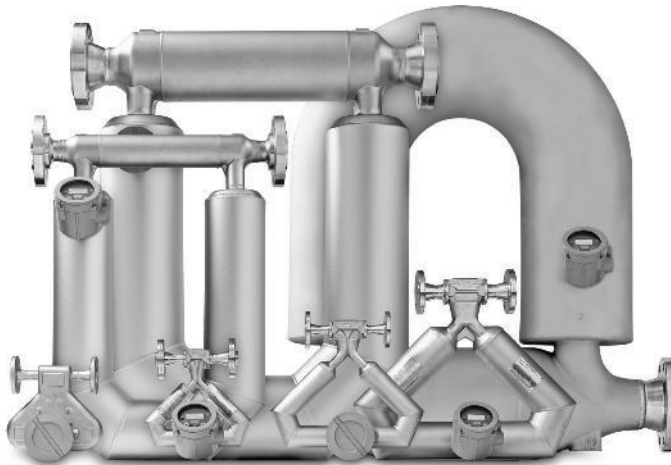


Product Data Sheet

PS-00375, Rev. K
November 2008

Micro Motion® ELITE® Coriolis Flow and Density Meters

Micro Motion® ELITE® Coriolis meters are the leading precision flow and density measurement solutions. ELITE meters offer the most accurate and repeatable measurement available for liquids, gases, or slurries.



Best precision flow and density measurement

- Unique design delivers unparalleled measurement sensitivity and stability
- Guarantees consistent, reliable performance over the widest flow range
- In-situ meter verification delivers fast, actionable, simplified performance checks

Superior performance in the most challenging applications

- Industry standard for custody transfer and critical process control
- Best two-phase flow capability for batching, loading, and entrained air applications
- Immune to fluid, process, or environmental effects for superb measurement confidence

- ELITE®** Peak performance Coriolis meter
- F-Series High performance compact drainable Coriolis meter
- H-Series Hygienic compact drainable Coriolis meter
- T-Series Straight tube full-bore Coriolis meter
- R-Series General purpose flow-only Coriolis meter
- LF-Series Extreme low-flow Coriolis meter

Micro Motion ELITE flow and density meters

Micro Motion Coriolis meters meet a vast range of application needs, ranging from extreme low-flow up to high-flow, high-capacity lines. Cryogenic, hygienic, high-temperature, and high-pressure—Micro Motion meters can handle them all. Micro Motion meters are available with a variety of wetted parts to ensure the best material compatibility.

Coriolis meters. Coriolis meters offer dramatic benefits over traditional volumetric measurement technologies. Coriolis meters:

- Deliver accurate and repeatable process data over a wide range of flow rates and process conditions.
- Provide direct inline measurement of mass flow and density, and also measure volume flow and temperature—all from a single device.
- Have no moving parts, so maintenance costs are minimal.
- Have no requirements for flow conditioning or straight pipe runs, so installation is simplified and less expensive.
- Provide advanced diagnostic tools for both the meter and the process.

ELITE Coriolis meters. Micro Motion ELITE meters are the leading meters for precision flow and density measurement. ELITE meters offer the most accurate measurement available for virtually any process fluid, while exhibiting exceptionally low pressure drop. Every ELITE meter features standard secondary containment, and is available with stainless steel or nickel-alloy wetted parts and a wide variety of process connections to meet your every need.

Now with in-situ meter verification, ELITE delivers the best in measurement and ease of use for critical applications. ELITE meters offer the best measurement performance for mass, density, and volume, regardless of process or environmental conditions. ELITE meters provide measurement capability for two-phase flow, liquid, and gas custody transfer, and process conditions from $-240\text{ }^{\circ}\text{C}$ to $350\text{ }^{\circ}\text{C}$.

Contents

Liquid flow performance	4	Hazardous area classifications.	12
Gas flow performance	6	Materials of construction	18
Density performance (liquid only)	8	Weight	18
Power consumption	8	Dimensions.	19
Temperature specifications	9	Fitting options.	26
Pressure ratings	10	Ordering information.	35
Environmental effects	11		

Micro Motion ELITE flow and density meters



Best precision flow and density measurement

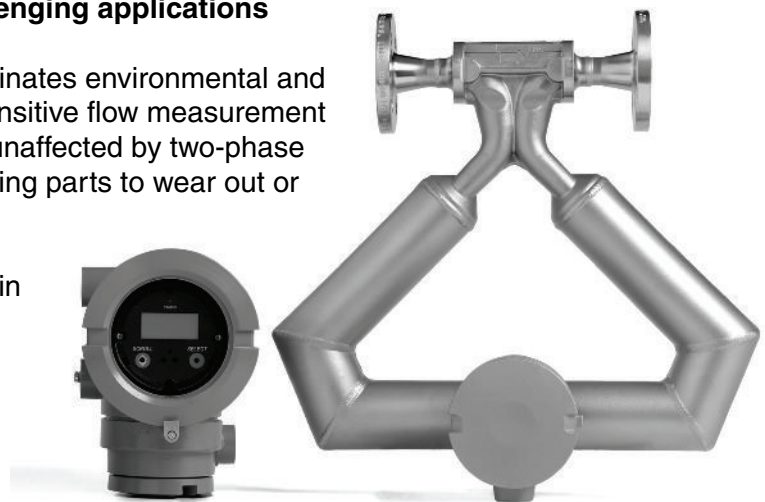
Micro Motion ELITE meters are the leading meters for precision flow and density measurement. ELITE meters are ideal for custody transfer and critical process control with unprecedented mass, volume, and density performance on liquids, gases, and slurries. ELITE meters have exceptional rangeability or turndown with a 20:1 flat spec at $\pm 0,05\%$ on liquid and $\pm 0,35\%$ on gas.

Broadest range of application coverage

ELITE meters are available to fit an extremely wide range of line sizes. Every ELITE meter features standard secondary containment, and is available with stainless steel or nickel alloy wetted parts and a wide variety of process connections to meet your process needs. The electronics options available with ELITE meters fit a wide range of control systems and installation needs—including 4–20 mA, HART®, PROFIBUS, Modbus®, FOUNDATION™ fieldbus, and more.

Superior performance in the most challenging applications

The robust design of the ELITE meter eliminates environmental and process effects while delivering the most sensitive flow measurement in the industry. Measurement accuracy is unaffected by two-phase flow or entrained air, and there are no moving parts to wear out or break down, which translates into minimal maintenance costs. Now with in-situ meter verification, ELITE meters deliver the best in measurement and ease of use for critical applications.



Liquid flow performance

		Mass	Volume ⁽¹⁾	
		kg/h	l/h	m ³ /h
Maximum flow rate	CMF010	108	108	
	CMF025	2180	2180	
	CMF050	6800	6800	
	CMF100	27200	27200	
	CMF200	87100	87100	87
	CMF300	272000	272000	272
	CMF400	545000	545000	545
	CMFH3C	2550000	2550000	2550
Mass and volume flow accuracy⁽²⁾⁽³⁾	Model 2400S transmitter or enhanced core processor	±0,05% of rate ⁽⁴⁾⁽⁵⁾		
	Transmitter with MVD technology	±0,10% of rate ⁽⁶⁾		
	All other transmitters	±0,10% ±[(zero stability / flow rate) × 100]% of rate		
Mass and volume flow repeatability	Model 2400S transmitter or enhanced core processor	±0,025% of rate ⁽⁴⁾⁽⁵⁾		
	Transmitter with MVD technology	±0,05% of rate ⁽⁶⁾		
	All other transmitters	±0,05% ±[½(zero stability / flow rate) × 100]% of rate		
Zero stability		kg/h		
	CMF010	0,002		
	CMF010P	0,004		
	CMF025	0,027		
	CMF050	0,163		
	CMF100	0,680		
	CMF200	2,18		
	CMF300	6,80		
	CMF400	40,91		
CMFH3C	136,4			

(1) Specifications for volumetric flow rate are based on a process-fluid density of 1000 kg/m³. For fluids with density other than 1000 kg/m³, the volumetric flow rate equals the mass flow rate divided by the fluid's density.

(2) Stated flow accuracy includes the combined effects of repeatability, linearity, and hysteresis. All specifications for liquids are based on reference conditions of water at 20 to 25 °C and 1 to 2 bar, unless otherwise noted.

(3) The calibration option for ±0,05% flow accuracy is not available with high-capacity or high-temperature sensor models.

(4) When flow rate is less than zero stability / 0,0005, accuracy = ±[(zero stability / flow rate) × 100]% of rate, and repeatability = ±[½(zero stability / flow rate) × 100]%

(5) When ordered with the ±0,10% factory calibration option, accuracy on liquid = ±0,10% when flow rate ≥ zero stability / 0,001. When flow rate < zero stability / 0,001, accuracy equals ±[(zero stability / flow rate) × 100]% of rate and repeatability equals ±[½(zero stability / flow rate) × 100]% of rate.

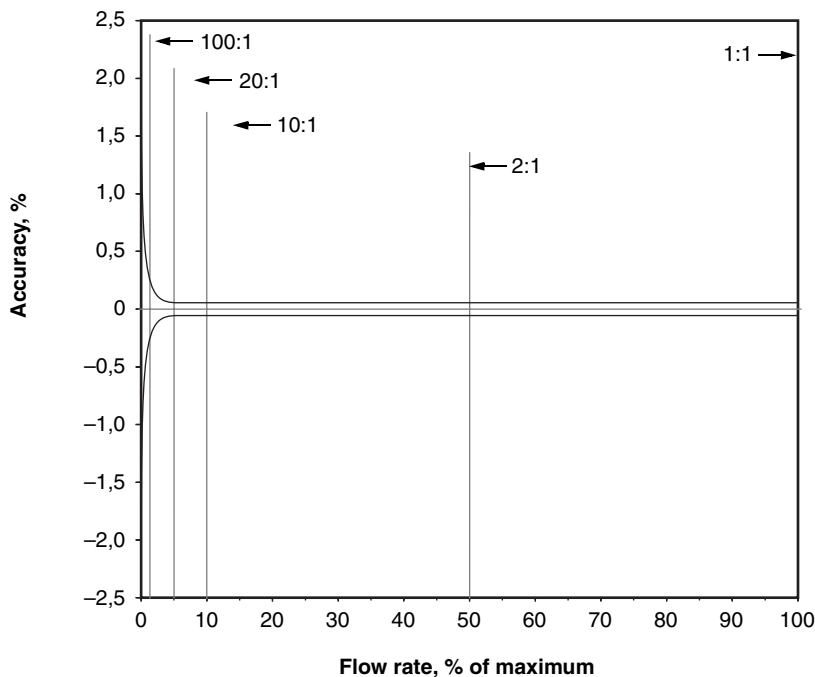
(6) When flow rate is less than zero stability / 0,001, accuracy equals ±[(zero stability / flow rate) × 100]% of rate and repeatability equals ±[½(zero stability / flow rate) × 100]% of rate.

Liquid flow performance *continued*

Typical accuracy, turndown, and pressure drop with CMF100 and 2400S transmitter or enhanced core processor

The graph below is an example of the relationship between accuracy, turndown, and pressure drop when measuring the flow of water with a Model CMF100 sensor and Model 2400S transmitter or enhanced core processor.

Actual pressure drop is dependent on process conditions. To determine accuracy, turndown, and pressure drop with your process variables, use the Micro Motion product selector, available at www.micromotion.com.



<i>Turndown from maximum flow rate</i>	<i>500:1</i>	<i>100:1</i>	<i>20:1</i>	<i>10:1</i>	<i>2:1</i>
Accuracy ($\pm\%$)	1,25	0,25	0,05	0,05	0,05
Pressure drop (bar)	~0	~0	0,01	0,05	0,93

Gas flow performance

When selecting sensors for gas applications, measurement accuracy is a function of fluid mass flow rate independent of operating temperature, pressure, or composition. However, pressure drop through the sensor is dependent upon operating temperature, pressure, and fluid composition. Therefore, when selecting a sensor for any particular gas application, it is highly recommended that each sensor be sized using the Micro Motion product selector, available at www.micromotion.com.

