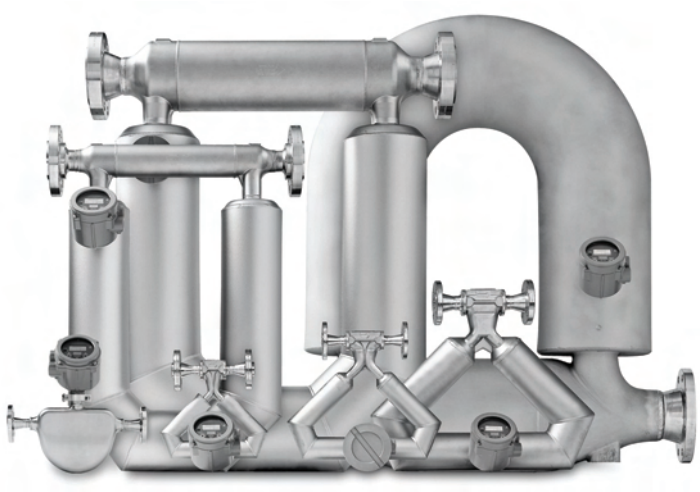
Product Data Sheet
PS-00374, Rev. R
March 2011

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
- Smart Meter Verification for quick, complete meter diagnosis without process interruption.
- 2-wire loop-powered option for installation simplification

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**
ELITE HC	Peak performance high capacity 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®

EMERSON™
Process Management

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. Now with the industry's only 2-wire Coriolis option, Micro Motion provides unsurpassed simplicity of installation and application flexibility.

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.

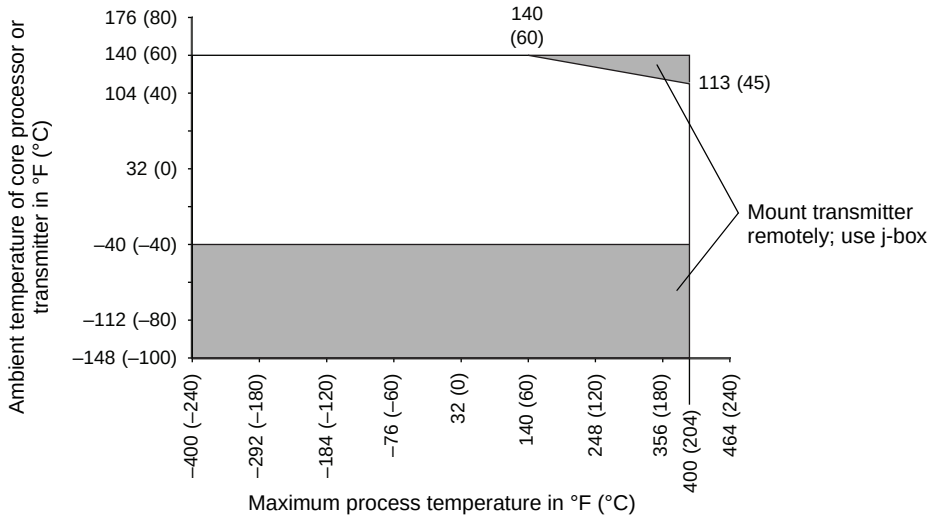
ELITE Coriolis meters. Micro Motion ELITE meters are the leading meters for precision flow and density measurement. ELITE meters offer the most accurate measurement available for virtually any process fluid, while exhibiting exceptionally low pressure drop. Every ELITE meter features standard secondary 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 Smart 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 –400 °F (–240 °C) to 662 °F (350 °C).

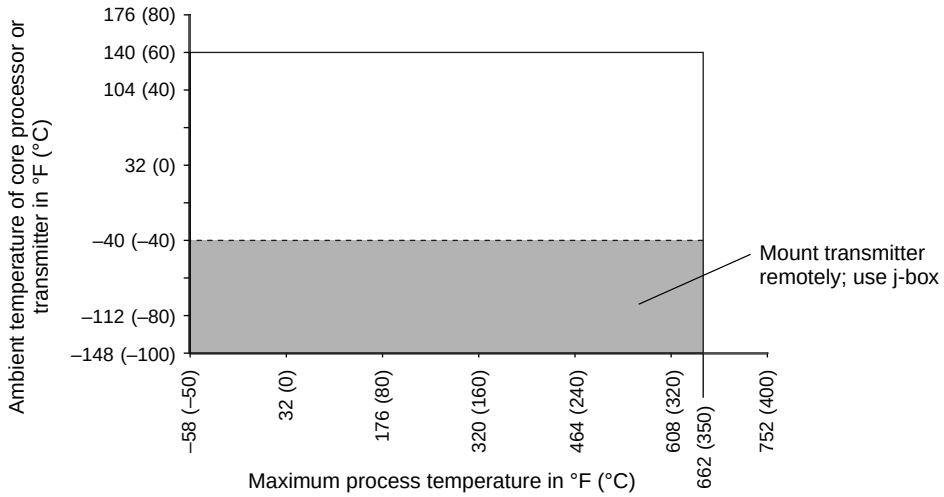
Contents

Temperature limits

All models except high-temperature models[1] [2] [3] [4]



High-temperature models



(1) Temperature limits may be further restricted by hazardous area approvals. See pages 11–17.

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

(3) When ambient temperature is below –40 °F (–40 °C), a core processor or Model 2400S transmitter must be heated to bring its local ambient temperature to between –40 °F (–40 °C) and +140 °F (+60 °C). Long-term storage of electronics at ambient temperatures below –40 °F (–40 °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.

Accuracy and repeatability

			Electronics option	
			Model 2400S, enh. core processor	**Other MVD transmitter, std. core processor**
Mass and volume flow[1]	Liquid	Accuracy	±0.05% of rate[2][3]	±0.10% of rate[4]
		Repeatability	±0.025% of rate	±0.05% of rate
	Gas	Accuracy	±0.35% of rate[5]	±0.35% of rate
		Repeatability	±0.20% of rate	±0.20% of rate
Density[1][6]	Liquid	Accuracy	±0.0002 g/cm^3 (±0.2 kg/m^3)	±0.0005 g/cm^3 (±0.5 kg/m^3)
		Repeatability	±0.0001 g/cm^3 (±0.1 kg/m^3)	±0.0002 g/cm^3 (±0.2 kg/m^3)
Temperature		Accuracy	±1 °C ± 0.5% of reading	±1 °C ± 0.5% of reading
		Repeatability	±0.2 °C	±0.2 °C
			lb/min	**kg/h**
Zero stability		CMFS010M	0.000075	0.002
		CMFS010H, P	0.00015	0.004
		CMFS015M	0.00037	0.01
		CMFS015H, P	0.00073	0.02
		CMF010M, H	0.000075	0.002
		CMF010P	0.00015	0.004
		CMF025	0.001	0.027
		CMF050	0.006	0.163
		CMF100	0.025	0.680
		CMF200	0.08	2.18
		CMF300	0.25	6.80
		CMF400	1.50	40.91

(1) Accuracy options vary by model. Models CMF010, CMFS010, CMFS015, sensors with Model 2200S transmitter, and all high-temperature models have fewer accuracy options. See Ordering information on page 42.

(2) 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]%.

(3) 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 = ±[(zero stability / flow rate) × 100]% of rate and repeatability = ±[½(zero stability / flow rate) × 100]% of rate.

(4) When flow rate is less than zero stability / 0.001, accuracy = ±[(zero stability / flow rate) × 100]% of rate and repeatability = ±[½(zero stability / flow rate) × 100]% of rate.

(5) When flow rate is less than zero stability / 0.0035, accuracy equals ±[(zero stability / flow rate) × 100]% of rate and repeatability equals ±[½(zero stability / flow rate) × 100]% of rate.

(6) Specifications for ±0.0002 g/cm^3 (±0.2 kg/m^3) density accuracy are based on reference conditions of water at 68 to 140 °F (20 to 60 °C) and 15 to 30 psig (1 to 2 bar).

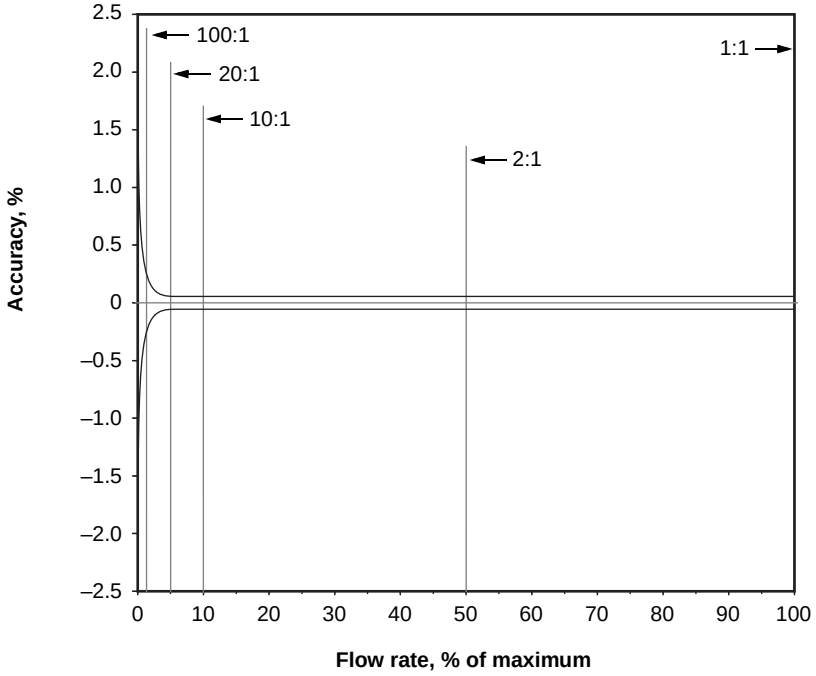
Liquid flow performance

		Mass		Volume[1]			
		lb/min	kg/h	gal/min	l/h	bbl/h	m^3/h
Maximum flow rate	CMFS010	4	108	0.5	108		
	CMFS015	12	330	1.5	330		
	CMF010	4	108	0.5	108		
	CMF025	80	2180	10	2180		
	CMF050	250	6800	30	6800		
	CMF100	1000	27,200	120	27,200		
	CMF200	3200	87,100	385	87,100	550	87
	CMF300	10,000	272,000	1200	272,000	1700	272
	CMF400	20,000	545,000	2400	545,000	3400	545

Typical accuracy, turndown, and pressure drop with CMF100 and 2400S 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.



Turndown from maximum flow rate		***500:1***	***100:1***	***20:1***	***10:1***	***2:1***
Accuracy	±%	1.25	0.25	0.05	0.05	0.05
Pressure drop	psi	~0	~0	0.2	0.7	13.5
	bar	~0	~0	0.01	0.05	0.93

(1) Specifications for volumetric flow rate are based on a process-fluid density of 1 g/cm³ (1000 kg/m³). For fluids with density other than 1 g/cm³ (1000 kg/m³), the volumetric flow rate equals the mass flow rate divided by the fluid's density.

