

Micro Motion

Precision
Measurement
for the
Pharmaceutical
and Biotech
Industries







Trust Your Process to Nothing But The Best

With world-leading Micro Motion® Coriolis technology, Emerson Process Management brings you the leadership and expertise to keep your processes ahead of the curve.

- Resources and experience to support your pharmaceutical and biotech process automation needs
- Industry-leading DeltaV™ control systems
- Process automation engineering expertise
- Emerson's Asset Management Solutions software to streamline maintenance activities
- State-of-the-art process instrumentation including flow measurement devices, control valves, regulators, transmitters and analyzers
- Proven PlantWeb® field-based architecture, combining intelligent field devices, open standards and automation systems for streamlined regulatory compliance





products and application expertise. We offer multi-variable flow and density measurement solutions for: • Batch additions • WFI loops KNOWLEDG Nitrogen blanketing • In-situ meter verification

- Chromatography column control
- Tablet and pill coating
- Mass balance
- CIP system monitoring
- Centrifuge control
- Cell mass indication
- Interface detection for two-phase reactor cuts

Emerson's Micro Motion technology has been the Coriolis leader for over 30 years with unsurpassed

Calibration carts

Providing precisely what you need is what Micro Motion is all about. Our flexibility will help you achieve top performance in your specific liquid, slurry or gas applications.

With Emerson's Micro Motion you can count on:

- The most accurate and repeatable flowmeters available
- Direct mass flow and density measurements
- No recalibration or compensation for fluid property variations
- No moving parts or maintenance requirements
- Real-time, on-line density measurements for continuous product quality monitoring
- Exclusive MVD™ technology to improve process consistency and maximize uptime
- · Large variety of sensors and surface finish options
- · Wide range of mounting options and transmitter output choices
- Sensors designed and manufactured according to the rigors of the ASME Bioprocessing Equipment standard
- 3-A authorized and EHEDG certified products for hygienic applications all can be drained, inspected and cleaned in place





We are dedicated to your success. Micro Motion will support your validation needs with:

- ISO 9000-2001 certified manufacturing and calibration facilities
- Certified factory calibration specifically tailored for the pharmaceutical and biotech industries
- ISO 17025 accredited calibration reference system
- 21 CFR Part 11 compliance for Micro Motion meters, as part of an Emerson Process Management PlantWeb solution
- Validation templates for Micro Motion meters

Emerson's knowledgeable field sales force and factory application engineers strive to help reduce your engineering time and costs with application, meter sizing and selection assistance, and installation recommendations.

We also offer a global Micro Motion factorycertified field service staff who can perform:

- Installation qualification (IQ)
- Operation qualification (OQ)
- Meter and process troubleshooting



PRODUCTS

Micro Motion Coriolis with MVD technology offers digital signal processing that enhances the superior performance of our mass flow and density measurements.



Micro Motion ELITE® meters

- The most accurate Coriolis mass flow and density meter on the market today
- 1/8 to 4 inch line sizes
- 316L, 304L stainless steel or Nickel Alloywetted parts

Micro Motion T-Series meters

- Full bore, single straight tube design-more installed around the world than any other single straight tube Coriolis meter
- Designed to meet ASME Bioprocessing Equipment Standard
- 3-A authorized, EHEDG certified
- 1/4 to 2 inch line sizes
- Titanium ASTM Grade 9 wetted parts
- Improved surface finish options

Micro Motion H-Series meters

- Coriolis benefits at an affordable price
- Designed to meet ASME Bioprocessing Equipment Standard
- 3-A authorized, EHEDG certified

- Improved surface finish options



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Join your peers in the industry who rely on Micro Motion flow

and density measurement

Abbott Laboratories

Bristol Myers Squibb

Johnson & Johnson

Novo Nordisk Pfizer

Roche Holdings

Schering-Plough

solutions.

Amgen

Baxter

Baver

Eli Lilly

Merck

Genzyme

Genentech Glaxo SmithKline



- 1/4 to 2 inch line sizes
- 316L stainless steel wetted parts

Emerson Process Management

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