	Mass kg/h	Volume ⁽¹⁾ Nm ³ /h
Flow rates that produce approximately 0,68 bar pressure drop on air at 20 °C and 6,8 bar		
CMF010M, CMF010H	8	6
CMF010P	6	5
CMF025	110	90
CMF050	300	230
CMF100	1300	1000
CMF200	4000	3100
CMF300	13300	10300
CMF400	34000	26250
CMFHC3 ⁽²⁾	51800	43500

Flow rates that produce approximately 3,4 bar pressure drop on natural gas (MW 16,675) at 20 °C and 34,0 bar

CMF010M, CMF010H	30	45
CMF010P	25	35
CMF025	450	600
CMF050	1140	1530
CMF100	5000	6700
CMF200	15200	20500
CMF300	50500	68000
CMF400	128000	172000
CMFHC3 ⁽³⁾	220450	330500

Mass flow accuracy⁽⁴⁾	Transmitters with MVD technology (including Model 2400S)	$\pm 0,35\%$ of rate ⁽⁵⁾
	All other transmitters	$\pm 0,50\%$ of rate \pm [(zero stability / flow rate) \times 100]% of rate

Mass flow repeatability	Transmitters with MVD technology (including Model 2400S)	$\pm 0,20\%$ of rate ⁽⁵⁾
	All other transmitters	$\pm 0,25\%$ of rate \pm [(zero stability / flow rate) \times 100]% of rate

Zero stability Refer to liquid flow specifications on page 4.

(1) Normal (Nm³/h) reference conditions are 1,013 bar and 0 °C.

(2) Listed flow rates produce 0,34 bar pressure drop.

(3) Listed flow rates produce 2,07 bar pressure drop.

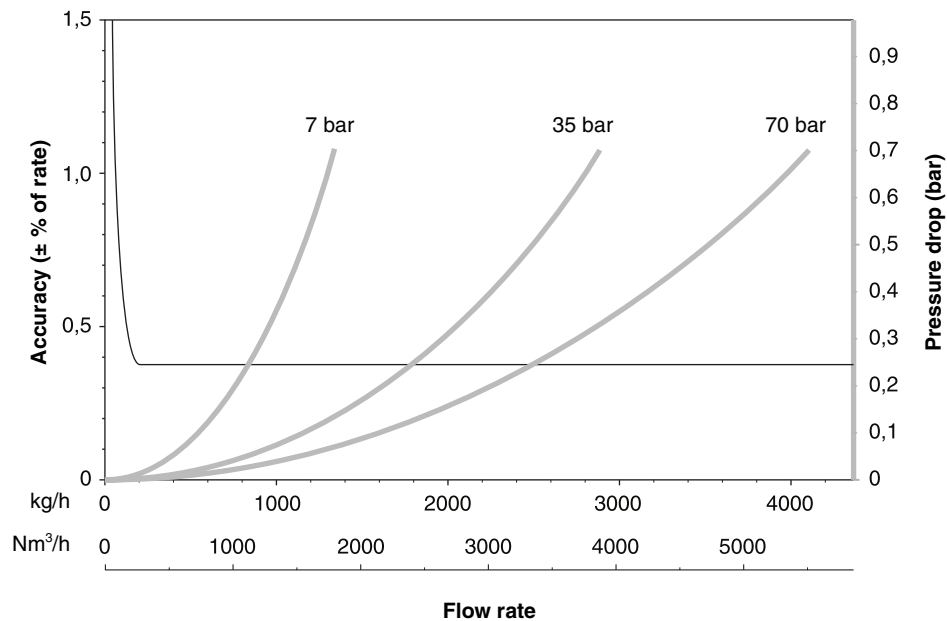
(4) Flow accuracy includes the combined effects of repeatability, linearity, and hysteresis.

(5) When flow rate is less than zero stability / 0,0035, accuracy equals \pm [(zero stability / flow rate) \times 100]% of rate and repeatability equals \pm [$\frac{1}{2}$ (zero stability / flow rate) \times 100]% of rate.

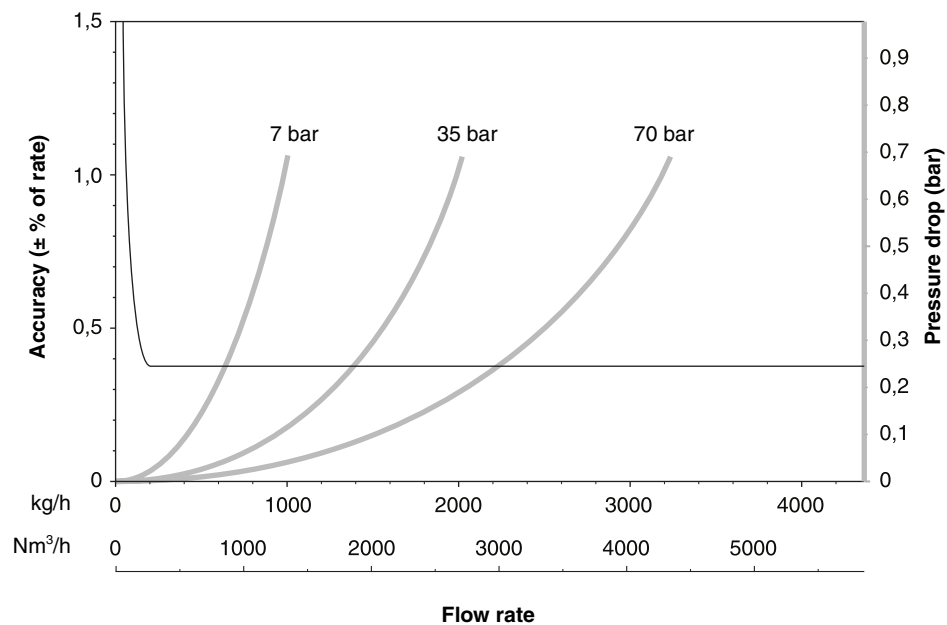
Gas flow performance *continued*

Typical mass flow accuracy and pressure drop with CMF100 and transmitter with MVD Technology

Air at 20 °C, static pressures as indicated on graph



Natural gas (MW 16,675) at 20 °C, static pressure as indicated on graph



Standard or Normal Volumetric Capability

Standard and normal volumes are “quasi mass” flow units for any fixed composition fluid. Standard and normal volumes do not vary with operating pressure, temperature, or density. With knowledge of density at standard or normal conditions (available from reference sources), a Micro Motion meter can be configured to output in standard or normal volume units without the need for pressure, temperature, or density compensation. Contact your local sales representative for more information.

Density performance (liquid only)

		With 2400S transmitter or enhanced core processor	With transmitter with MVD technology (except Model 2400S), standard core processor, or RFT9739 transmitter
		kg/m ³	kg/m ³
Accuracy⁽¹⁾	Model CMF010 and high-temperature models	±0,5	±0,5
	All other models	±0,2	±0,5
Repeatability	Model CMF010 and high-temperature models	±0,2	±0,2
	All other models	±0,1	±0,2
Range	All models	up to 5000	up to 5000

(1) Accuracy includes the combined effects of repeatability, linearity, and hysteresis. Specifications for ±0,2 kg/m³ density accuracy are based on reference conditions of water at 20 to 60 °C and 1 to 2 bar. All other accuracy specifications are based on reference conditions of water at 20 to 25 °C and 1 to 2 bar, unless otherwise noted.

Power consumption

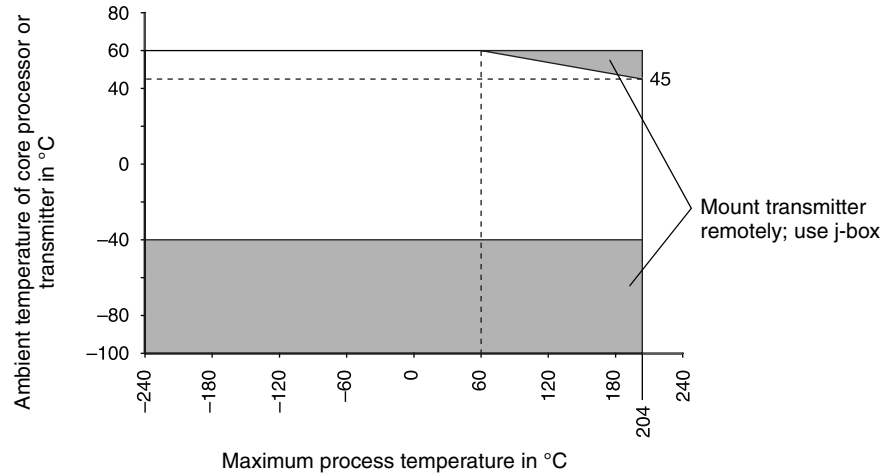
Meter with core processor	4 watts maximum
Meter with Model 2400S transmitter	7 watts maximum
Meter with Model 1700/2700 transmitter	Refer to transmitter documentation

Temperature specifications

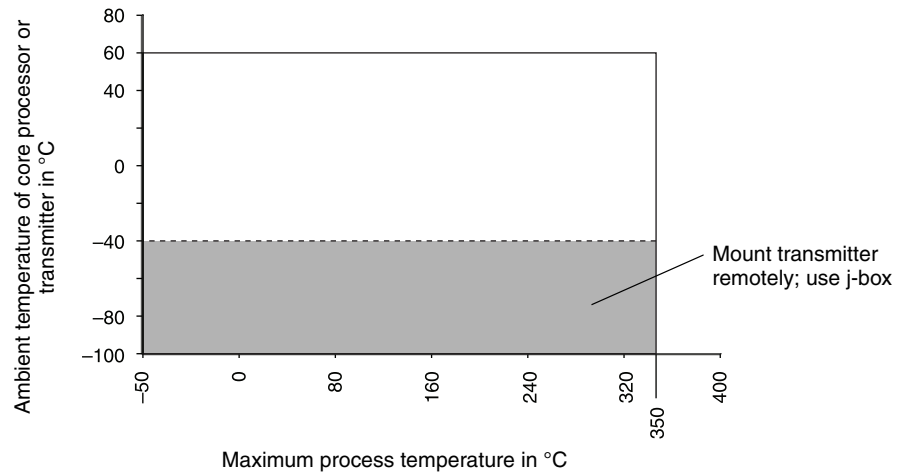
Accuracy All models $\pm 1\text{ }^{\circ}\text{C} \pm 0,5\%$ of reading in $^{\circ}\text{C}$

Repeatability All models $\pm 0,2\text{ }^{\circ}\text{C}$

Temperature limits^{(1) (2) (3)} All models except high-temperature models⁽⁴⁾



High-temperature models



(1) Temperature limits may be further restricted by hazardous area approvals. See pages 12–16.

(2) The temperature graphs shown here are for use only as a general guide.

(3) When ambient temperature is below $-40\text{ }^{\circ}\text{C}$, a core processor or Model 2400S transmitter must be heated to bring its local ambient temperature to between $-40\text{ }^{\circ}\text{C}$ and $+60\text{ }^{\circ}\text{C}$. Long-term storage of electronics at ambient temperatures below $-40\text{ }^{\circ}\text{C}$ is not recommended.

(4) The temperature limits shown apply only when the electronics are not covered (for example, by insulation). If the sensor case must be insulated, use extended mount electronics.

Pressure ratings

Sensor rating ⁽¹⁾	316L and 304L stainless steel	Hastelloy C-22	High pressure
	bar	bar	bar
CMF010	125	225	413
CMF025	103	190	—
CMF050	103	185	—
CMF100	100	170	—
CMF200	108	190	—
CMF300	119	185	—
CMF400	103	197	205
CMFHC3	102	—	—

PED compliance Sensors comply with council directive 97/23/EC of 29 May 1997 on Pressure Equipment

Dual seal compliance CSA sensors comply with ANSI/ISA 12.27.01-2003 requirements for process sealing between electrical systems and flammable or combustible process fluids

Housing rating ⁽³⁾	ASME B31.3 secondary containment rating ^{(2) (3)}	Burst pressure ⁽³⁾
	bar	bar
CMF010 ⁽⁴⁾	29	209
CMF025	58	377
CMF050	58	364
CMF100	43	227
CMF200	37	192
CMF300	18	108
CMF400	17	107
CMFHC3	—	102

(1) Process connection rating may differ from sensor rating. Please choose process connections accordingly.