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		**Volume**[1]	
		lb/min	kg/h	SCFM	Nm^3/h
Flow rates that produce approximately 10 psi (0.68 bar) pressure drop on air[2]	CMFS010	0.3	8	4	6
	CMFS015	1	24	12	18
	CMF010M, H	0.30	8	4	6
	CMF010P	0.2	6	3	5
	CMF025	4	110	60	90
	CMF050	10	300	145	230
	CMF100	50	1300	640	1000
	CMF200	150	4000	2000	3100
	CMF300	490	13,300	6500	10,300
	CMF400	1250	34,000	16,600	26,250
Flow rates that produce approximately 50 psi (3.4 bar) pressure drop on natural gas[3]	CMFS010	1	30	30	45
	CMFS015	3	90	90	130
	CMF010M, H	1	30	30	45
	CMF010P	0.9	25	20	35
	CMF025	16	450	380	600
	CMF050	40	1140	970	1530
	CMF100	185	5000	4300	6700
	CMF200	560	15,200	13,000	20,500
	CMF300	1850	50,500	43,000	68,000
	CMF400	4700	128,000	109,000	172,000

(1) Standard (SCFM) reference conditions are 14.7 psia and 68 °F. Normal (Nm^3/h) reference conditions are 1.013 bar and 0 °C.

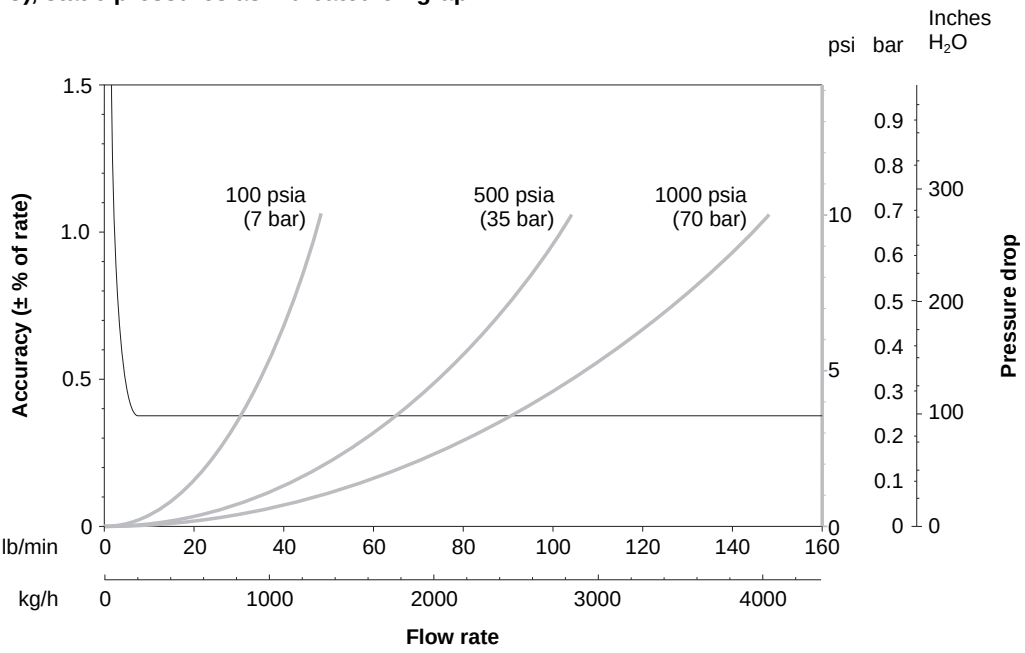
(2) Air at 68 °F (20 °C) and 100 psia (6.8 bar).

(3) Natural gas with MW 16.675 at 68 °F (20 °C) and 500 psia (34.0 bar).

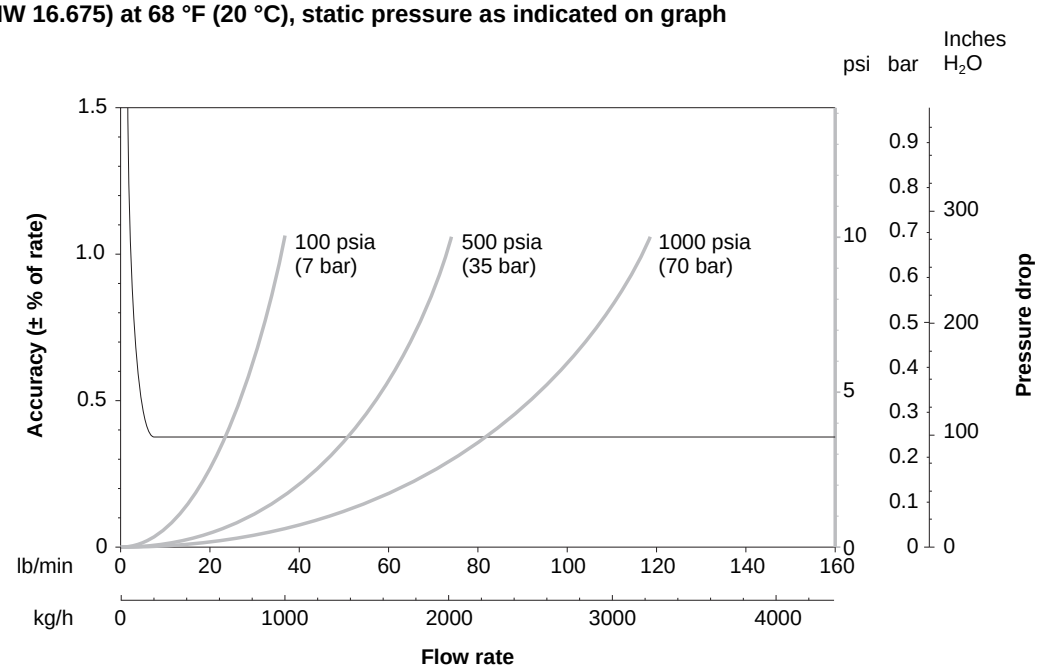
Gas flow performance *continued*

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

Air at 68 °F (20 °C), static pressures as indicated on graph



Natural gas (MW 16.675) at 68 °F (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 range (liquid only)

Range	Up to 5 g/cm^3	Up to 5000 kg/m^3

Vibration limits

Meets IEC 68.2.6, endurance sweep, 5 to 2000 Hz, 50 sweep cycles at 1.0 g

Power consumption

Meter with core processor	4 watts maximum
Meter with Model 2400S transmitter	7 watts maximum
Meter with Model 2200S transmitter	Loop-powered, 0.8 watts maximum
Meter with Model 1700/2700 transmitter	Refer to transmitter documentation

Pressure ratings

Sensor rating[1]		316L and 304L stainless steel		Alloy C-22		High pressure	
		psig	bar	psig	bar	psig	bar
	CMFS010	1813	125	3263	225	6000	413
	CMFS015	1813	125	3263	225	6000	413
	CMF010	1813	125	3263	225	6000	413
	CMF025	1500	103	2755	190	—	—
	CMF050	1500	103	2683	185	—	—
	CMF100	1450	100	2465	170	—	—
	CMF200	1580	108	2755	190	—	—
	CMF300	1730	119	2683	185	—	—
	CMF400	1500	103	2855	197	2973	205

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]	
		psig	bar	psig	bar
	CMFS010	850	58	5169	356
	CMFS015	850	58	5169	356
	CMF010[4]	425	29	3042	209
	CMF025	850	58	5480	377
	CMF050	850	58	5286	364
	CMF100	625	43	3299	227
	CMF200	550	37	2786	192
	CMF300	275	18	1568	108
	CMF400	250	17	1556	107

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

(2) For operating temperatures above 300 °F (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***	***Alloy C-22 sensors***	***316L sensors***	***304L sensors***
up to 300 °F (up to 148 °C)	*None*	*None*	*None*	*None*	*None*
at 400 °F (at 204 °C)	*7.2% derating*	*5.4% derating*	*None*	*7.2% derating*	*5.4% derating*
at 500 °F (at 260 °C)	*13.8% derating*	*11.4% derating*	*4.7% derating*	—	—
at 600 °F (at 316 °C)	*19.2% derating*	*16.2% derating*	*9.7% derating*	—	—
at 650 °F (at 343 °C)	*21.0% derating*	*18.0% derating*	*11.7% 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 400 psig (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
CMFS010, CMFS015, CMF010, CMF025, CMF050, and CMF100	±0.0002	±0.000015	±0.015
CMF200	±0.0005	±0.000015	±0.015
CMF300	±0.0005	±0.000015	±0.015
CMF400	±0.0007	±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	
	liquid	*gas*	*liquid*	*gas*
CMFS010	None	None	None	None
CMFS015	None	None	None	None
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	–0.0015	–0.0015	–0.022	–0.022

	Pressure effect on density accuracy	
	g/cm^3 per psi	kg/m^3 per bar
CMFS010	None	None
CMFS015	None	None
CMF010	None	None
CMF025	0.000004	0.058
CMF050	–0.000002	–0.029
CMF100	–0.000006	–0.087
CMF200	–0.000001	–0.0145
CMF300	–0.0000002	–0.0029
CMF400	–0.00001	–0.145

(1) For –100 °C and above.

