High Capacity Coriolis

Superior measurement accuracy and reliability for high flow rate applications







Superior Performance High Capacity Coriolis – only from Micro Motion®

Emerson's expanded line of Micro Motion ELITE[®] High Capacity Coriolis meters deliver exceptional measurement accuracy for high flow rates in large line sizes 6"-16" (150-400mm).

Micro Motion Measurement Benefits

Reduce Costs

- Significant cost savings against traditional measurement devices, such as PD meters, for high flow rate applications
- Sustained accuracy over wide turndown and bi-directional flow reduces the need for multiple meters
- Measure flow, volume and density with one device

Increase Uptime

- In-situ meter verification delivers the only true and complete assessment of meter performance at the touch of a button
- Unique, simple design reduces system complexity, installation and maintenance for greater productivity
- Highest possible measurement reliability and unbeatable accuracy over time ensures trouble-free operation

Improve Performance

- Best-in-class two-phase flow measurement capability for reliable, repeatable measurement
- Superior application support from experience gained with tens of thousands of meters installed in custody transfer applications around the world
- Field-proven, industry-accepted measurement that meets standards for crude oil and hydrocarbon product (e.g. API)



Micro Motion ELITE High Capacity Coriolis meters are ideal for custody transfer, pipelines and critical applications:

- Allocation and production measurement
- Chloride corrosion resistance
- CO₂-EOR (Enhanced Oil Recovery)
- Crude oil blending
- Custody transfer of liquids or gases
- Drilling fluid downhole/return flow
- Fuel bunkering
- Measurement skids and systems
- Natural Gas transmission
- Pipeline leak detection
- · Ship, rail loading and unloading



Inherent Advantages of Micro Motion Coriolis

- Direct mass measurement, high accuracy, wide turndown
- Multivariable (flow, density and temperature) measurement from a single device
- 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
- Repeatable, direct mass flow measurement
- Improved startup and simple commissioning





High Capacity Measurement

when every drop **COUNTS**

Designed for High Flow Performance

Micro Motion ELITE Coriolis meters deliver exceptionally accurate, direct mass measurement with no maintenance or ancillary devices required. Count on Micro Motion measurement devices to handle high capacity flow rates with robust and reliable performance.

- Compliant, custody transfer accuracy that delivers sustainable measurement performance, without the maintenance
- No slippage, moving parts, no density effects, and 20:1 turndown for custody transfer and 100:1 turndown capability
- Verify meter performance, at the touch of a button and without removing the meter from service, with in-situ meter verification
- Super Duplex alloy material (available in 6-10" line sizes) offers
 excellent high chloride resistance, to avoid corrosion and reduce
 operating costs, and improved strength for a higher pressure
 rating up to class 900 or 2320 PSI
- All Super Duplex materials comply with NORSOK M-650

Key Specifications

Mass flow accuracy	Liquid Gas	±0.10% of rate ±0.35% of rate		
Volume flow accuracy	Liquid only	±0.10% of rate		
Repeatability	Liquid Gas	±0.05% of rate ±0.20% of rate		
Temperature rating	-400°F to 662°F (-240°C to 350 Super Duplex: -29°F to 350°F (-20°C to 177°C)			
*Applications up to 204°C with factory approval				
Pressure rating	1480 psi (103 bar) Super Duplex: 2320 psi (160 bar)			
Process connections	6"-16" (150 - 4	100 mm)		





Emerson's global support and unparalleled expertise ensure the success of even the toughest applications and measurement challenges

High Flow Rate Performance

Typical Flow Rate (Gas)

ELITE Meters
CMFHC2
CMFHC3
CMFHC4
CMFHC2
CMFHC3
CMFHC3

	Mass		Volume			
		lb/min	kg/h	SCFM	Nm³/h	
		4.000		4.5.500		
	Air	1,220	33,100	16,200	27,500	
		1,900	51,800	25,600	43,500	
		3,000	81,800	40,400	68,600	
	Natural Gas	4,450	121,000	103,000	175,000	
		8,500	231,000	196,000	334,000	
		10,000	272,200	231,000	393,000	

Typical Flow Rate (Liquid)

Maximum Flow Rate (Liquid)

	Mass			Volume		
	lb/min	kg/h	tons/h	l/h	bbl/h	m³/h
ELITE Meters						
CMFHC2	13,500	367,400	367	367,400	2,300	367
CMFHC3	24,000	653,200	653	653,200	4,100	653
CMFHC4	38,000	1,034,200	1034	1,034,200	6,500	1034

m3/h

1,470 2,550 3,270

	Mass	i i iow kate (i	Volume	Volume		
	lb/min	kg/h	tons/h	I/h	bbl/h	
ELITE Meters	<u> </u>		· · ·	·	•	
CMFHC2	54,000	1,470,000	1,470	1,470,000	9,200	
CMFHC3	94,000	2,550,000	2,550	2,550,000	16,10	
CMFHC4	120,000	3,266,000	3,270	3,266,000	20,50	

Complies with Country Specific Weights & Measures approvals. See Product Data Sheet for more information.





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.



Ŭ PlantWeb

Benefit from the wide range of Micro Motion solutions available

- Meter verification of the complete Coriolis meter sensor through electronics with no downtime
- 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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