(2) For operating temperatures above 148 °C, pressure needs to be derated as follows. Linear interpolation may be used between values. Process connection derating may differ from sensor rating.

	Flow tubes			Housing
	316L sensors	304L sensors	Hastelloy C-22 sensors	All sensors
up to 148 °C	None	None	None	None
at 204 °C	7,2% derating	5,4% derating	None	5,4% derating
at 260 °C	13,8% derating	11,4% derating	4,7% derating	—
at 316 °C	19,2% derating	16,2% derating	9,7% derating	—
at 343 °C	21,0% derating	18,0% derating	11,7% derating	—
at 371 °C	22,8% derating	19,2% derating	13,7% derating	—
at 399 °C	24,6% derating	20,4% derating	15,0% derating	—
at 427 °C	25,7% derating	22,2% derating	16,3% derating	—

(3) The housing of high-temperature models is rated for neither secondary containment nor burst pressure.

(4) Optional rupture disks for high-pressure CMF010P will burst if pressure inside sensor housing reaches 27 bar.

Environmental effects

Process temperature effect

Process temperature effect is defined as:

- For mass flow measurement, the worst-case zero offset due to process fluid temperature change away from the zeroing temperature.
- For density measurement, the maximum measurement offset due to process fluid temperature change away from the density calibration temperature.

	Process temperature effect		
	% of maximum flow rate per °C	density accuracy per °C ⁽¹⁾	
		g/cm ³	kg/m ³
CMF010	±0,0001875	±0,000015	±0,015
CMF025	±0,0001250	±0,000015	±0,015
CMF050	±0,0001250	±0,000015	±0,015
CMF100	±0,0001250	±0,000015	±0,015
CMF200	±0,0005000	±0,000015	±0,015
CMF300	±0,0005000	±0,000015	±0,015
CMF400	±0,0007500	±0,000015	±0,015
CMFH3C	±0,0002500	±0,000015	±0,015

Pressure effect

Pressure effect is defined as the change in sensor flow and density sensitivity due to process pressure change away from the calibration pressure. Pressure effect can be corrected.

	Pressure effect on flow accuracy			
	% of rate per psi		% of rate per bar	
	<i>liquid</i>	<i>gas</i>	<i>liquid</i>	<i>gas</i>
CMF010	None	None	None	None
CMF025	None	None	None	None
CMF050	None	None	None	None
CMF100	-0,0002	None	-0,003	None
CMF200	-0,0008	-0,0004	-0,012	-0,006
CMF300	-0,0006	-0,0003	-0,009	-0,0045
CMF400	-0,001	-0,0005	-0,015	-0,0075
CMFH3C	-0,002	-0,002	-0,029	-0,029

	Pressure effect on density accuracy	
	g/cm ³ per psi	kg/m ³ per bar
CMF010	None	None
CMF025	0,000004	0,058
CMF050	-0,000002	-0,029
CMF100	-0,000006	-0,087
CMF200	0,000001	0,0145
CMF300	0,000002	0,0029
CMF400	-0,00001	-0,145
CMFH3C	-0,0000255	-0,037

Vibration limits

Meets IEC 68.2.6, endurance sweep, 5 to 2000 Hz, 50 sweep cycles at 1,0 g

(1) For -100 °C and above.

Hazardous area classifications




UL⁽¹⁾

All models with core processor	Ambient temperature: -40 °C to +40 °C Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div.1, Groups E, F, and G
All models with junction box	Ambient temperature: +40 °C maximum Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div.1, Groups E, F, and G

CSA and CSA C-US⁽²⁾

All models with Model 2400S transmitter	Ambient temperature: -40 °C to +60 °C Class I, Div 2, Groups A, B, C and D
All models with core processor, except CMFHC3	Ambient temperature: -40 °C to +60 °C Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div.1, Groups E, F, and G
Model CMFHC3 with core processor	Ambient temperature: -40 °C to +60 °C Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D
All models with junction box	Ambient temperature: +60 °C maximum Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div.1, Groups E, F, and G

ATEX

All models with Model 2400S transmitter	CE  II 3G Ex nA II T ⁽³⁾ °C II 3D Ex tD A22 IP65 T ⁽³⁾ °C
Models CMF010, CMF025, CMF050, and CMF100 with core processor or junction box	CE  II 2G Ex ib IIC T ⁽³⁾ °C II 2D Ex tD A21 IP65 T ⁽³⁾ °C
CMF200, CMF300, CMF400, and CMFHC3 with core processor or junction box	CE  II 2G Ex ib IIB T ⁽³⁾ °C II 2D IP65 T ⁽³⁾ °C

IECEx and NEPSI

All models with Model 2400S transmitter	Ex nA II T ⁽³⁾
Models CMF010, CMF025, CMF050, and CMF100 with core processor or junction box	Ex ib IIC T ⁽³⁾
Models CMF200, CMF300, CMF400, and CMFHC3 with core processor or junction box	Ex ib IIB T ⁽³⁾

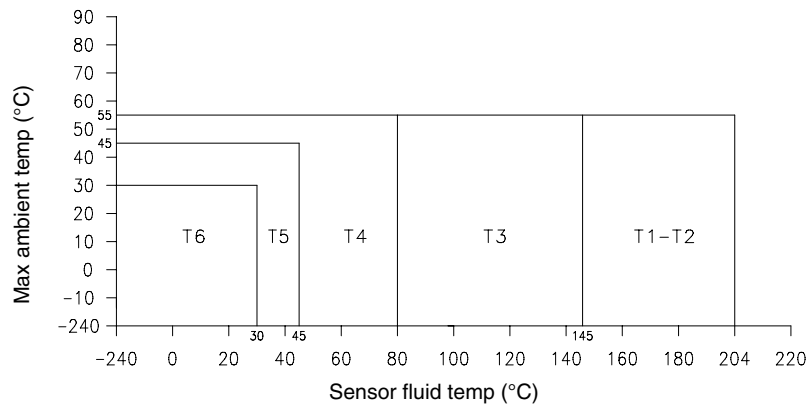
(1) The following products are not available with UL approval: sensors with enhanced core processor or Model 2400S transmitter; high-capacity sensors; high-temperature sensors; extreme high-temperature sensors.

(2) The following products are available only with CSA C-US approval (i.e., not CSA): sensors with enhanced core processor or Model 2400S transmitter; high-temperature sensors; extreme high-temperature sensors.

(3) For ambient and process temperature limits, refer to the temperature graphs on pages 13–16.

Hazardous area classifications *continued*

Model CMF010, CMF025, or CMF050 with junction box connected to MVD transmitter

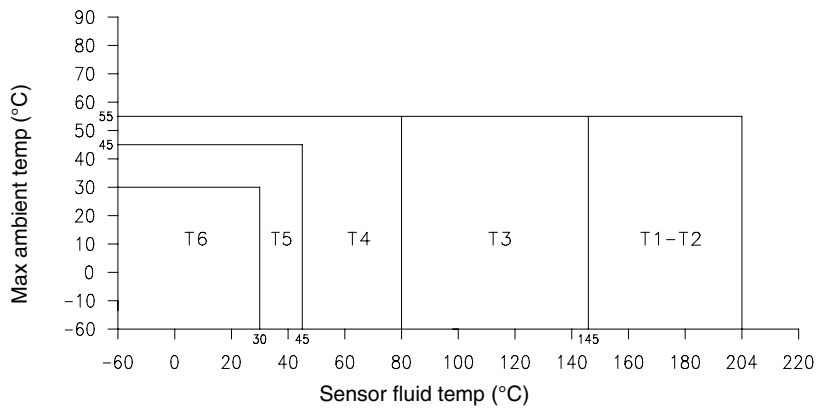


Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80 °C, T5:T 95 °C, T4:T 130 °C, T3:T 195 °C, T2 to T1:T 254 °C. The minimum ambient and process fluid temperature allowed for dust is -40 °C.

The use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Ambient temperature range Ta -240 °C to +55 °C

Model CMF100 with junction box connected to MVD transmitter



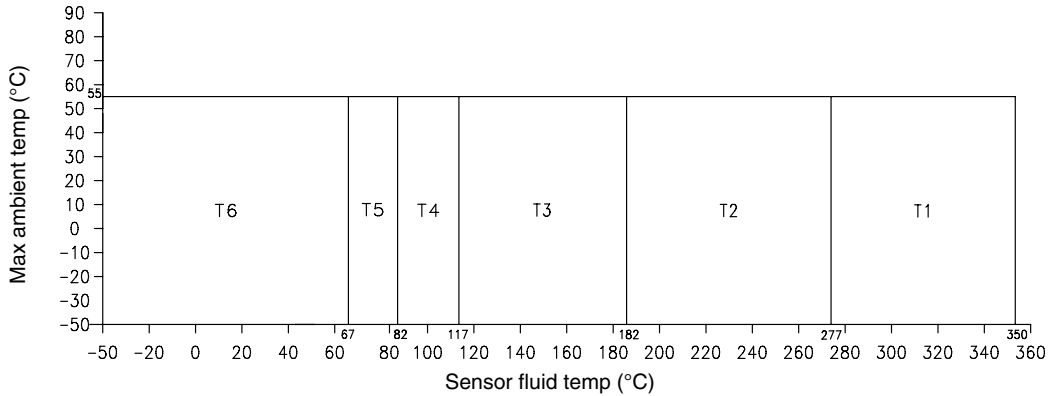
Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80 °C, T5:T 95 °C, T4:T 130 °C, T3:T 195 °C, T2 to T1:T 254 °C. The minimum ambient and process fluid temperature allowed for dust is -40 °C.

The use of the sensor at an ambient temperature higher than +55 °C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Ambient temperature range Ta -60 °C to +55 °C

Hazardous area classifications *continued*

High-temperature model CMF200A, CMF200B, CMF300A, CMF300B, CMF400A, or CMF400B with junction box connected to MVD transmitter

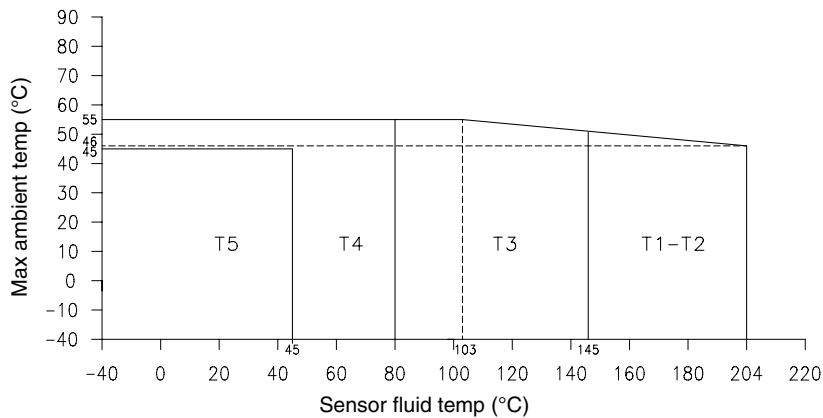


Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80 °C, T5:T 95 °C, T4:T 130 °C, T3:T 195 °C, T2:T 290 °C, T1:T 363 °C. The minimum ambient and process fluid temperature allowed for dust is -40 °C.

The use of the sensor at an ambient temperature higher than +55°C is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Ambient temperature range T_a -50 °C to +55 °C

Model CMF010, CMF025, CMF050, CMF100, CMF200 or CMF300 with core processor or enhanced core processor⁽¹⁾



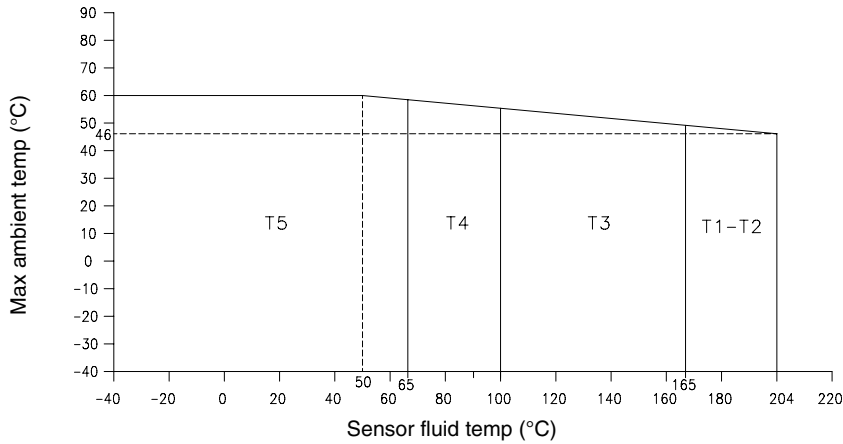
Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 254°C.