Hazardous area classifications

UL[1]	
All models with core processor	Ambient temperature: –40 to +104 °F (–40 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: +104 °F (+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 to +140 °F (–40 to +60 °C) Class I, Div. 2, Groups A, B, C and D Class II, Div. 2, Groups F and G
Models CMFS010 and CMFS015 with FMT transmitter	Ambient temperature: –13 to +140 °F (–25 to +60 °C) Class I, Div. 2, Groups A, B, C and D Class II, Div. 2, Groups F and G
All models with core processor or Model 2200S transmitter	Ambient temperature: –40 to +140 °F (–40 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
All models with junction box	Ambient temperature: +140 °F (+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

NEPSI	
All models with Model 2400S transmitter	Ex nA II T1–T5
Models CMF010, CMF025, CMF050, CMF100, CMFS010, and CMFS015 with core processor or junction box	Ex ib IIC T1–T[3]
Models CMF200, CMF300, and CMF400 with core processor or junction box	Ex ib IIB/IIC T1–T[3]

(1) The following products are not available with UL approval: sensors with enhanced core processor, Model 2400S transmitter, or Model 2200S transmitter; 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*

ATEX

All models with Model 2400S transmitter; Models CMFS010 and CMFS015 with FMT transmitter	CE ⟨Ex⟩ II 3G Ex nA IIC T1–T5 Gc II 3D Ex tc IIIC T(1) °C Dc IP65
Models CMFS010, CMFS015, CMF010, CMF025, CMF050, and CMF100 with Model 2200S transmitter	CE 0575 ⟨Ex⟩ II 2G Ex ib IIC T1–T4 II 2D Ex ibD 21 T(1) °C CE ⟨Ex⟩ II 3G Ex nA II T1–T4 II 3D Ex tD A22 IP65 T(1) °C
Models CMF200, CMF300, and CMF400 with Model 2200S transmitter	CE 0575 ⟨Ex⟩ II 2G Ex ib IIB/IIC T1–T4 II 2D Ex ibD 21 T(1) °C CE ⟨Ex⟩ II 3G Ex nA II T1–T4 II 3D Ex tD A22 IP65 T(1) °C
Models CMFS010 and CMFS015 with core processor or junction box	CE 0575 ⟨Ex⟩ II 2G Ex ib IIC T1–T(1) II 2D Ex tD A21 IP65 T(1) °C
Models CMF010, CMF025, CMF050, and CMF100, with core processor or junction box	CE 0575 ⟨Ex⟩ II 2G Ex ib IIC T1–T(1) Gb II 2D Ex ib IIIC T(1) °C Db IP65
Models CMF200, CMF300, and CMF400 with core processor or junction box	CE 0575 ⟨Ex⟩ II 2G Ex ib IIB/IIC T1–T(1) Gb II 2D Ex ib IIIC T(1) °C Db IP65

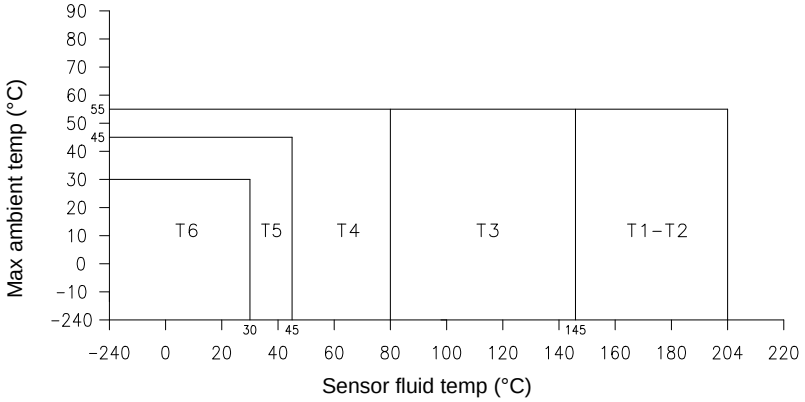
IECEx

All models with Model 2400S transmitter; Models CMFS010 and CMFS015 with FMT transmitter	Ex nA IIC T1–T5 Gc
Models CMF010, CMF025, CMF050, CMF100, CMFS010, and CMFS015 with core processor or junction box	Ex ib IIC T1–T(1) Gb
Models CMF200, CMF300, and CMF400 with core processor or junction box	Ex ib IIB/IIC T1–T(1) Gb
Models CMFS010, CMFS015, CMF010, CMF025, CMF050, and CMF100 with Model 2200S transmitter	Ex ib IIC T1–T4 Ex nA II T1–T4
Model CMF200, CMF300, and CMF400 with Model 2200S transmitter	Ex ib IIB/IIC T1–T4 Ex nA II T1–T4

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

Hazardous area classifications *continued*

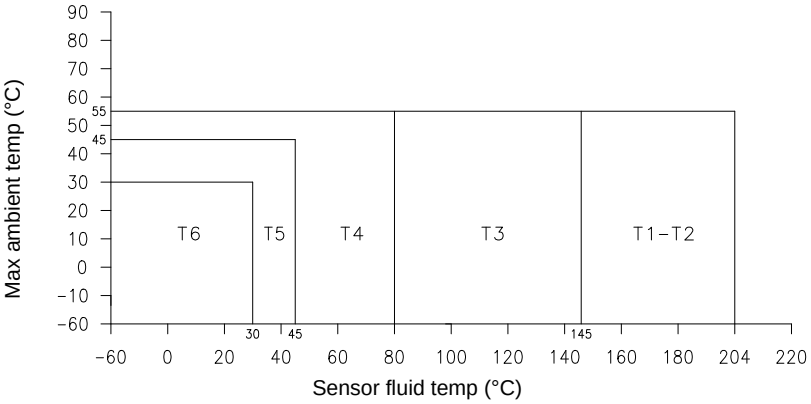
Model CMF010, CMF025, or CMF050 with junction box connected to MVD transmitter



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

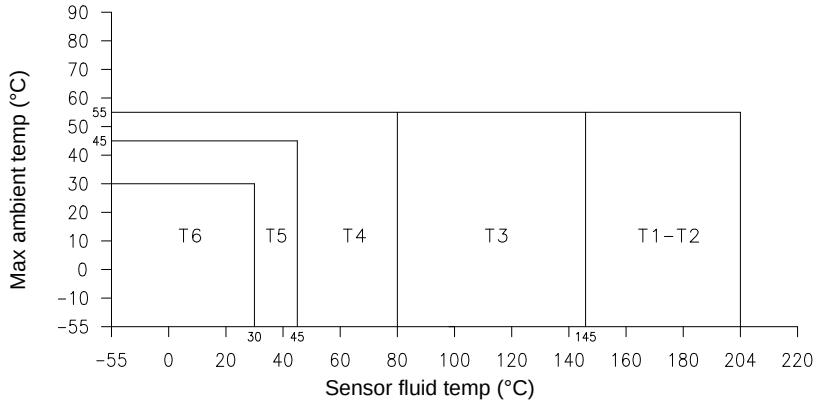


Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80 °C, T5:T 95 °C, T4:T 130 °C, T3:T 195 °C, T2 to T1:T 254 °C. The minimum ambient and process fluid temperature allowed for dust is –40 °C.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

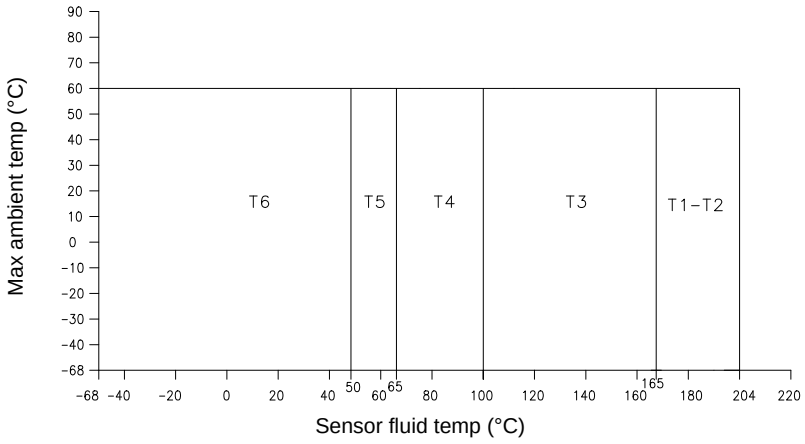
Model CMF200 or CMF300 with junction box connected to MVD transmitter[1]



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: 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	–55 °C to +55 °C

Model CMF400 with junction box connected to MVD transmitter[1]



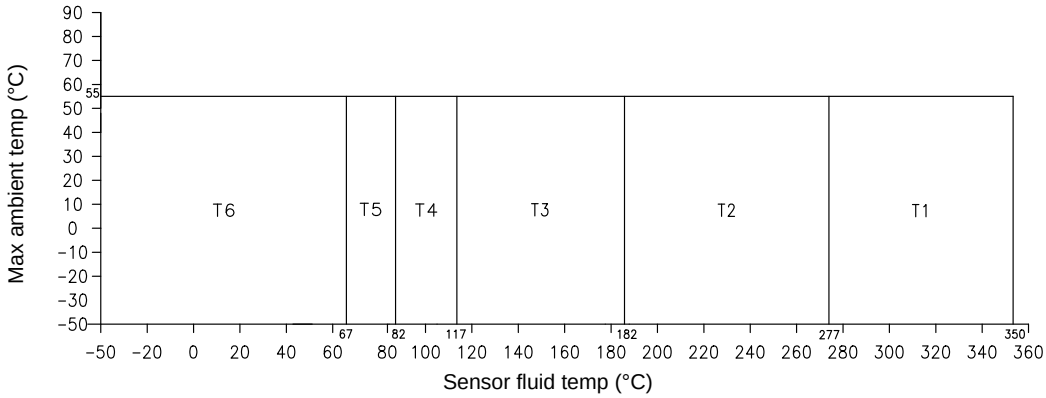
Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80 °C, T5:T 95 °C, T4:T 130 °C, T3:T 195 °C, T2: to T1:T 234 °C. The minimum ambient and process fluid temperature allowed for dust is –40 °C.
The use of the sensor at an ambient temperature higher than +60 °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	–68 °C to +60 °C

(1) Refer to page 15 for "T" rating graph for high-temperature models with junction box.

Hazardous area classifications *continued*

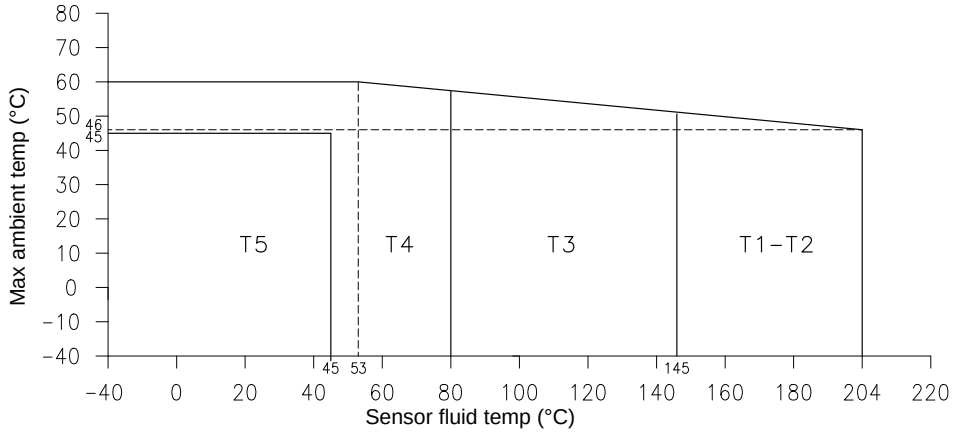
High-temperature models CMF200A, CMF200B, CMF300A, CMF300B, CMF400A, or CMF400B with junction box connected to MVD transmitter



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	Ta	–50 °C to +55 °C

Models CMF010, CMF025, CMF050, CMF100, CMF200 or CMF300 with core processor[(1)]



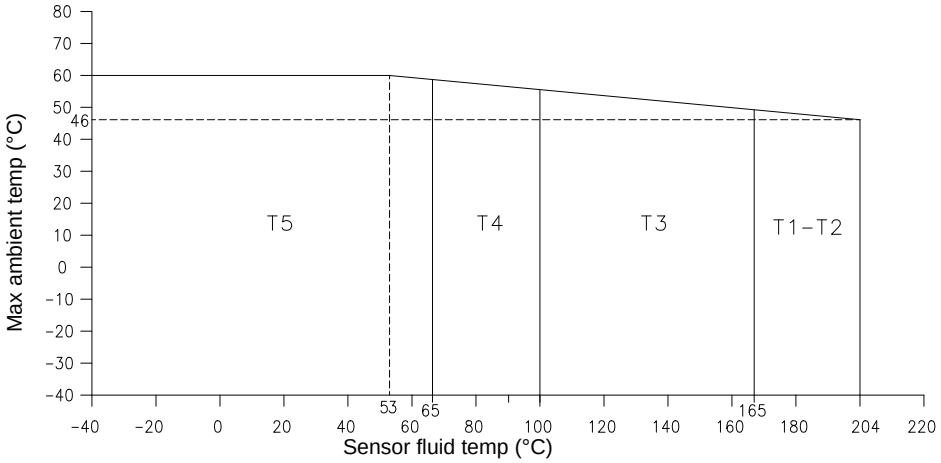
Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 254°C.

