

Micro Motion™ F-Series Flow and Density Meters



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High accuracy real world performance

- Best-in-class performance on liquid mass flow, volume flow, and density measurements in a compact design (up to $\pm 0.05\%$ liquid mass accuracy and up to $\pm 0.5 \text{ kg/m}^3$ liquid density accuracy)
- Rugged design minimizing process, mounting, and environmental effects

Best fit-for-application

- Cleanable, self-draining design for critical process control service
- Compact design enables installation flexibility
- Broad range of I/O offerings including HART™, Profibus-DP, FOUNDATION™ fieldbus, 4-20 mA, and wireless capabilities

Exceptional reliability and safety

- No moving parts to wear or replace minimizes maintenance for long-term reliability
- 316L stainless steel and nickel alloy C22 wetted parts construction for compatibility with most fluids
- Robust sensor design

Physical specifications

Materials of construction

General corrosion guidelines do not account for cyclical stress, and therefore should not be relied upon when choosing a wetted material for your Micro Motion meter.

For material compatibility information, see the *Micro Motion Corrosion Guide* at www.emerson.com.

Wetted path materials

Model	Material options		Sensor weight
	316/316L Stainless steel	Nickel alloy C22	
F025	F025S/A/P	F025H/B	10 lb (4.5 kg)
F050	F050S/A/P	F050H/B	11 lb (5.0 kg)
F100	F100S/A	F100H/B/P	21 lb (9.5 kg)
F200	F200S	F200H	42 lb (19 kg)
F300	F300S	F300H	105 lb (47.6 kg)
F400	F400S		180 lb (81.6 kg)

Notes

- Weight specifications are based upon ASME B16.5 CL150 flange and do not include electronics.
- Heat jackets and steam kits are also available.

Non-wetted part materials

Component	Enclosure rating	300 series stainless steel	Polyurethane-painted aluminum
Sensor housing	IP66	•	
Core processor housing	NEMA [®] 4X (IP66/67)	•	•
Junction box	NEMA 4X (IP66/67)	•	•
Transmitter housing ⁽¹⁾	NEMA 4X (IP66/67)	•	•

(1) Material of construction and surface finish options vary by model. For available options, see the transmitter Product Data Sheet.

Process connections

Sensor type	Flange types
Stainless steel 316L	<ul style="list-style-type: none"> ASME B16.5 weld neck flange raised face EN 1092-1 weld neck flange form B1, B2, D, and F JIS B2220 weld neck raised face NAMUR NE 132 compliant flange options for standardized face-to-face dimensions VCO, VCR swagelok compatible fitting Hygienic Tri-Clamp[®] compatible

Sensor type	Flange types
Nickel alloy C22	<ul style="list-style-type: none"> ■ ASME B16.5 lap joint flange ■ EN 1092-1 lap joint flange form B1 ■ JIS B2220 lap joint flange ■ Hygienic Tri-Clamp compatible
High pressure	<ul style="list-style-type: none"> ■ ASME B16.5 weld neck flange ■ VCO swagelok compatible fitting ■ EN 1092-1 weld neck flange type B2, D

Notes

- For flange compatibility, see the [Sizing and Selection](#) tool.
- For more information on available NAMUR NE 132 compliant flange options, see the [Micro Motion F-Series Hygienic Coriolis Flow and Density Meters Technical Data Sheet](#).

Dimensions

These dimensional drawings provide a basic guideline for sizing and planning.

For Face-to-Face (Dim. A, below) dimensions for all F-Series meters with each available process connection, see the *Micro Motion F-Series Flow and Density Meters Technical Data Sheet*.

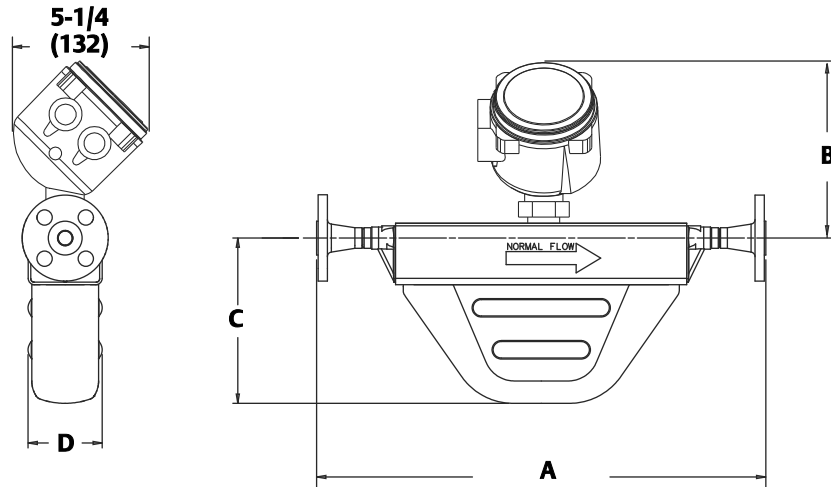
For detailed dimensional drawings, go to www.emerson.com.

Note

- Accuracy = ± 0.12 in (± 3.0 mm)
- These drawings are representative of a sensor model fitted with an ASME B16.5 CL 150 flange, and a 2400 transmitter.

Example dimensions for all models

Dimension drawings are applicable to 316L stainless steel (S/A), nickel alloy C22 (H/B), and high pressure (P).



Model	Dim. A ASME B16.5 CL150	Dim. B	Dim. C	Dim. D
F025	16 in (406 mm)	6.97 in (177 mm)	5.12 in (130 mm)	2.80 in (71 mm)
F050	18.11 in (460 mm)	6.97 in (177 mm)	6.73 in (171 mm)	2.95 in (75 mm)
F100	22.68 in (576 mm)	7.17 in (182 mm)	9.13 in (232 mm)	4.13 in (105 mm)
F200	24.76 in (629 mm)	8.11 in (206 mm)	12.56 in (319 mm)	5.63 in (143 mm)
F300 ⁽¹⁾	34.6 in (879 mm)	9.84 in (250 mm)	11.14 in (283 mm)	7.32 in (186 mm)
F400	43.00 in (1,092 mm)	9.90 in (251.46 mm)	11.49 in (291.8 mm)	9.31 in (236 mm)

(1) Dimensions representative of model F300 with case code "E".