Ambient temperature range T_a -40 °C to +55 °C

(1) Refer to page 16 for "T" rating graph for high-temperature models with core processor.

Hazardous area classifications *continued*

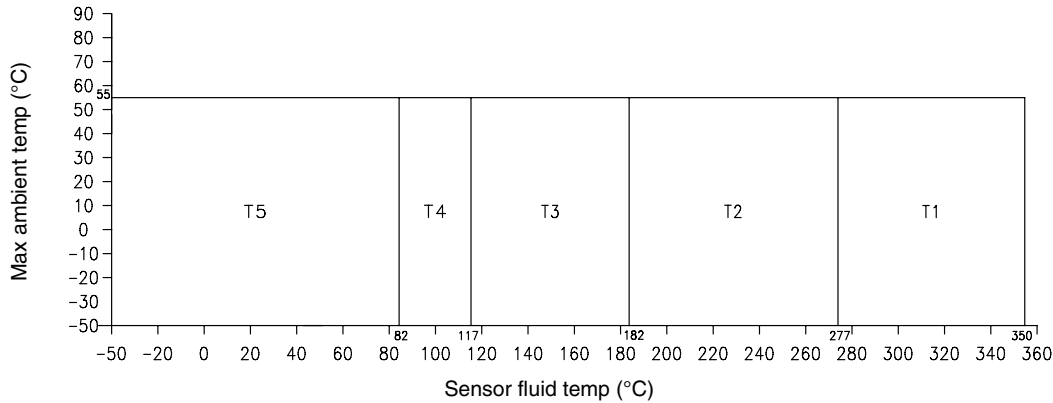
Model CMF400 with core processor or enhanced core processor



Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 234°C.

Ambient temperature range T_a $-40\text{ °C to }+60\text{ °C}$

High-temperature model CMF200A, CMF200B, CMF300A, CMF300B, CMF400A, or CMF400B with core processor, enhanced core processor, or Model 1700/2700 transmitter



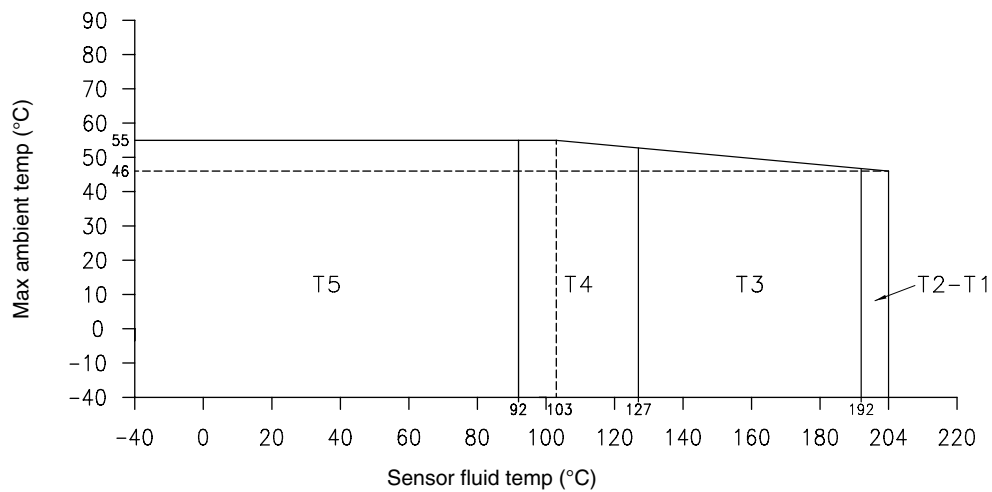
Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95 °C, T4:T 130 °C, T3:T 195 °C, T2: T 290 °C, T1:T 363 °C. The minimum ambient and process fluid temperature allowed for dust is -40 °C .

Since the electronics are mounted approx. 1 meter away from the sensor by means of a flexible stainless steel hose, the use of the sensor at an ambient temperature higher than $+55\text{ °C}$ is possible, provided that the ambient temperature does not exceed the maximum temperature of the medium taking into account the temperature classification and the maximum operating temperature of the sensor.

Ambient temperature range T_a $-50\text{ °C to }+55\text{ °C}$

Hazardous area classifications *continued*

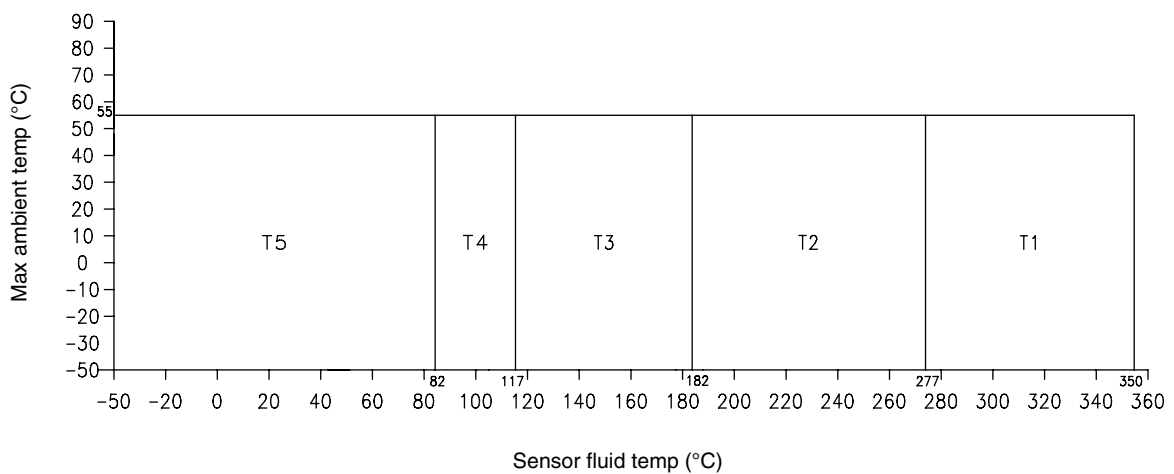
Model CMFHC3M with core processor



Use the temperature graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2 to T1: 207 °C.

Ambient temperature range T_a $-40\text{ °C to }+55\text{ °C}$

High-temperature model CMFHC3A with core processor



Use the temperature graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature T for dust is as follows: T5: 95 °C, T4: 130 °C, T3: 195 °C, T2: 290 °C, T1: 363 °C. The minimum ambient and process fluid temperature allowed for dust is -40 °C .

Ambient temperature range T_a $-50\text{ °C to }+55\text{ °C}$

Materials of construction

Wetted parts ⁽¹⁾	Stainless steel	Nickel alloy
All models ⁽²⁾	316L or 304L	Hastelloy C-22
Housing	304L stainless steel ⁽³⁾	
Junction box	300-series stainless steel ⁽³⁾ or polyurethane-painted aluminum; NEMA 4X (IP65)	
Core processor	300-series stainless steel ⁽³⁾ or polyurethane-painted aluminum; NEMA 4X (IP65)	
Model 2400S transmitter	Polyurethane-painted aluminum or 316L stainless steel; NEMA 4X (IP65)	

- (1) General corrosion guides do not account for cyclical stress, and therefore should not be relied upon when choosing a wetted material for your Micro Motion sensor. Please refer to the Micro Motion corrosion guide for proper material compatibility information.
- (2) Models CMF010P and CMF400P have nickel alloy tubes and stainless steel fittings. Material compatibility is never better than 316L stainless steel. Refer to the Micro Motion Corrosion Guide for the Micro Motion policy on fixed bi-metallic sensor capability.
- (3) 316L stainless steel is available.

Weight

Weights provided are the weight of the flowmeter with ANSI CL150 weld neck raised face flanges. All weights in kg.

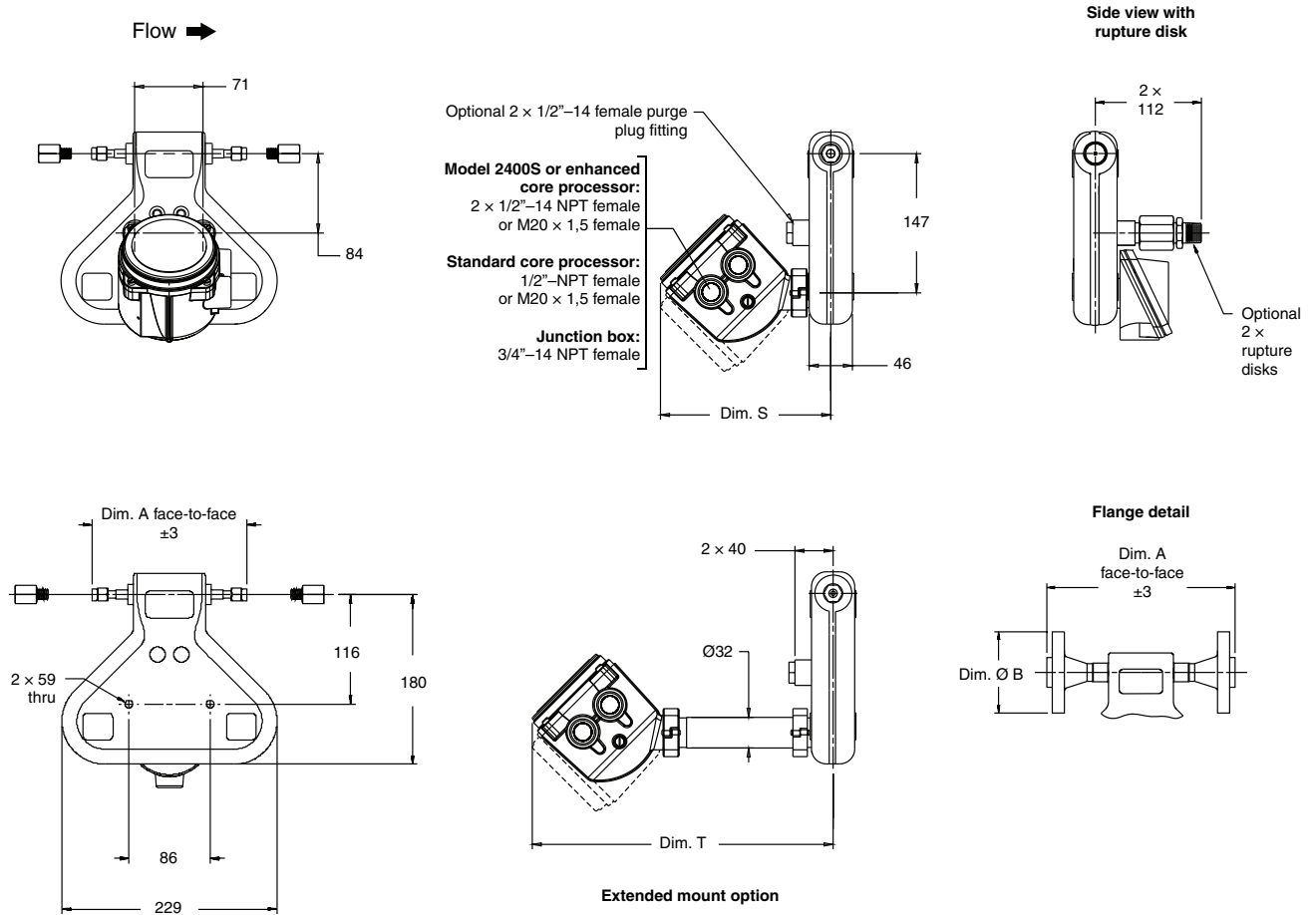
	With junction box	With core processor or Model 2400S transmitter ⁽¹⁾
CMF010	7	9
CMF025	4	6
CMF050	6	8
CMF100	13	16
CMF200	29	31
CMF300	75	77
CMF400	200	202
CMFHC3	—	356

- (1) Weight stated for sensor with aluminum core processor. Add 2 kg for stainless steel core processor or stainless steel Model 2400S transmitter.