Ambient temperature range	Ta	–40 °C to +60 °C

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

Hazardous area classifications *continued*

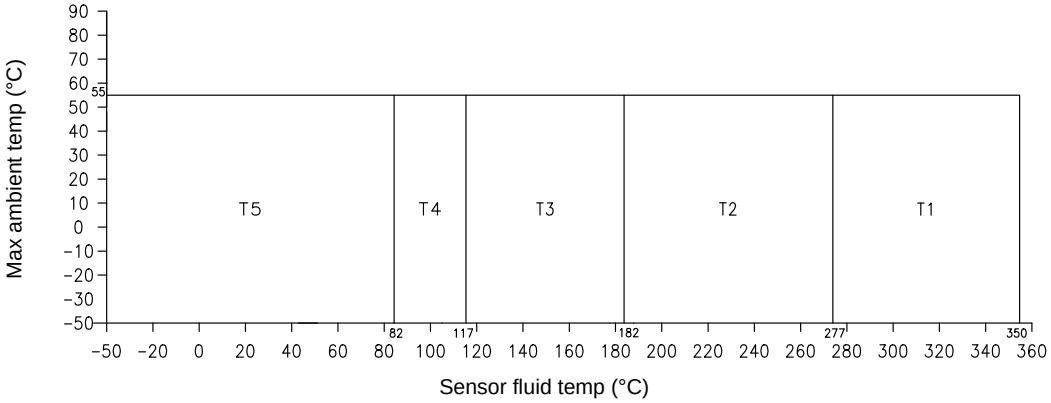
Model CMF400 with core processor



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	Ta	–40 °C to +60 °C

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

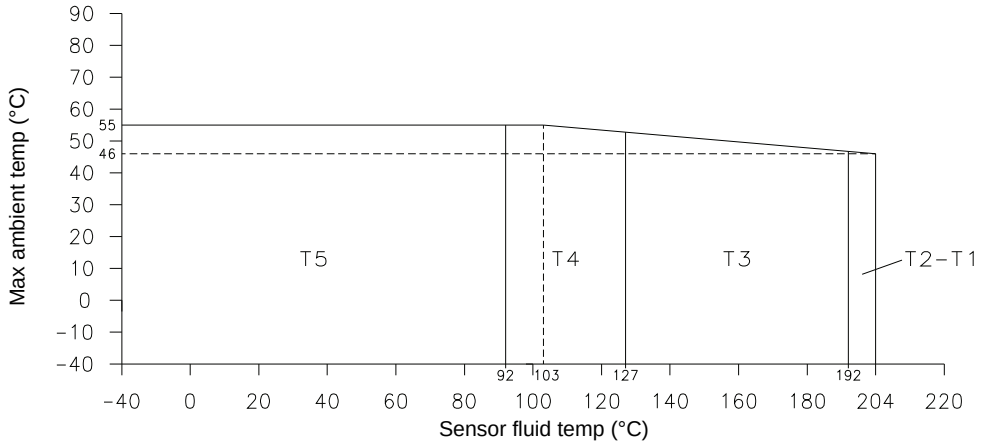


Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T5:T 95 °C, T4:T 130 °C, T3:T 195 °C, T2: T 290 °C, T1:T 363 °C. The minimum ambient and process fluid temperature allowed for dust is –40 °C.
Since 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 °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	–50°C to +55°C

Hazardous area classifications *continued*

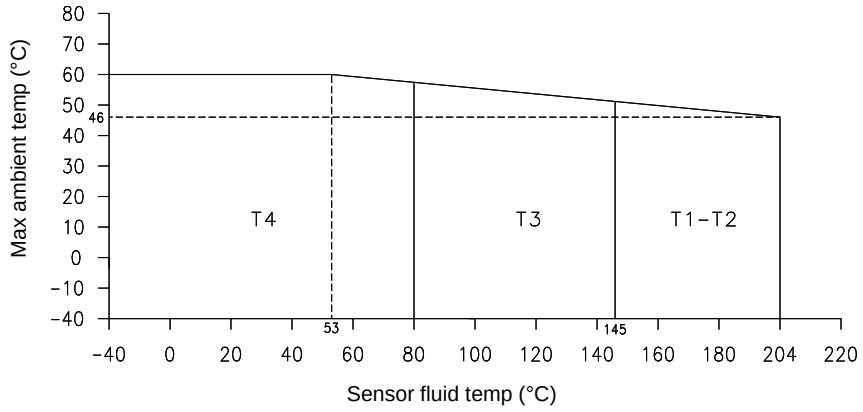
Models CMFS010 or CMFS015 with core processor



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 207°C. The minimum ambient and process fluid temperature allowed for dust is –40°C.

Ambient temperature range	Ta	–40 °C to +55 °C

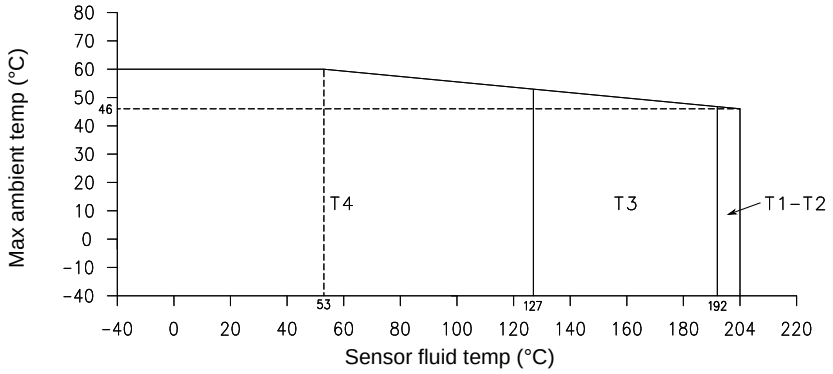
Models CMF010, CMF025, CMF050, and CMF100 with Model 2200S transmitter



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: T4:T 130°C, T3:T 195°C, T2 to T1:T 254°C.

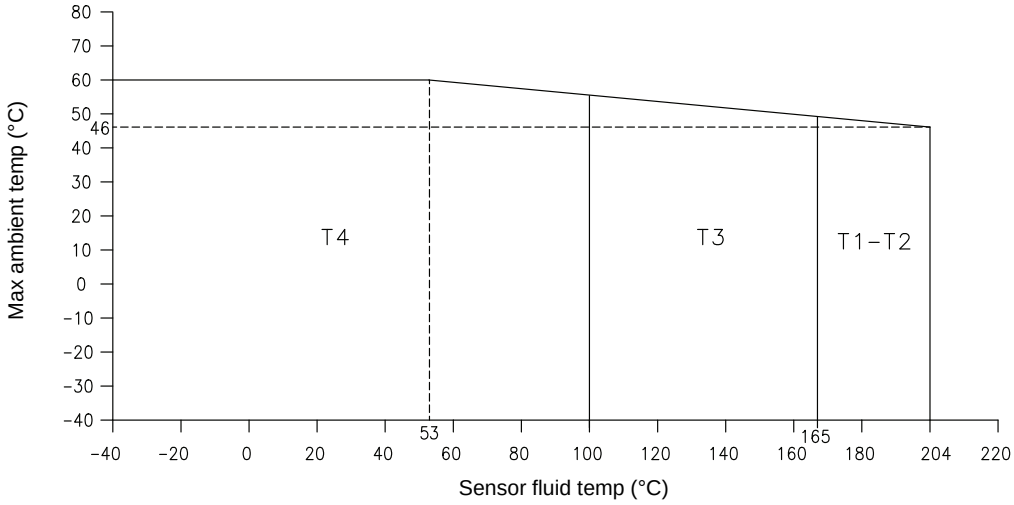
Hazardous area classifications *continued*

Models CMFS010 and CMFS015 with Model 2200S 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: T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C.

Models CMF400 with Model 2200S 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: T4:T 130°C, T3:T 195°C, T2 to T1:T 234°C

Materials of construction

Wetted parts[1][2][3]	304L or 316L stainless steel; or alloy C-22
Housing	304L stainless steel[4]
Junction box	300-series stainless steel[4] or polyurethane-painted aluminum; NEMA 4X (IP66)
Core processor	300-series stainless steel[4] or polyurethane-painted aluminum; NEMA 4X (IP66)
Model 2400S transmitter	Polyurethane-painted aluminum or 316L stainless steel; NEMA 4X (IP66)
Model 2200S transmitter	Polyurethane-painted aluminum or 316L stainless steel; NEMA 4X (IP66/67)

(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) The outer flange ring on lap-joint type flanges is non-wetted and is 304L stainless steel. Consult factory for other materials.

(3) Models CMF010P, CMFS010P, CMFS015P, 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.

(4) 316L stainless steel is available.

Weight

Weights provided are the weight of the flowmeter with 150 lb weld neck raised face flanges.

