosion resistance in offshore applications</li> <li>High turndown to accommodate changing treatment programs</li> <li>Two-wire technology for easy replacement of older, loop-powered devices</li> </ul>
Engine Testing	<ul style="list-style-type: none"> <li>High turndown maximizes test bed flexibility</li> <li>Two sensor sizes in one footprint give OEMs simplicity of engineering</li> </ul>

### LF-Series

Laboratory, R&D and Pilot Plants	<ul style="list-style-type: none"> <li>Precise measurement for flow rates as low as 0.013 kg/h (0.028 lb/h)</li> <li>Small footprint, the size of a handheld organizer, fits into any tight space for ultra-low, high precision measurement</li> </ul>
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Micro Motion Coriolis meters handle flow rates of 0-330 kg/h (0-17 lb/min) and are ideally suited for a range of industries and applications:

#### Industries:

- Automotive
- Chemical
- Electronics & semiconductors
- Filling machines
- Food & beverage
- Fuel cells
- Life sciences
- Oil & gas
- Pharmaceuticals

#### Applications:

- Batching/dosing of dyes, fragrances, flavorings
- Chemical injection
- Engine test beds
- Filling of cosmetic and pharmaceutical products
- Metering pump control
- Pilot plants; R&D and labs
- Precision spray coatings
- Vacuum thin film coating



## Inherent Advantages of Micro Motion Coriolis

- Direct mass measurement, high accuracy, wide turndown
- Multi-variable, bidirectional measurement - flow, density, temperature
- 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 plant efficiency
- Repeatable, direct mass flow measurement to eliminate problems of volume measurement



# Superior Low Flow Measurement for the *widest range of applications*

## Designed for Low Flow Performance

Micro Motion Coriolis meters reliably measure mass flow, volume flow, density and temperature from a single device and are suited for a range of applications - from laboratory conditions to the toughest of applications and most challenging of conditions.

- Range of meters sizes for optimum coverage from 330 kg/h down to 0.013 kg/h (0.028 lb/hr)
- 316L Stainless Steel and Nickel Alloy wetted parts
- Pressure Rating up to 6,000 psi
- Hygienic version: CIP suitable; 3A and EHEDG certifications
- Breakthrough design and manufacturing for unsurpassed stability and reliability
- On-board meter verification for complete assessment of meter performance at the touch of a button
- Optimized sensor design with the latest in signal processing deliver best available two-phase flow
- Two-wire delivers accurate, repeatable measurement performance for loop-powered processes



LF-Series Coriolis Meter



ELITE Coriolis Meters

### Key Specifications

#### LF-Series

##### Flow range

Liquid 0.013 kg/h (0.028 lb/hr) to 27 kg/h (69.54 lb/h)

Gas 0.227 lb/h (0.103 kg/h) to 8.026 lb/h (3.640 kg/h)

**Mass Flow Accuracy** Liquid/Gas ±0.5% of rate

**Density Accuracy** Liquid/Gas ±0.005 g/cm<sup>3</sup>

**Temperature Rating** 32°F to 149°F (0°C to 65°C)

**Pressure Rating** up to 1500 psi (100 bar)

**Wetted Parts:** 316L Stainless Steel

**Hazard Area:** Class I Division 2/Zone 2

**Weight:** 4 lbs (2 kg)

#### ELITE CMFS10 and CMFS15

**Line sizes** 1/10" (DN2) and 1/6" (DN4)

**Flow range** DN2 1/10": 0.073 lb/min to 4 lb/min (2 to 110 kg/h)  
DN4 1/6": 0.37 lb/min to 12 lb/min (10 to 330 kg/h)

**Mass Flow Accuracy** Liquid up to ±0.05% of rate  
Gas ±0.35% of rate

**Density Accuracy** Liquid ±0.0005 g/cm<sup>3</sup>

**Temperature Rating** -400°F to 400°F (-240°C to 204°C)

**Pressure Rating** up to 6000 psi (413 bar)

**Wetted Parts:** 316L Stainless Steel and Nickel Alloy  
Hygienic version (316L SS tubes and manifold finished to 32Ra (0.8 μm); 316L SS highly polished housing; 3A and EHEDG certifications)

**Hazard Area:** Class I Division 1

**Weight:** 9 lbs (4 kg)



**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

- 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
- Exida Safety-certified Coriolis for SIL-2 and SIL-3 applications



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