Dimensions

Model CMF010

Dimensions in mm



Dimensions⁽¹⁾

Model	S ⁽²⁾	T ⁽²⁾
CMF010	84 – 192	220 – 325

(1) For dimensions A and B, see fittings tables on pages 26–34.

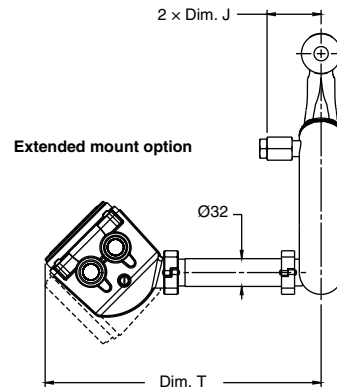
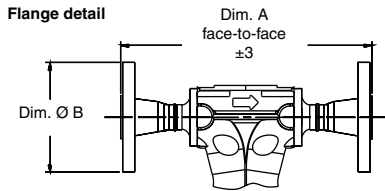
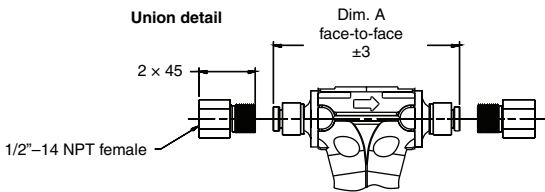
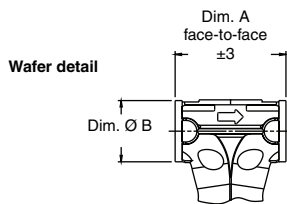
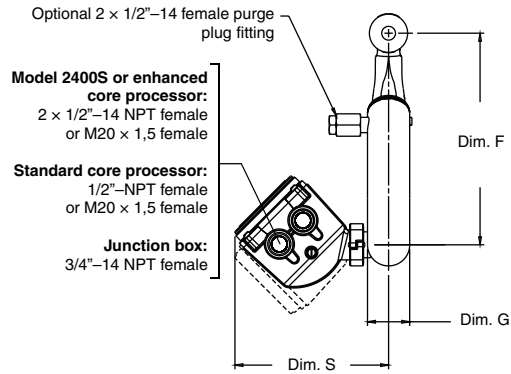
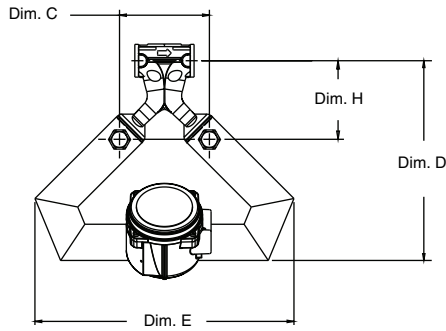
(2) Dimensions S and T will vary depending on electronics interface option.

Dimensions *continued*

Models CMF025, CMF050, and CMF100

Dimensions in mm

Flow →



Dimensions⁽¹⁾

Model	C	D	E	F	G	H	J	S ⁽²⁾	T ⁽²⁾
CMF025	72	209	255	188	41	85	58	87 – 192	223 – 325
CMF050	126	280	364	255	51	111	63	89 – 192	225 – 324
CMF100	150	405	546	360	91	136	83	108 – 213	244 – 346

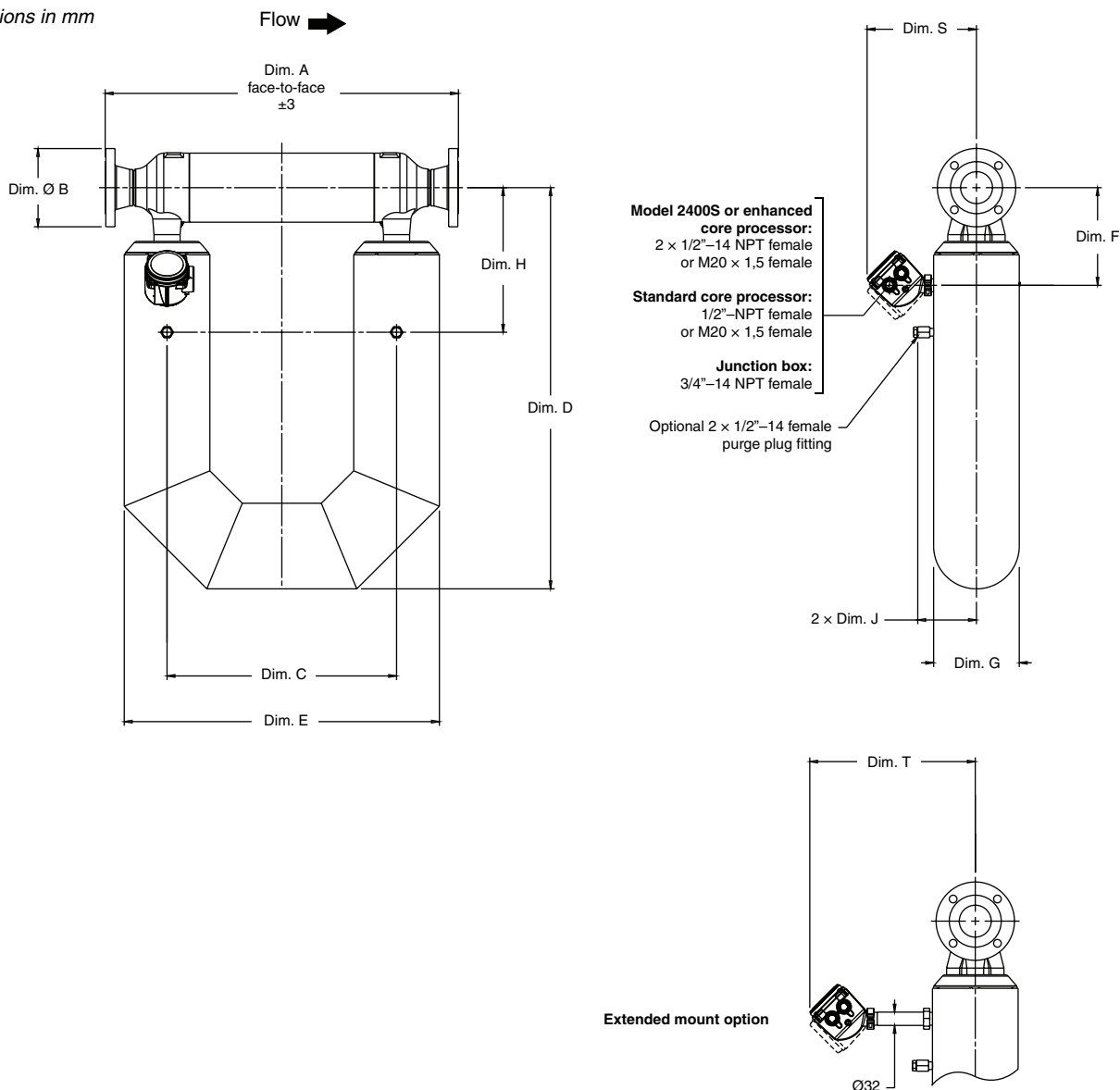
(1) For dimensions A and B, see fittings tables on pages 26–34.

(2) Dimensions S and T will vary depending on electronics interface option.

Dimensions *continued*

Models CMF200 and CMF300

Dimensions in mm



Model	Dimensions ⁽¹⁾								
	C	D	E	F	G	H	J	S ⁽²⁾	T ⁽²⁾
CMF200	356	727	497	175	142	302	110	142 – 239	270 – 372
CMF300	559	977	767	238	209	352	143	167 – 273	303 – 406

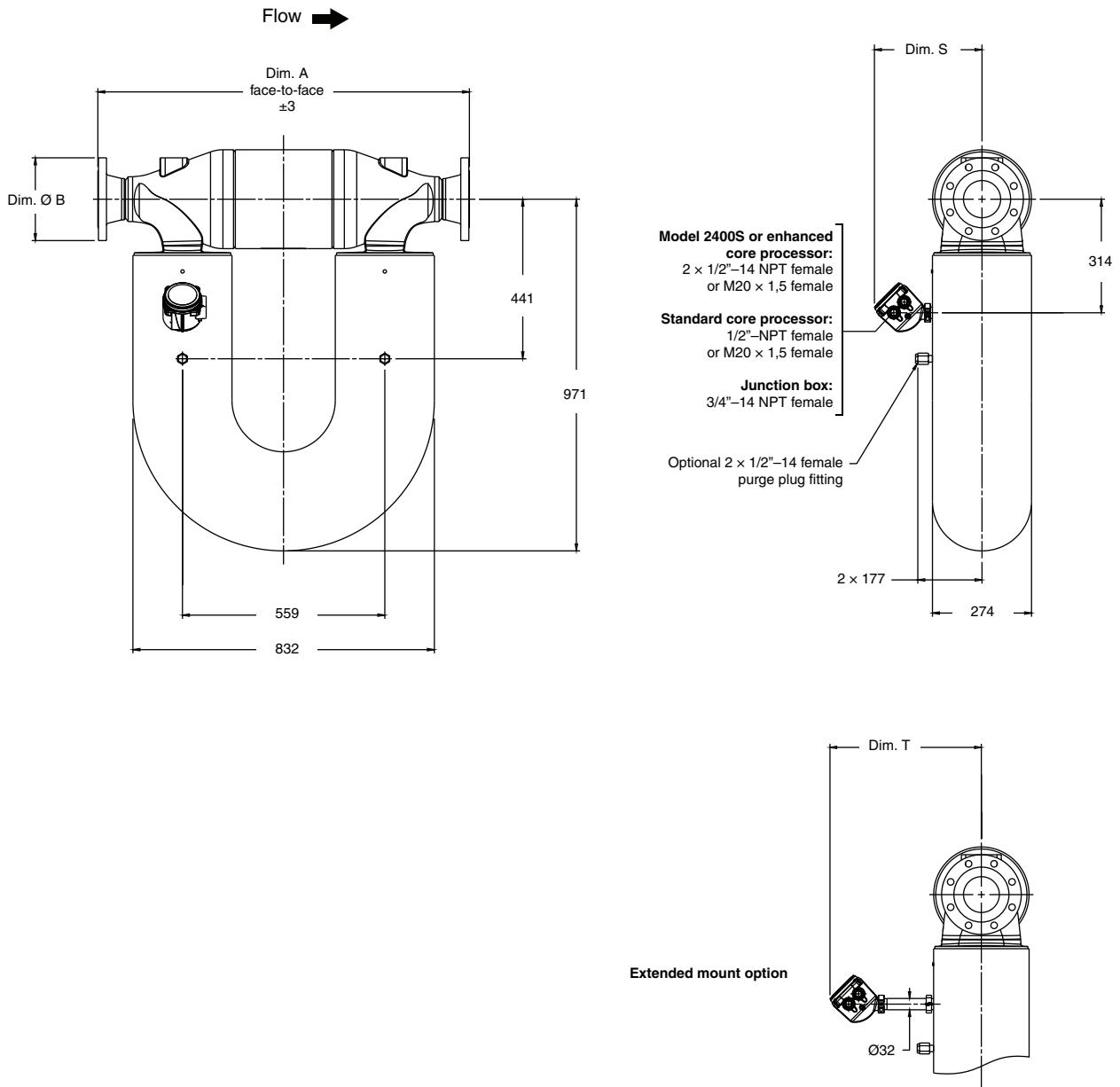
(1) For dimensions A and B, see fittings tables on pages 26–34.

(2) Dimensions S and T will vary depending on electronics interface option.