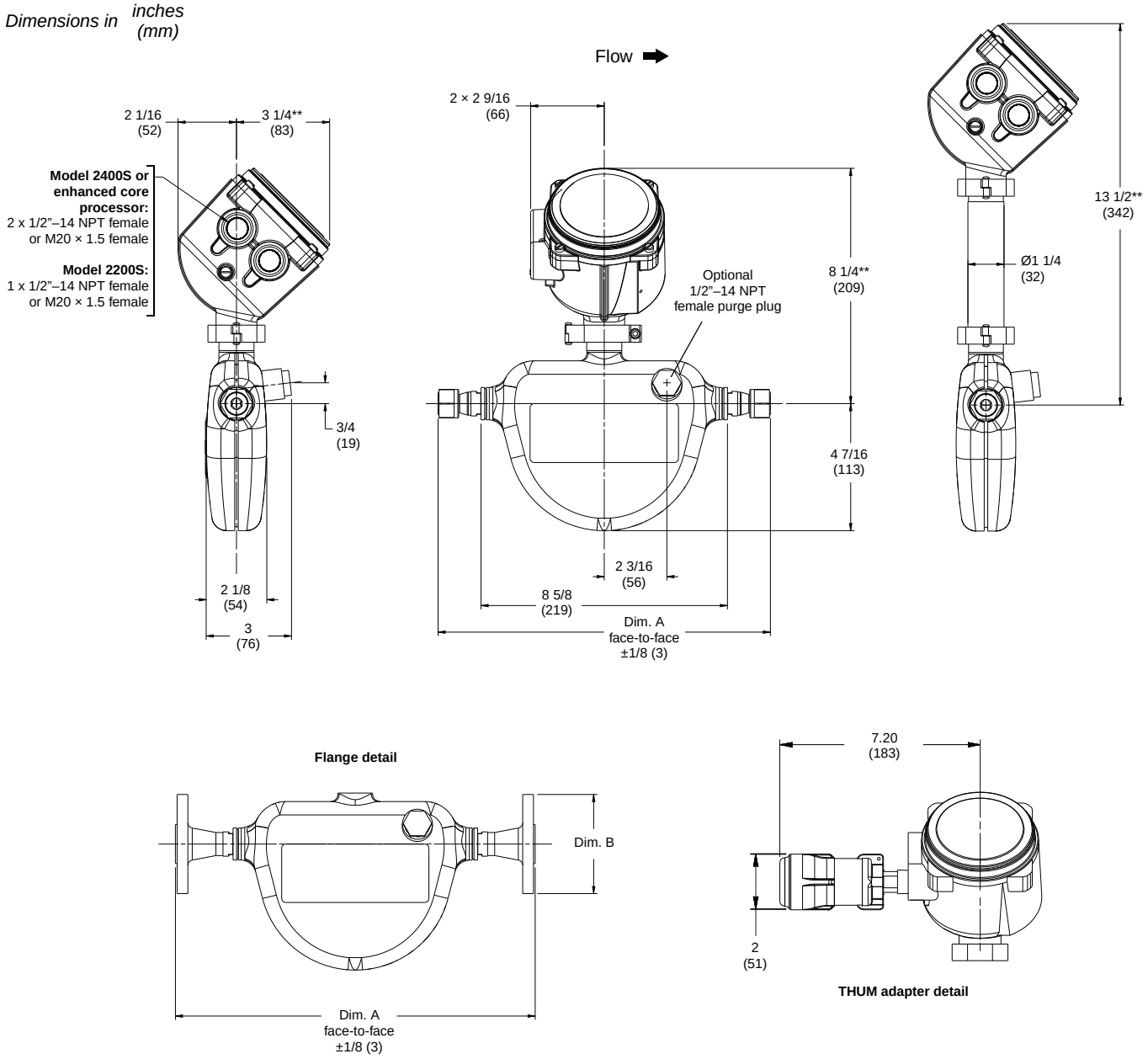
	With junction box		**With core processor, Model 2400S,or Model 2200S transmitter**[1]		**With FMT transmitter**	
	lb	kg	lb	kg	lb	kg
CMFS010	—	—	9	4	12	5
CMFS015	—	—	9	4	12	5
CMF010	14	7	19	9	—	—
CMF025	8	4	13	6	—	—
CMF050	12	6	17	8	—	—
CMF100	29	13	34	16	—	—
CMF200	63	29	68	31	—	—
CMF300	165	75	170	77	—	—
CMF400	441	200	446	202	—	—

(1) Weight stated for sensor with aluminum core processor. Add 4 lb (2 kg) for stainless steel core processor or stainless steel Model 2400S transmitter.

Dimensions

Models CMFS010 and CMFS015 with Model 2200S, Model 2400S, or enhanced core processor

Dimensions in inches (mm)



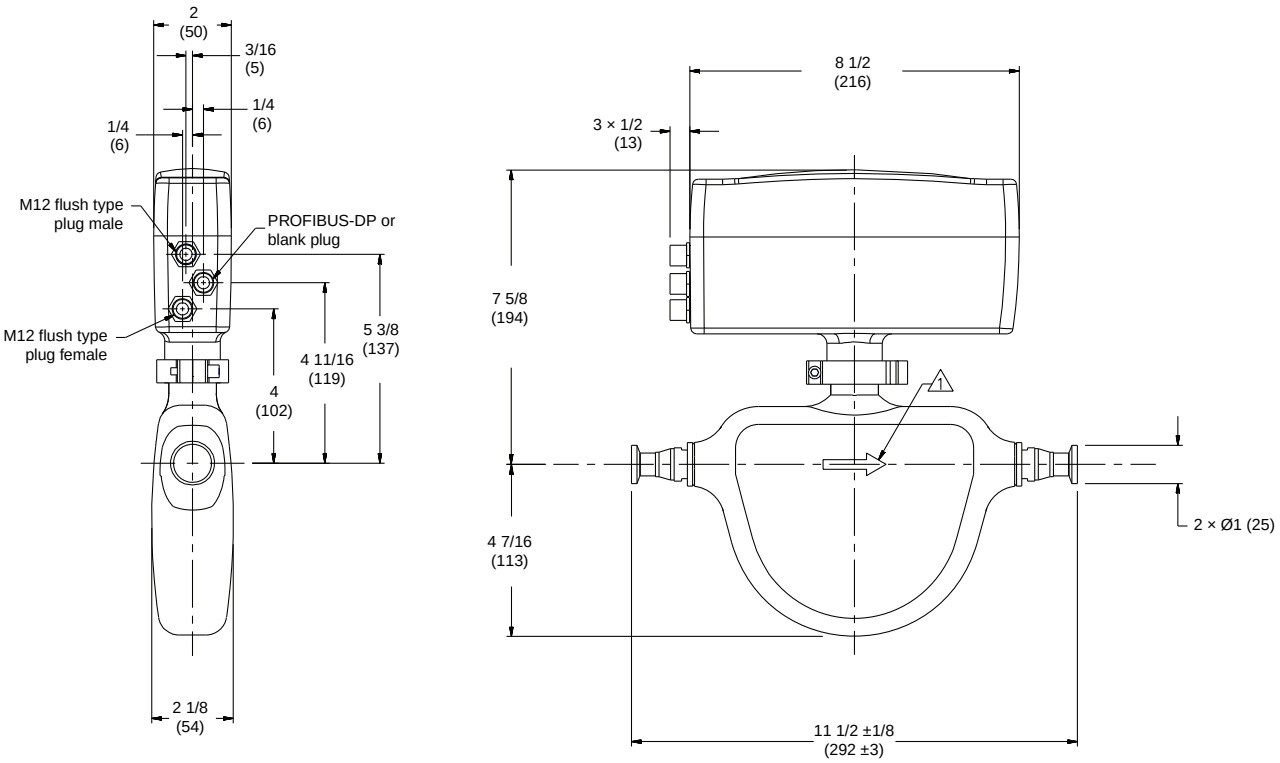
* *For dimensions A and B, see fittings options on pages 31 and 32.*
** *Electronics with painted aluminum housing shown. For stainless steel housing, add 0.40 inches (10 mm).*

Model	No. of flow tubes	Flow tube ID inches (mm)
CMFS010	2	0.07 (1.8)
CMFS015	2	0.11 (2.9)

Dimensions *continued*

Models CMFS010 and CMFS015 with Filling Mass Transmitter

Dimensions in *inches (mm)*



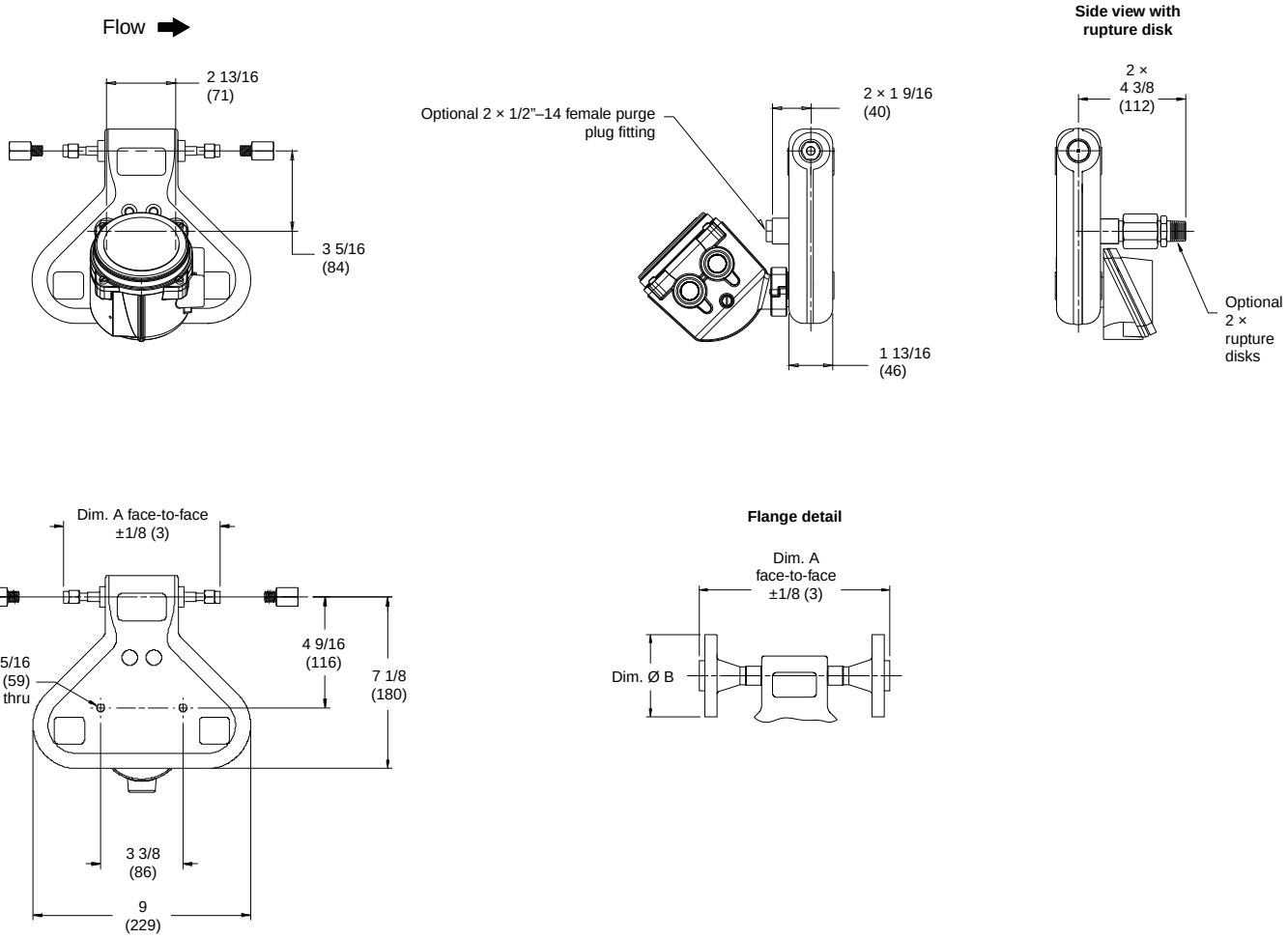
* *For dimensions A and B, see fittings options on page 29.*