Dimensions *continued*

Model CMF400

Dimensions in mm



Dimensions⁽¹⁾

Model	S ⁽²⁾	T ⁽²⁾
CMF400	195 – 306	332 – 439

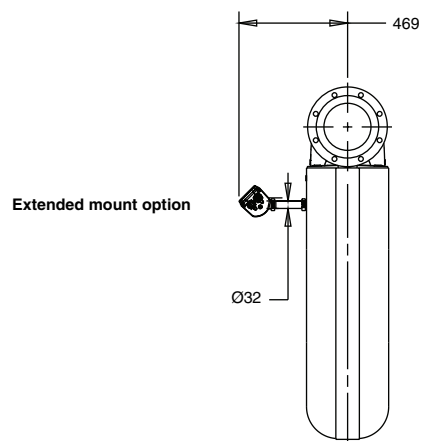
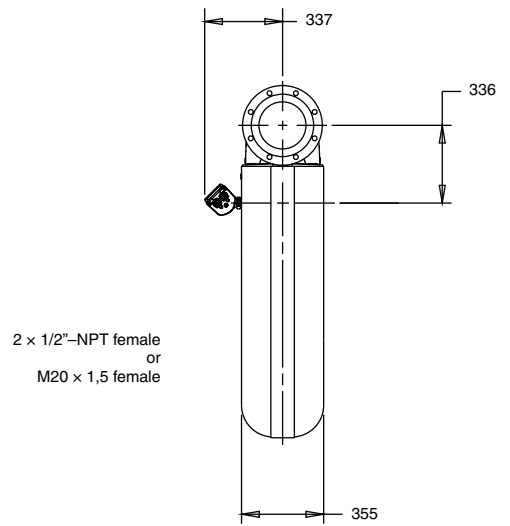
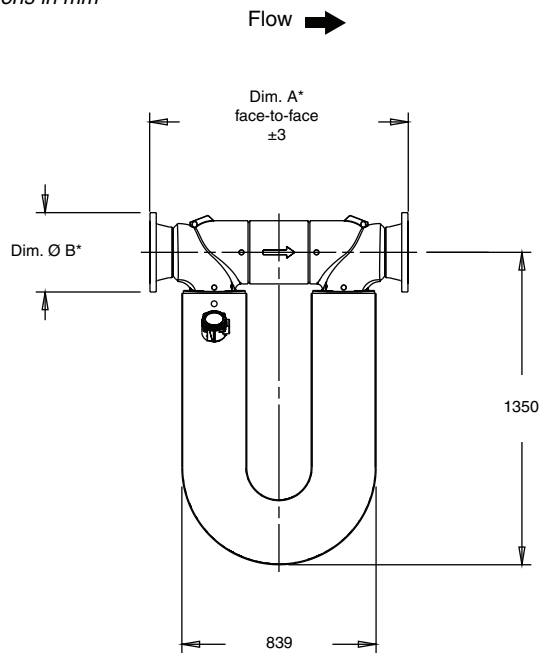
(1) For dimensions A and B, see fittings tables on pages 26–34.

(2) Dimensions S and T will vary depending on electronics interface option.

Dimensions *continued*

High-capacity Model CMFHC3

Dimensions in mm

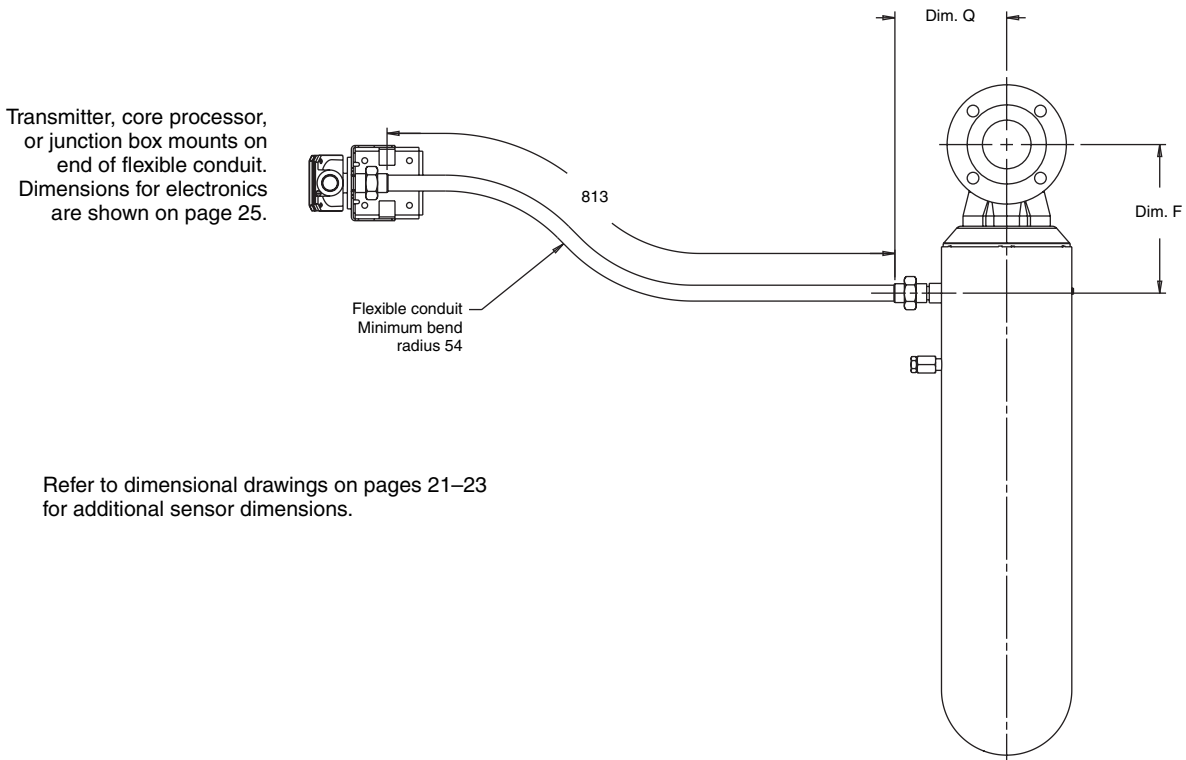


* For dimensions A and B, see fittings tables on pages 26–34.

Dimensions *continued*

High-temperature Models CMF200A, CMF200B, CMF300A, CMF300B, CMF400A, CMF400B, and CMFHC3A

Dimensions in mm

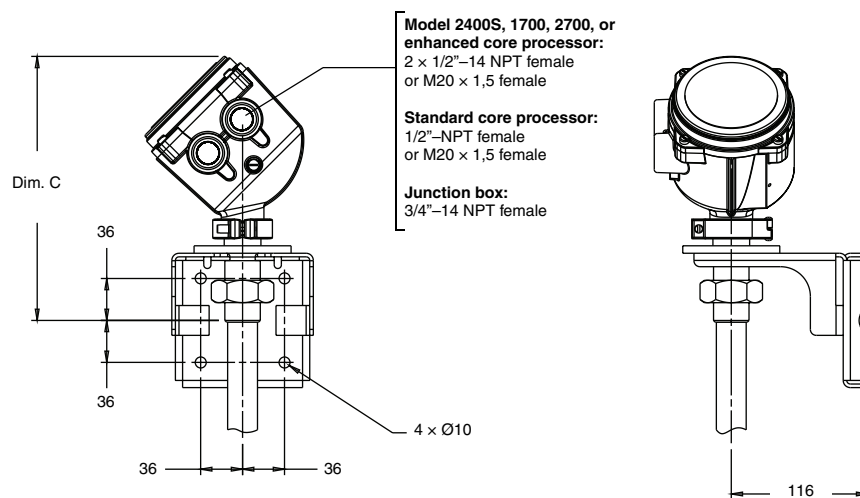


Model	Dimensions	
	F	Q
CMF200A and CMF200B	175	145
CMF300A and CMF300B	238	179
CMF400A and CMF400B	314	211
CMFHC3A	336	258

Dimensions *continued*

Electronics mounted on high-temperature sensor flexible conduit

Dimensions in mm



Electronics interface option

Dimension C

Electronics interface option	Dimension C
0 Model 2400S transmitter, painted aluminum housing	225
Model 2400S transmitter, stainless steel housing	235
2 Enhanced core processor, painted aluminum housing	225
3 Enhanced core processor, stainless steel housing	235
Q Standard core processor, painted aluminum housing	161
A Standard core processor, stainless steel housing	161
C Model 1700/2700 transmitter	261
R Junction box, painted aluminum housing	91
S Junction box, stainless steel housing	91

Fitting options

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF010 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
1/2-inch ANSI CL150 weld neck raised face flange	313	199	89
1/2-inch ANSI CL300 weld neck raised face flange	314	209	95
1/2-inch ANSI CL600 weld neck raised face flange	315	221	95
1/2-inch sanitary fitting (Tri-Clamp compatible)	321	177	25
DN15 PN40 weld neck flange; DIN 2635 type C face	300	189	95
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	189	95
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	189	95
DN15 PN100 weld neck flange; DIN 2637 type E face	302	203	105
DN15 PN100 weld neck flange; EN 1092-1 Form B2	177	203	105
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	203	105
DN25 PN40 Weld Neck Flange; EN 1092-1 Form B1	172	193	115
DN25 PN40 Weld Neck Flange; EN 1092-1 Form D	183	193	115
1/4-inch NPT female Swagelok size 4 VCO fitting	323	164	—
1/4-inch tube compression fitting	324	164	—
6 mm tube compression fitting	325	164	—
<i>304L stainless steel sensors</i>			
1/2-inch ANSI CL150 weld neck raised face flange	413	199	89
1/2-inch ANSI CL300 weld neck raised face flange	414	209	95
DN15 PN40 weld neck flange; DIN 2526 type C face	423	189	95
DN15 PN40 weld neck flange; EN 1092-1 Form B1	421	189	95
<i>Nickel alloy sensors</i>			
1/2-inch ANSI CL150 lap joint flange	520	199	89
1/2-inch ANSI CL300 lap joint flange	521	209	95
DN15 PN40 lap joint flange; DIN 2656 type C face	523	240	95
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	240	95
1/4-inch NPT female Swagelok size 4 VCO fitting	323	164	—
High-pressure CMF010P fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
1/4-inch NPT female Swagelok size 4 VCO fitting	323	164	—
1/4-inch tube compression fitting	324	164	—
6 mm tube compression fitting	325	164	—

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF025 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
Wafer style; 1/2-inch ANSI (150 lb; 300 lb; 600 lb bolt kit)	009	60	46
Wafer style, 15mm DIN 2526; type C face (PN40 bolt kit)	016	60	46
Wafer style; 15mm DIN 2512; type N grooved face (PN40 bolt kit)	017	60	46
Wafer style; 15mm DIN 2526; type E face (PN100 bolt kit)	018	60	46
Wafer style; 15mm DIN 2512; type N grooved face (PN100 bolt kit)	019	60	46
1/2-inch ANSI CL150 weld neck raised face flange	313	172	89
1/2-inch ANSI CL300 weld neck raised face flange	314	181	95
1/2-inch ANSI CL600 weld neck raised face flange	315	194	95
1/2-inch NPT female Swagelok size 8 VCO fitting	319	119	—
1/2-inch sanitary fitting (Tri-Clamp compatible)	321	119	25
DN15 PN40 weld neck flange; DIN 2635 type C face	300	160	95
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	160	95
DN15 PN40 weld neck flange; DIN 2635 type N grooved face	301	160	95
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	160	95
DN15 PN100 weld neck flange; DIN 2637 type E face	302	176	105
DN15 PN100 weld neck flange; EN 1092-1 Form B2	177	176	105
DN15 PN100 weld neck flange; DIN 2637 type N grooved face	303	176	105
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	176	105
DN25 PN40 Weld Neck Flange; EN 1092-1 Form B1	172	164	115
DN25 PN40 Weld Neck Flange; EN 1092-1 Form D	183	164	115
<i>304L stainless steel sensors</i>			
1/2-inch ANSI CL150 weld neck raised face flange	413	172	89
1/2-inch ANSI CL300 weld neck raised face flange	414	181	95
DN15 PN40 weld neck flange; DIN 2526 type C face	423	160	95
DN15 PN40 weld neck flange; EN 1092-1 Form B1	421	160	95
<i>Nickel alloy sensors</i>			
1/2-inch ANSI CL150 lap joint flange	520	172	89
1/2-inch ANSI CL300 lap joint flange	521	181	95
DN15 PN40 lap joint flange; DIN 2656 type C face	523	186	95
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	186	95