Model	No. of flow tubes	Flow tube ID inches (mm)
CMFS010	2	0.07 (1.8)
CMFS015	2	0.11 (2.9)

Dimensions *continued*

Model CMF010

Dimensions in *inches (mm)*



* *For dimensions A and B, see fittings options on pages 31 and 32.*
** *Dimensions for each electronics option are shown on page 26.*

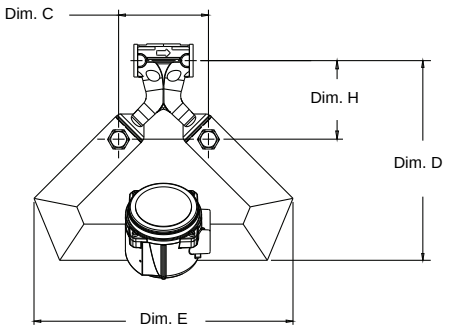
Model	No. of flow tubes	Flow tube ID inches (mm)
CMF010	1	0.11 (2.9)

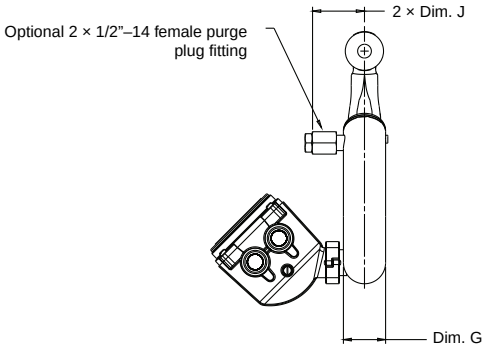
Dimensions *continued*

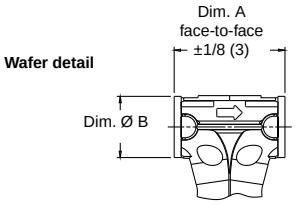
Models CMF025, CMF050, and CMF100

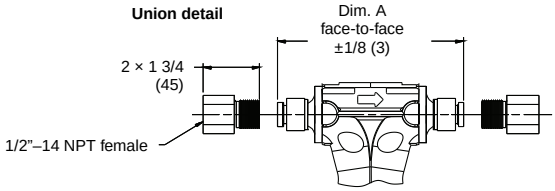
Dimensions in inches (mm)

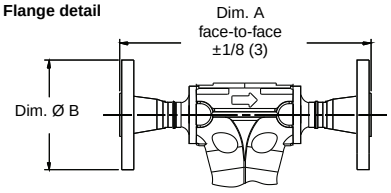
Flow ➡











Model	No. of flow tubes	Dimensions[1][2] in inches (mm)						
		Flow tube ID	C	D	E	G	H	J
CMF025	2	0.21 (5.2)	2 13/16 (72)	8 1/4 (209)	10 (255)	1 5/8 (41)	3 5/16 (85)	2 1/4 (58)
CMF050	2	0.35 (8.8)	5 (126)	11 1/16 (280)	14 5/16 (364)	2 (51)	4 3/8 (111)	2 1/2 (63)
CMF100	2	0.65 (16)	5 15/16 (150)	15 15/16 (405)	21 1/2 (546)	3 9/16 (91)	5 3/8 (136)	3 5/16 (83)

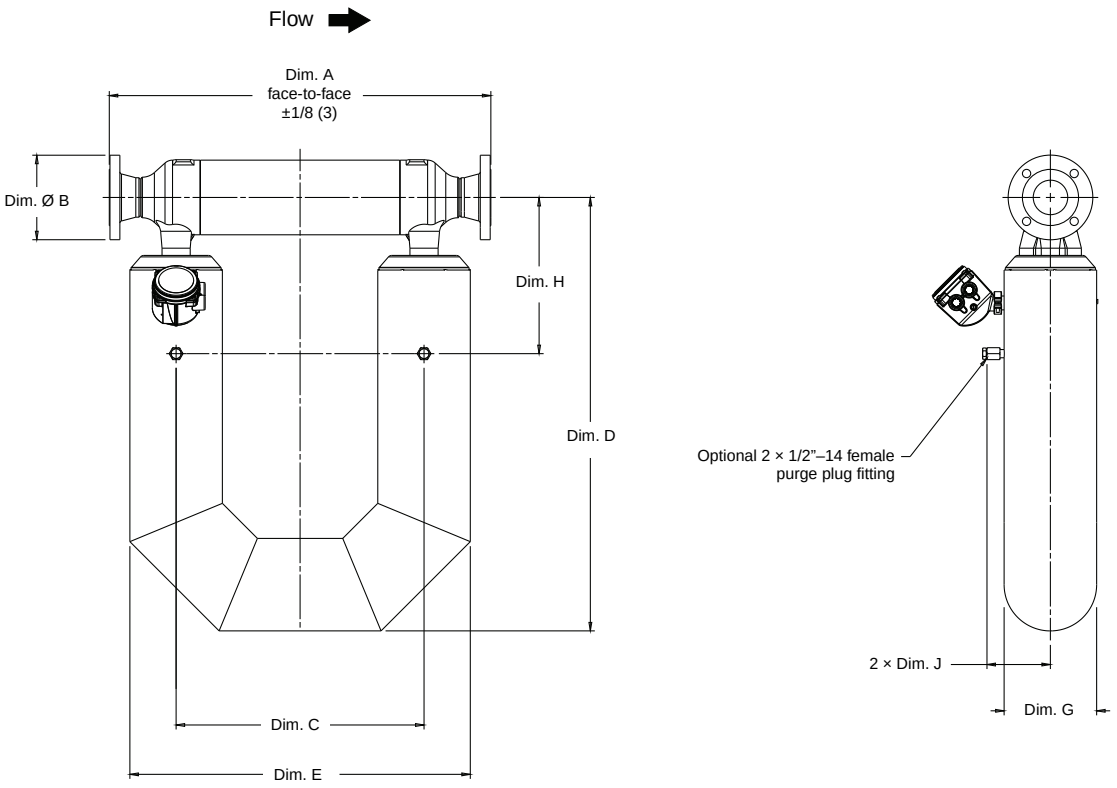
(1) For dimensions A and B, see fittings tables on pages 34–36.

(2) Dimensions for each electronics option are shown on page 26.

Dimensions *continued*

Models CMF200 and CMF300

Dimensions in inches (mm)



Model	No. of flow tubes	Dimensions[1][2] in inches (mm)						
		Flow tube ID	C	D	E	G	H	J
CMF200	2	1.1 (27)	14 (356)	28 5/8 (727)	19 9/16 (497)	5 9/16 (142)	11 7/8 (302)	4 5/16 (110)
CMF300	2	1.8 (45)	22 (559)	38 7/16 (977)	30 3/16 (767)	8 3/16 (209)	13 7/8 (352)	5 5/8 (143)

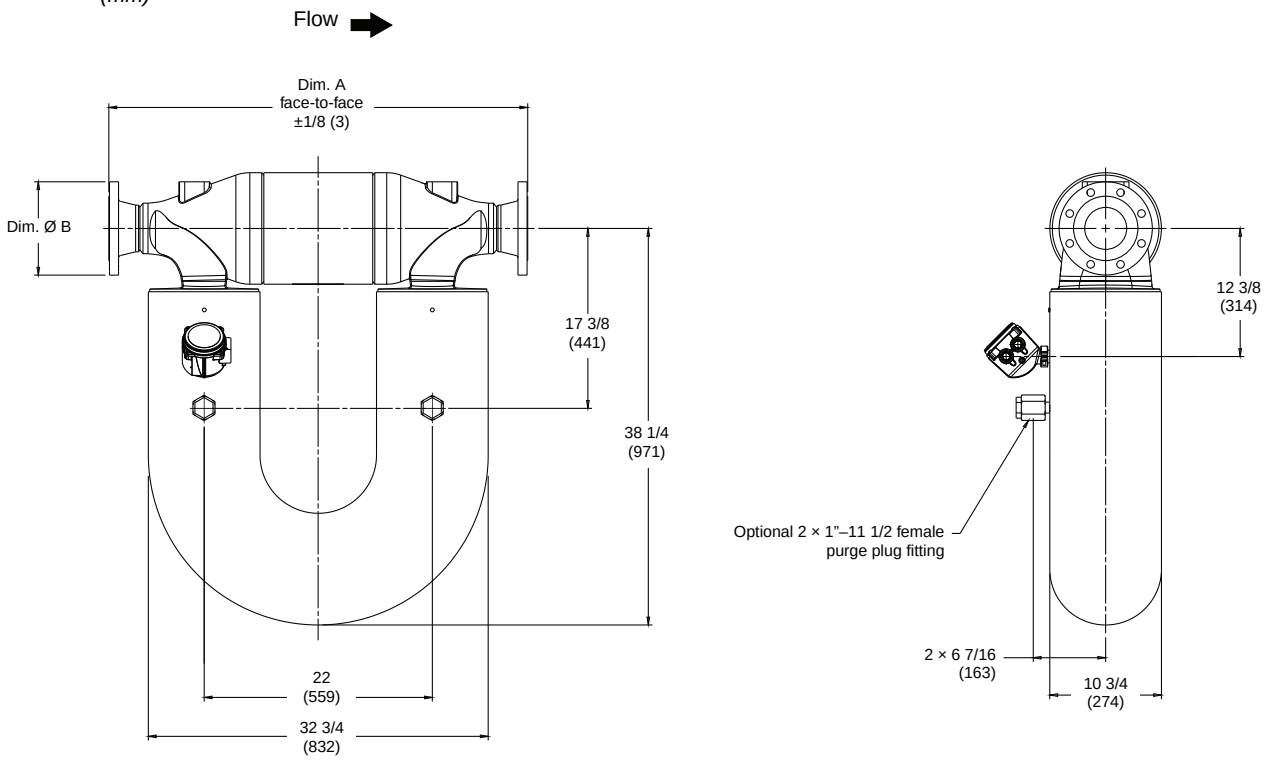
(1) For dimensions A and B, see fittings tables on pages 37–39.

(2) Dimensions for each electronics option are shown on page 26.