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF050 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
Wafer style; 1/2-inch ANSI (150 lb; 300 lb; 600 lb bolt kit)	009	89	46
Wafer style; 15mm DIN 2526; type C face (PN40 bolt kit)	016	89	46
Wafer style; 15mm DIN 2512; type N grooved face (PN40 bolt kit)	017	89	46
Wafer style; 15mm DIN 2526; type E face (PN100 bolt kit)	018	89	46
Wafer style; 15mm DIN 2512; type N grooved face (PN100 bolt kit)	019	89	46
1/2-inch ANSI CL150 weld neck raised face flange	313	202	89
1/2-inch ANSI CL300 weld neck raised face flange	314	211	95
1/2-inch ANSI CL600 weld neck raised face flange	315	224	95
3/4-inch NPT female Swagelok size 12 VCO fitting	320	165	—
3/4-inch sanitary fitting (Tri-Clamp compatible)	322	165	25
DN15 PN40 weld neck flange; DIN 2635 type C face	300	191	95
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	191	95
DN15 PN40 weld neck flange; DIN 2635 type N grooved face	301	191	95
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	191	95
DN15 PN100 weld neck flange; DIN 2637 type E face	302	205	105
DN15 PN100 weld neck flange; EN 1092-1 Form B2	177	205	105
DN15 PN100 weld neck flange; DIN 2637 type N grooved face	303	205	105
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	205	105
DN25 PN40 Weld Neck Flange; EN 1092-1 Form B1	172	195	115
DN25 PN40 Weld Neck Flange; EN 1092-1 Form D	183	195	115
<i>304L stainless steel sensors</i>			
1/2-inch ANSI CL150 weld neck raised face flange	413	202	89
1/2-inch ANSI CL300 weld neck raised face flange	414	211	95
DN15 PN40 weld neck flange; DIN 2526 type C face	423	191	95
DN15 PN40 weld neck flange; EN 1092-1 Form B1	421	191	95
<i>Nickel alloy sensors</i>			
1/2-inch ANSI CL150 lap joint flange	520	202	89
1/2-inch ANSI CL300 lap joint flange	521	211	95
DN15 PN40 lap joint flange; DIN 2656 type C face	523	216	95
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	216	95

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF100 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
Wafer style; 1-inch ANSI (150 lb bolt kit)	010	102	64
Wafer style; 1-inch ANSI (300 lb; 600 lb bolt kit)	011	102	64
Wafer style; 25mm type C face (PN40 bolt kit)	020	102	64
Wafer style; 25mm DIN 2512 type N grooved face (PN40 bolt kit)	021	102	64
Wafer style; 25mm type E face (PN100 bolt kit)	022	102	64
Wafer style; 25mm DIN 2512; type N grooved face (PN100 bolt kit)	023	102	64
1-inch ANSI CL150 weld neck raised face flange	328	235	108
1-inch ANSI CL300 weld neck raised face flange	329	248	124
1-inch ANSI CL600 weld neck raised face flange	330	260	124
1 1/2-inch ANSI CL600 weld neck raised face flange	331	276	156
1-inch sanitary fitting (Tri-Clamp compatible)	339	213	50
DN25 PN40 weld neck flange; DIN 2635 type C face	306	211	115
DN25 PN40 weld neck flange; EN 1092-1 Form B1	179	211	115
DN25 PN40 weld neck flange; DIN 2635 type N grooved face	307	211	115
DN25 PN40 weld neck flange; EN 1092-1 Form D	311	211	115
DN25 PN100 weld neck flange; DIN 2637 type E face	308	246	140
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	246	140
DN25 PN100 weld neck flange; DIN 2637 type N grooved face	309	246	140
DN25 PN100 weld neck flange; EN 1092-1 Form D	181	246	140
<i>304L stainless steel sensors</i>			
1-inch ANSI CL150 weld neck raised face flange	415	235	108
1-inch ANSI CL300 weld neck raised face flange	416	248	124
DN25 PN40 weld neck flange; DIN 2526 type C face	424	217	115
DN25 PN40 weld neck flange; EN 1092-1 Form B1	422	217	115
<i>Nickel alloy sensors</i>			
1-inch ANSI CL150 lap joint flange	530	235	108
1-inch ANSI CL300 lap joint flange	531	248	124
DN25 PN40 lap joint flange; DIN 2656 type C face	533	243	115
DN25 PN40 lap joint flange; EN 1092-1 Form B1	534	243	115

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF200 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
1 1/2-inch ANSI CL150 weld neck raised face flange	341	581	127
1 1/2-inch ANSI CL300 weld neck raised face flange	342	594	156
1 1/2-inch ANSI CL600 weld neck raised face flange	343	606	156
2-inch ANSI CL150 weld neck raised face flange	418	581	152
2-inch ANSI CL300 weld neck raised face flange	419	594	165
2-inch ANSI CL600 weld neck raised face flange	420	600	165
1 1/2" sanitary fitting (Tri-Clamp compatible) ⁽²⁾	351	543	51
2" sanitary fitting (Tri-Clamp compatible) ⁽²⁾	352	543	64
DN40 PN40 weld neck flange; DIN 2635 type C face	381	551	150
DN40 PN40 weld neck flange; EN 1092-1 Form B1	368	547	150
DN40 PN40 weld neck flange; DIN 2635 type N grooved face	383	551	150
DN40 PN40 weld neck flange; EN 1092-1 Form D	312	547	150
DN40 PN100 weld neck flange; DIN 2637 type E face	377	587	170
DN40 PN100 weld neck flange; EN 1092-1 Form B2	363	580	170
DN40 PN100 weld neck flange; DIN 2637 type N grooved face	379	587	170
DN40 PN100 weld neck flange; EN 1092-1 Form D	366	580	170
DN50 PN40 weld neck flange; DIN 2635 type C face	382	557	165
DN50 PN40 weld neck flange; EN 1092-1 Form B1	369	553	165
DN50 PN40 weld neck flange; DIN 2635 type N grooved face	384	557	165
DN50 PN40 weld neck flange; EN 1092-1 Form D	316	553	165
DN50 PN100 weld neck flange; DIN 2637 type E face	378	598	195
DN50 PN100 weld neck flange; EN 1092-1 Form B2	365	593	195
DN50 PN100 weld neck flange; DIN 2637 type N grooved face	380	598	195
DN50 PN100 weld neck flange; EN 1092-1 Form D	367	593	195

(1) *Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.*

(2) *Not available with high-temperature models CMF200A or CMF200B.*

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF200 fitting options⁽¹⁾			
<i>304L stainless steel sensors</i>			
1 1/2-inch ANSI CL150 weld neck raised face flange	441	581	127
1 1/2-inch ANSI CL300 weld neck raised face flange	442	594	156
2-inch ANSI CL150 weld neck raised face flange	518	581	152
2-inch ANSI CL300 weld neck raised face flange	519	597	165
DN40 PN40 weld neck flange; DIN 2526 type C face	481	551	150
DN40 PN40 weld neck flange; EN 1092-1 Form B1	457	547	150
DN50 PN40 weld neck raised face flange; DIN 2526 type C face	482	557	165
DN50 PN40 weld neck raised face flange; EN 1092-1 Form B1	458	553	165
<i>Nickel alloy sensors</i>			
1 1/2-inch ANSI CL150 lap joint flange	540	581	127
1 1/2-inch ANSI CL300 lap joint flange	541	594	156
2-inch ANSI CL150 lap joint flange	544	581	152
2-inch ANSI CL300 lap joint flange	545	594	165
DN40 PN40 lap joint flange; DIN 2656 type C face	543	551	150
DN40 PN40 lap joint flange; EN 1092-1 Form B1	548	551	150
DN50 PN40 lap joint flange; DIN 2656 type C face	547	557	165
DN50 PN40 lap joint flange; EN 1092-1 Form B1	549	557	165

(1) *Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.*

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF300 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
3-inch ANSI CL150 weld neck raised face flange	355	856	191
3-inch ANSI CL300 weld neck raised face flange	356	875	210
3-inch ANSI CL600 weld neck raised face flange	357	894	210
4-inch ANSI CL150 weld neck raised face flange	425	865	229
4-inch ANSI CL300 weld neck raised face flange	426	889	254
4-inch ANSI CL600 weld neck raised face flange	427	932	273
3-inch sanitary fitting (Tri-Clamp compatible) ⁽²⁾	361	813	90
DN80 PN40 weld neck flange; DIN 2635 type C face	391	835	200
DN80 PN40 weld neck flange; EN 1092-1 Form B1	371	832	200
DN80 PN40 weld neck flange; DIN 2635 type N grooved face	393	835	200
DN80 PN40 weld neck flange; EN 1092-1 Form D	326	832	200
DN80 PN100 weld neck flange; DIN 2637 type E face	395	878	230
DN80 PN100 weld neck flange; EN 1092-1 Form B2	373	872	230
DN80 PN100 weld neck flange; DIN 2637 type N grooved face	397	878	230
DN80 PN100 weld neck flange; EN 1092-1 Form D	375	872	230
DN100 PN40 weld neck flange; DIN 2635 type C face	392	845	235
DN100 PN40 weld neck flange; EN 1092-1 Form B1	372	845	235
DN100 PN40 weld neck flange; DIN 2635 type N grooved face	394	845	235
DN100 PN40 weld neck flange; EN 1092-1 Form D	333	845	235
DN100 PN100 weld neck flange; DIN 2637 type E face	396	903	265
DN100 PN100 weld neck flange; EN 1092-1 Form B2	374	896	265
DN100 PN100 weld neck flange; DIN 2637 type N grooved face	398	903	265
DN100 PN100 weld neck flange; EN 1092-1 Form D	359	896	265
<i>304L stainless steel sensors</i>			
3-inch ANSI 150 lb weld neck raised face flange	455	856	191
3-inch ANSI 300 lb weld neck raised face flange	456	875	210
DN80 PN40 weld neck flange; DIN 2526 type C face	491	835	200
DN80 PN40 weld neck flange; EN 1092-1 Form B1	459	832	200
<i>Nickel alloy sensors</i>			
3-inch ANSI CL150 lap joint flange	550	856	191
3-inch ANSI CL300 lap joint flange	551	875	210
DN80 PN40 lap joint flange; DIN 2656 type C face	553	835	200
DN80 PN40 lap joint flange; EN 1092-1 Form B1	554	835	200

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

(2) Not available with high-temperature models CMF300A or CMF300B.

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF400 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
4-inch ANSI 150 lb weld neck raised face flange	435	1021	229
4-inch ANSI 300 lb weld neck raised face flange	436	1041	254
4-inch ANSI 600 lb weld neck raised face flange	437	1084	273
4-inch ANSI 900 lb weld neck raised face flange ⁽²⁾	438	1110	292
6-inch ANSI 150 lb weld neck raised face flange	451	1024	279
6-inch ANSI 300 lb weld neck raised face flange	452	1049	318
6-inch ANSI 600 lb weld neck raised face flange	453	1105	356
DN100 PN40 weld neck flange; DIN 2635 type C face	460	999	235
DN100 PN40 weld neck flange; EN 1092-1 Form B1	443	999	235
DN100 PN40 weld neck flange; DIN 2635 type N grooved face	462	999	235
DN100 PN40 weld neck flange; EN 1092-1 Form D	480	999	235
DN100 PN100 weld neck flange; DIN 2637 type E face	464	1049	265
DN100 PN100 weld neck flange; EN 1092-1 Form B2	445	1049	265
DN100 PN100 weld neck flange; DIN 2637 type N grooved face	466	1049	265
DN100 PN100 weld neck flange; EN 1092-1 Form D	447	1049	265
DN150 PN40 weld neck flange; DIN 2635 type C face	461	1006	300
DN150 PN40 weld neck flange; EN 1092-1 Form B1	444	1018	300
DN150 PN40 weld neck flange; DIN 2635 type N grooved face	463	1006	300
DN150 PN40 weld neck flange; EN 1092-1 Form D	478	1018	300
DN150 PN100 weld neck flange; DIN 2637 type E face	465	1065	355
DN150 PN100 weld neck flange; EN 1092-1 Form B2	446	1099	355
DN150 PN100 weld neck flange; DIN 2637 type N grooved face	467	1065	355
DN150 PN100 weld neck flange; EN 1092-1 Form D	448	1099	355

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

(2) Available only with high-temperature model CMF400A.