Dimensions *continued*

Model CMF400

Dimensions in inches (mm)



* *For dimensions A and B, see fittings options on pages 31 and 32.*
** *Dimensions for each electronics option are shown on page 26.*

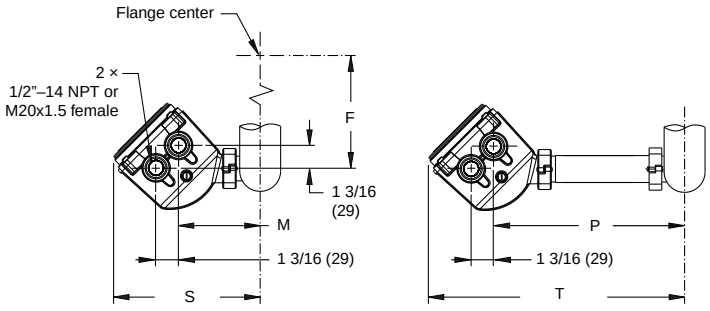
Model	No. of flow tubes	Flow tube ID inches (mm)
CMF400	2	2.9 (73)

Dimensions *continued*

Electronics detail for Models CMF010, CMF025, CMF050, CMF100, CMF200, CMF300, and CMF400

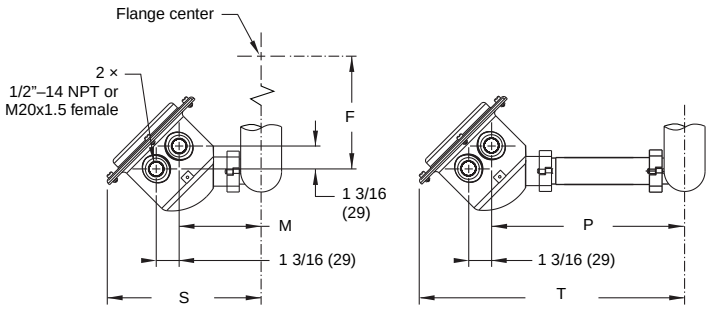
Enhanced core processor, Model 2400S, or Model 2200S with painted aluminum housing

Model	Dimensions in inches (mm)				
	F	M	P	S	T
CMF010	5 13/16 (147)	3 7/8 (98)	9 5/16 (236)	7 1/8 (180)	12 1/2 (318)
CMF025	7 7/16 (188)	3 13/16 (97)	9 5/16 (236)	7 1/16 (179)	12 1/2 (318)
CMF050	10 1/16 (255)	4 1/16 (103)	9 7/16 (240)	7 5/16 (185)	12 11/16 (322)
CMF100	14 1/8 (360)	4 3/4 (121)	10 1/8 (257)	8 (204)	13 3/8 (340)
CMF200	6 7/8 (175)	5 7/8 (150)	11 1/4 (286)	9 1/8 (232)	14 1/2 (368)
CMF300	9 3/8 (238)	7 3/16 (183)	12 5/8 (320)	10 1/2 (266)	15 7/8 (403)
CMF400	12 3/8 (314)	8 7/16 (215)	13 7/8 (352)	11 11/16 (297)	17 1/16 (434)



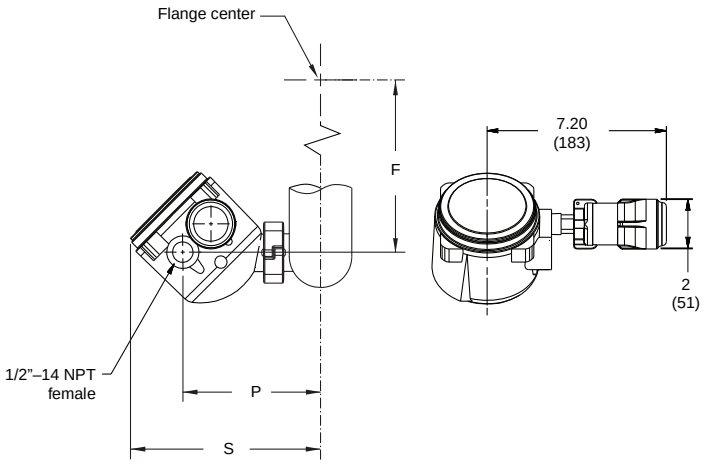
Enhanced core processor, Model 2400S, or Model 2200S with stainless steel housing

Model	Dimensions in inches (mm)				
	F	M	P	S	T
CMF010	5 13/16 (147)	4 1/16 (103)	9 5/16 (236)	7 9/16 (192)	12 13/16 (325)
CMF025	7 7/16 (188)	4 1/16 (103)	9 5/16 (236)	7 9/16 (192)	12 13/16 (325)
CMF050	10 1/16 (255)	4 (102)	9 3/16 (234)	7 9/16 (192)	12 3/4 (324)
CMF100	14 3/16 (360)	4 7/8 (124)	10 1/8 (257)	8 3/8 (213)	13 5/8 (346)
CMF200	6 7/8 (175)	5 3/4 (147)	11 (280)	9 7/16 (239)	14 5/8 (372)
CMF300	9 3/8 (238)	7 1/4 (183)	12 7/16 (316)	10 3/4 (273)	16 (406)
CMF400	12 3/8 (314)	8 1/2 (216)	13 3/4 (349)	12 1/16 (306)	17 1/4 (439)



Model 2200S with THUM adapter

Model	Dimensions in inches (mm)		
	F	P	S
CMF010	5 13/16 (147)	5 3/16 (132)	7 9/16 (192)
CMF025	7 7/16 (188)	5 3/16 (132)	7 9/16 (192)
CMF050	10 1/16 (255)	5 1/8 (130)	7 9/16 (192)
CMF100	14 3/16 (360)	6 (152)	8 3/8 (213)
CMF200	6 7/8 (175)	6 7/8 (175)	9 7/16 (239)
CMF300	9 3/8 (238)	8 5/16 (212)	10 3/4 (273)
CMF400	12 3/8 (314)	9 5/8 (245)	12 1/16 (306)

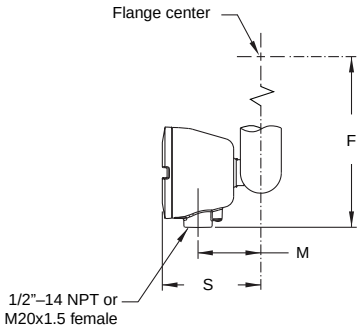


Dimensions *continued*

Electronics detail for Models CMF010, CMF025, CMF050, CMF100, CMF200, CMF300, and CMF400

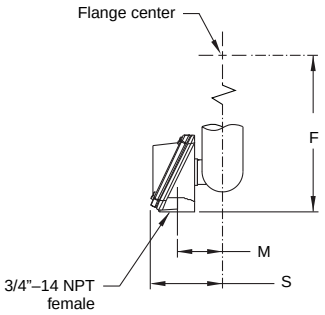
Standard core processor

Model	Dimensions in inches (mm)		
	F	M	S
CMF010	8 7/16 (214)	2 7/8 (73)	4 9/16 (116)
CMF025	10 1/16 (255)	2 15/16 (75)	4 11/16 (119)
CMF050	12 11/16 (322)	3 1/16 (77)	4 3/4 (121)
CMF100	16 13/16 (426)	3 13/16 (96)	5 1/2 (139)
CMF200	9 1/2 (241)	4 13/16 (122)	6 1/2 (165)
CMF300	11 15/16 (303)	6 1/8 (155)	7 13/16 (199)
CMF400	15 (380)	7 3/8 (188)	9 1/8 (231)



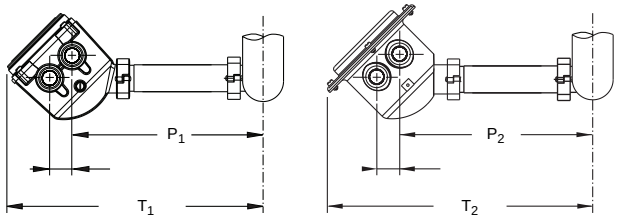
Junction box

Model	Dimensions in inches (mm)		
	F	M	S
CMF010	7 3/4 (197)	2 (50)	3 5/16 (84)
CMF025	9 11/16 (246)	2 1/16 (53)	3 7/16 (87)
CMF050	12 (305)	2 3/16 (55)	3 1/2 (89)
CMF100	16 1/8 (409)	2 15/16 (74)	4 1/4 (108)
CMF200	8 13/16 (223)	3 15/16 (100)	5 1/4 (134)
CMF300	11 1/4 (286)	5 1/4 (133)	6 9/16 (167)
CMF400	14 5/16 (363)	6 3/8 (162)	7 11/16 (195)



Extended 9-wire junction box

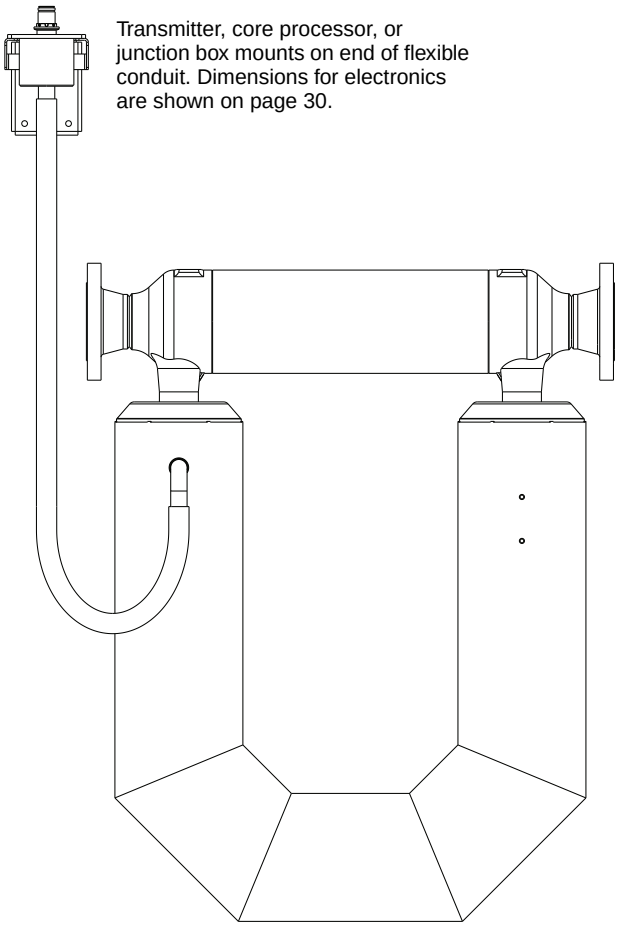
Model	Dimensions in inches (mm)			
	P_1	P_2	T_1	T_2
CMF010	9 5/16 (236)	9 5/16 (236)	12 1/2 (318)	12 13/16 (325)
CMF025	9 5/16 (236)	9 5/16 (236)	12 1/2 (318)	12 13/16 (325)
CMF050	9 7/16 (240)	9 3/16 (234)	12 11/16 (322)	12 3/4 (324)
CMF100	10 1/8 (257)	10 1/8 (257)	13 3/8 (340)	13 5/8 (346)
CMF200	11 1/4 (286)	11 (280)	14 1/2 (368)	14 5/8 (372)
CMF300	12 5/8 (320)	12 7/16 (316)	15 7/8 (403)	16 (406)
CMF400	13 7/8 (352)	13 3/4 (349)	17 1/16 (434)	17 1/4 (439)