Fitting options *continued*

	Fitting code	Dim. A face-to-face (mm)	Dim. B outside diameter (mm)
CMF400 fitting options⁽¹⁾			
<i>Nickel alloy sensors</i>			
4-inch ANSI CL150 lap joint	907	1078	229
DN100 PN40 weld neck flange; EN 1092-1 Form B1	906	999	235
DN100 PN100 weld neck flange; EN 1092-1 Form B2	908	1048	265
DN100 PN160 weld neck flange; EN 1092-1 Form B2	910	1068	265
4-inch ANSI CL150 weld neck raised face flange	911	1021	229
4-inch ANSI CL300 weld neck raised face flange	912	1024	254
4-inch ANSI CL600 weld neck raised face flange	913	1084	273
4-inch ANSI CL900 weld neck raised face flange	914	1110	292
High-pressure CMF400P fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
4-inch ANSI CL600 weld neck raised face flange	437	1084	273
4-inch ANSI CL900 weld neck raised face flange	438	1110	292
4-inch ANSI CL1500 weld neck raised face flange	439	1129	311
6-inch ANSI CL600 weld neck raised face flange	453	1105	356
4-inch ANSI CL600 carbon steel/316L stainless steel lap joint flange	562	1110	273
4-inch ANSI CL900 carbon steel/316L stainless steel lap joint flange	563	1110	292
CMFHC3 fitting options⁽¹⁾			
<i>316L stainless steel sensors</i>			
DN200 PN40 weld neck flange; EN 1092-1 Form B1	801	1090	375
DN200 PN100 weld neck flange; EN 1092-1 Form B2	802	1174	430
DN200 PN160 weld neck flange; EN 1092-1 Form B2	803	1194	430
8-inch ANSI CL150 weld neck raised face flange	810	1118	343
8-inch ANSI CL300 weld neck raised face flange	811	1137	381
8-inch ANSI CL600 lap joint flange	812	1194	—
8-inch ANSI CL600 weld neck raised face flange	818	1194	419
8-inch ANSI CL900 weld neck raised face flange	819	1239	470
10-inch ANSI CL900 weld neck raised face flange	820	1258	546
DN250 PN40 weld neck flange; EN 1092-1 Form B1	804	1124	450
DN250 PN100 weld neck flange; EN 1092-1 Form B2	805	1228	505
DN250 PN160 weld neck flange; EN 1092-1 Form B2	806	1224	515
10-inch ANSI CL150 weld neck raised face flange	813	1118	292
10-inch ANSI CL300 weld neck raised face flange	814	1137	445
10-inch ANSI CL600 weld neck raised face flange	815	1232	508
10-inch ANSI CL600 lap joint flange	816	1219	—
10-inch ANSI CL600 weld neck raised face PD replacement flange	817 ⁽²⁾	1125	508

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

(2) Not available with Model CMFHC3A.

Ordering information

Model	Product Description
Standard models	
CMF010M	Micro Motion Coriolis ELITE sensor; 2,5 to 6 mm; 316L stainless steel
CMF010H	Micro Motion Coriolis ELITE sensor; 2,5 to 6 mm; Hastelloy C-22
CMF010L	Micro Motion Coriolis ELITE sensor; 2,5 to 6 mm; 304L stainless steel
CMF025M	Micro Motion Coriolis ELITE sensor; 6 to 13 mm; 316L stainless steel
CMF025H	Micro Motion Coriolis ELITE sensor; 6 to 13 mm; Hastelloy C-22
CMF025L	Micro Motion Coriolis ELITE sensor; 6 to 13 mm; 304L stainless steel
CMF050M	Micro Motion Coriolis ELITE sensor; 13 to 25 mm; 316L stainless steel
CMF050H	Micro Motion Coriolis ELITE sensor; 13 to 25 mm; Hastelloy C-22
CMF050L	Micro Motion Coriolis ELITE sensor; 13 to 25 mm; 304L stainless steel
CMF100M	Micro Motion Coriolis ELITE sensor; 25 to 50 mm; 316L stainless steel
CMF100H	Micro Motion Coriolis ELITE sensor; 25 to 50 mm; Hastelloy C-22
CMF100L	Micro Motion Coriolis ELITE sensor; 25 to 50 mm; 304L stainless steel
CMF200M	Micro Motion Coriolis ELITE sensor; 50 to 75 mm; 316L stainless steel
CMF200H	Micro Motion Coriolis ELITE sensor; 50 to 75 mm; Hastelloy C-22
CMF200L	Micro Motion Coriolis ELITE sensor; 50 to 75 mm; 304L stainless steel
CMF300M	Micro Motion Coriolis ELITE sensor; 75 to 100 mm; 316L stainless steel
CMF300H	Micro Motion Coriolis ELITE sensor; 75 to 100 mm; Hastelloy C-22
CMF300L	Micro Motion Coriolis ELITE sensor; 75 to 100 mm; 304L stainless steel
CMF400M	Micro Motion Coriolis ELITE sensor; 100 to 150 mm; 316L stainless steel
CMF400H	Micro Motion Coriolis ELITE sensor; 100 to 150 mm; Hastelloy C-22
High-capacity models	
CMFHC3M	Micro Motion Coriolis ELITE sensor; 200 to 250 mm; 316L stainless steel
High-pressure models	
CMF010P	Micro Motion Coriolis ELITE sensor; 2,5 to 6 mm; high pressure; nickel alloy with stainless steel fittings
CMF400P	Micro Motion Coriolis ELITE sensor; 100 to 150 mm; high pressure; nickel alloy with stainless steel fittings
High-temperature models	
CMF200A	Micro Motion Coriolis ELITE sensor; 50 to 75 mm; high temperature; 316L stainless steel
CMF200B	Micro Motion Coriolis ELITE sensor; 50 to 75 mm; high temperature; Hastelloy C-22
CMF300A	Micro Motion Coriolis ELITE sensor; 75 to 100 mm; high temperature; 316L stainless steel
CMF300B	Micro Motion Coriolis ELITE sensor; 75 to 100 mm; high temperature; Hastelloy C-22
CMF400A	Micro Motion Coriolis ELITE sensor; 100 to 150 mm; high temperature; 316L stainless steel
CMF400B	Micro Motion Coriolis ELITE sensor; 100 to 150 mm; high temperature; Hastelloy C-22
High-temperature, high-capacity models	
CMFHC3A	Micro Motion Coriolis ELITE sensor; 200 to 250 mm; high temperature; 316L stainless steel
Code	Process Connections
###	See process fitting options on pages 26–33.
Code	Case Options
N	Standard pressure containment
P ⁽¹⁾	Purge fittings (two 1/2-inch NPT female)
D	Rupture disks (two 28 bar disks) — Model CMF010P only
Continued on next page	

(1) Not available with Models CMFHC3M or CMFHC3A.

Ordering information *continued*

Code	Electronics Interface
For all models <i>except</i> high-temperature and high-capacity models	
0	Model 2400S transmitter
1	Extended mount Model 2400S transmitter
2	4-wire polyurethane-painted aluminum integral enhanced core processor for remote mount transmitters
3	4-wire stainless steel integral enhanced core processor for remote mount transmitters
4	4-wire polyurethane-painted aluminum integral extended mount enhanced core processor for remote mount transmitters
5	4-wire extended mount stainless steel integral enhanced core processor for remote mount transmitters
Q	4-wire polyurethane-painted aluminum integral core processor for remote mount transmitters
A	4-wire stainless steel integral core processor for remote mount transmitters
V	4-wire extended mount polyurethane-painted aluminum integral core processor for remote mount transmitters
B	4-wire extended mount stainless steel integral core processor for remote mount transmitters
R	9-wire polyurethane-painted aluminum junction box
H	9-wire extended mount polyurethane-painted aluminum junction box
S	9-wire 316L stainless steel junction box
For high-capacity models	
0	Model 2400S transmitter
1	Extended mount Model 2400S transmitter
2	4-wire polyurethane-painted aluminum integral enhanced core processor for remote mount transmitters
3	4-wire stainless steel integral enhanced core processor for remote mount transmitters
4	4-wire polyurethane-painted aluminum integral extended mount enhanced core processor for remote mount transmitters
5	4-wire stainless steel integral extended mount enhanced core processor for remote mount transmitters
For high-temperature models	
0	Model 2400S transmitter
2	4-wire polyurethane-painted aluminum integral enhanced core processor for remote mount transmitters
3	4-wire stainless steel integral enhanced core processor for remote mount transmitters
Q	4-wire polyurethane-painted aluminum integral core processor for remote mount transmitters
A	4-wire stainless steel integral core processor for remote mount transmitters
C	Model 1700/2700 transmitter
R	9-wire polyurethane-painted aluminum junction box
S	9-wire 316L stainless steel junction box
For high-capacity, high-temperature models	
0	Model 2400S transmitter
2	4-wire polyurethane-painted aluminum integral enhanced core processor for remote mount transmitters
3	4-wire stainless steel integral enhanced core processor for remote mount transmitters
Continued on next page	

Ordering information *continued*

Code	Conduit Connections
	Electronics interface codes 0, 1, and C
A	Not applicable
	Electronics Interface Codes 2, 3, 4, 5, Q, A, V, and B
B	1/2-inch NPT — no gland
E	M20 — no gland
F	Brass/nickel cable gland (cable diameter 8,5 to 10 mm)
G	Stainless steel cable gland (cable diameter 8,5 to 10 mm)
	Electronics Interface Codes R, H, and S (9-wire junction box)
A	3/4-inch NPT — no gland
H	Brass nickel cable gland
J	Stainless steel cable gland
Code	Approvals
	Electronics interface codes 0 and 1
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
2	CSA C-US (US and Canada) Class I, Div. 2
V	ATEX — Equipment Category 3 (Zone 2) / PED compliant
3	IECEX Zone 2
	Electronics interface codes 2, 3, 4, and 5
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
A	CSA C-US (US and Canada)
Z	ATEX — Equipment Category 2 (Zone 1) / PED compliant
I	IECEX Zone 1
	Electronics interface codes Q, A, C, V, B, R, H, and S
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
U	UL — Not available with electronics interface code C
C	CSA (Canada only) — Not available with electronics interface code C
A	CSA C-US (US and Canada)
Z	ATEX — Equipment Category 2 (Zone 1) / PED compliant
P ⁽¹⁾	NEPSI
I	IECEX Zone 1
Continued on next page	

(1) Available only with language option M (Chinese).

Ordering information *continued*

Code	Language
A	Danish installation manual
D	Dutch installation manual
E	English installation manual
F	French installation manual
G	German installation manual
H	Finnish installation manual
I	Italian installation manual
N	Norwegian installation manual
O	Polish installation manual
P	Portuguese installation manual
S	Spanish installation manual
W	Swedish installation manual
C	Czech installation manual
B	Hungarian CE requirements document and English installation manual
K	Slovak CE requirements document and English installation manual
T	Estonian CE requirements document and English installation manual
U	Greek CE requirements document and English installation manual
L	Latvian CE requirements document and English installation manual
V	Lithuanian CE requirements document and English installation manual
Y	Slovenian CE requirements document and English installation manual
Code ⁽¹⁾	Calibration Options
Z	0,10% mass flow and 0,5 kg/m ³ density
D	0,10% mass flow and 0,2 kg/m ³ density
2	0,05% mass flow and 0,5 kg/m ³ density
3	0,05% mass flow and 0,2 kg/m ³ density
Code	Measurement Application Software
Z	No measurement application software
Code	Factory Options
Z	Standard product
X	ETO product
Typical Model Number: CMF050M 313 N 2 B A E Z Z Z	

(1) Calibration options other than Z require electronics interface codes 0–5. In addition, for high-capacity and high-temperature models, **only** calibration option Z is available.

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