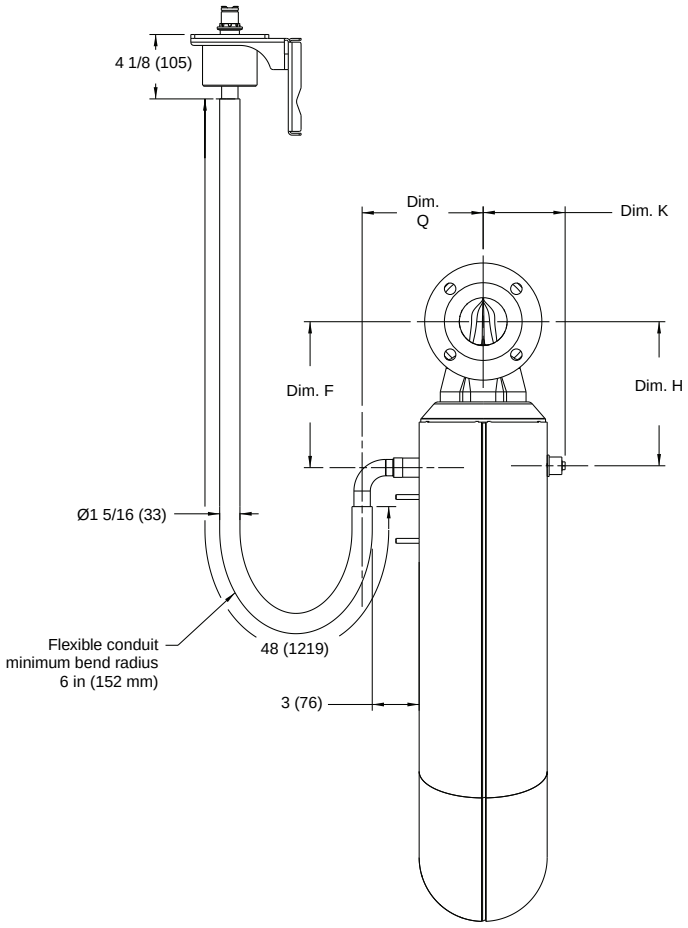
Dimensions *continued*

High-temperature Models CMF200A, CMF200B, CMF300A, and CMF300B

Dimensions in inches (mm)



Transmitter, core processor, or junction box mounts on end of flexible conduit. Dimensions for electronics are shown on page 30.



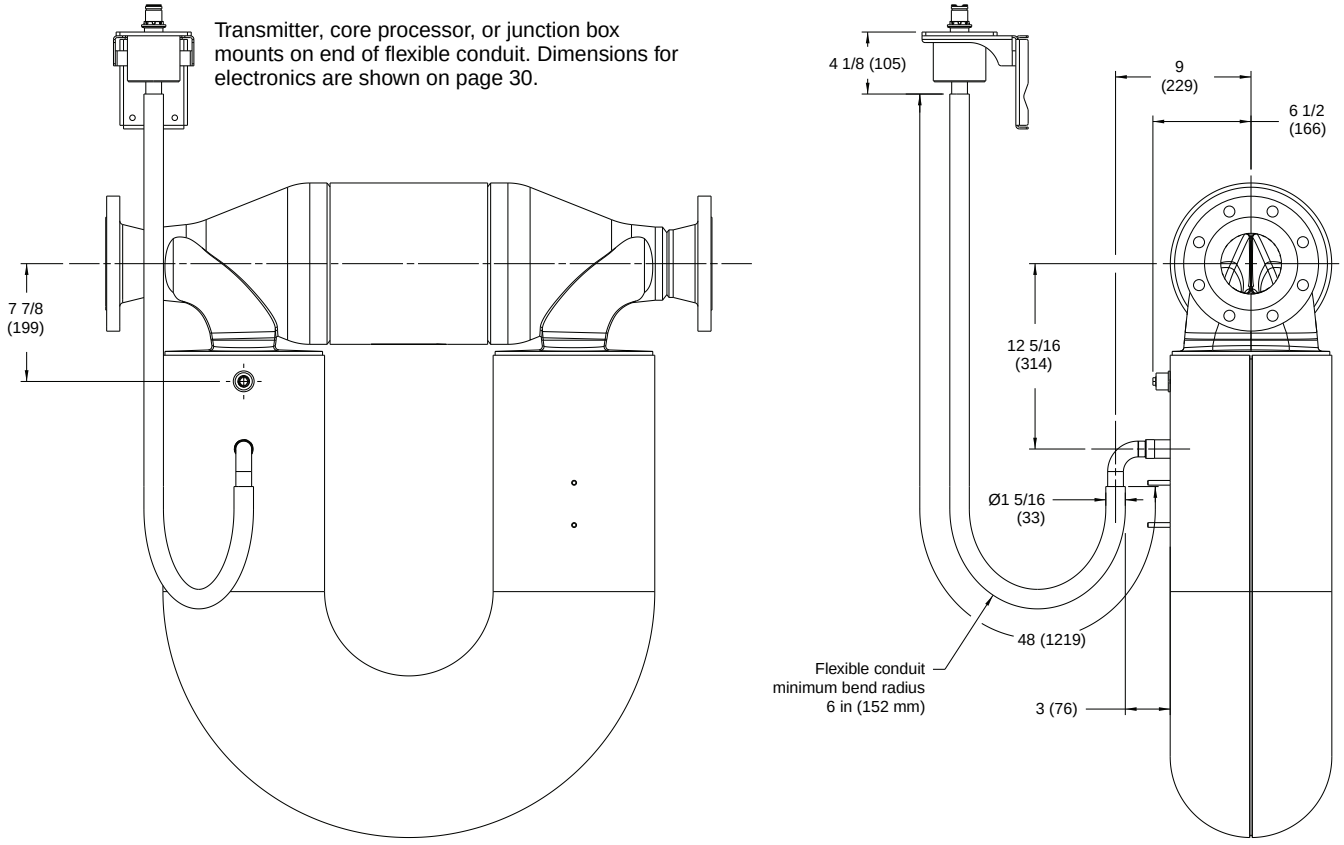
Refer to page 24 for additional sensor dimensions.

Model	Dimensions in inches (mm)			
	F	H	K	Q
CMF200A and CMF200B	6 7/8 (175)	6 5/16 (160)	3 15/16 (100)	6 7/16 (163)
CMF300A and CMF300B	9 3/8 (238)	9 1/4 (235)	5 1/4 (134)	7 3/4 (197)

Dimensions *continued*

High-temperature Models CMF400A and CMF400B

Dimensions in *inches (mm)*

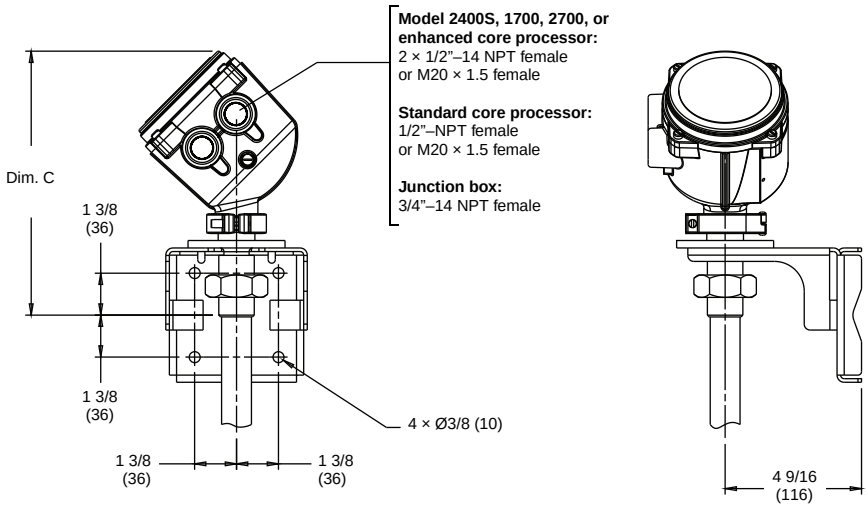


Refer to page 25 for additional sensor dimensions.

Dimensions *continued*

Electronics mounted on high-temperature sensor flexible conduit

Dimensions in inches (mm)



Electronics interface option		Dimension C in inches (mm)
0	Model 2400S transmitter, painted aluminum housing	8 7/8 (225)
	Model 2400S transmitter, stainless steel housing	9 1/4 (235)
2	Enhanced core processor, painted aluminum housing	8 7/8 (225)
3	Enhanced core processor, stainless steel housing	9 1/4 (235)
Q	Standard core processor, painted aluminum housing	6 5/16 (161)
A	Standard core processor, stainless steel housing	6 5/16 (161)
C	Model 1700/2700 transmitter	10 1/4 (261)
R	Junction box, painted aluminum housing	3 9/16 (91)
S	Junction box, stainless steel housing	3 9/16 (91)

Fitting options

	Fitting code[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Models CMFS010 and CMFS015			
316L stainless steel sensors			
1/2-inch ANSI CL150 weld neck raised face flange	313	12.64 (321)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	314	13.00 (330)	3 3/4 (95)
1/2-inch ANSI CL600 weld neck raised face flange	315	13.50 (343)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2635 type C face	300	12.21 (310)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2635 type N grooved face	301	12.21 (310)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	12.21 (310)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	12.21 (310)	3 3/4 (95)
DN15 PN100 weld neck flange; DIN 2637 type E face	302	12.76 (324)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form B2	177	12.76 (324)	4 1/8 (105)
DN15 PN100 weld neck flange; DIN 2637 type N grooved face	303	12.76 (324)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	12.76 (324)	4 1/8 (105)
DN25 PN40 weld neck flange EN1092-1 Form B1	172	12.37 (314)	4 1/2 (115)
DN25 PN40 weld neck flange EN1092-1 Form D	183	12.37 (314)	4 1/2 (115)
JIS 15mm 10K weld neck raised face flange	304	11.98 (304)	3 3/4 (95)
JIS 15mm 20K weld neck raised face flange	305	11.98 (304)	3 3/4 (95)
1/4-inch NPT female Swagelok size 4 VCO fitting	323	12.16 (309)	—
Swagelok compatible size 4 VCO union fitting	334	12.16 (309)	—
1/2-inch NPT female Swagelok size 8 VCO fitting	319	11.52 (293)	—
Swagelok compatible size 8 VCO union fitting	335	11.52 (293)	—
1/2-inch sanitary fitting (Tri-Clamp compatible)	321	11.52 (293)	1 (25)
1/4-inch tube compression fitting	324	12.16 (309)	—
6 mm tube compression fitting	325	12.16 (309)	—
EHEDG certified, 3-A approved fittings			
3/4-inch sanitary fitting (Tri-Clamp compatible)	344	11.52 (293)	1.0 (25)
ISO clamp DN10; ISO 2852 facing/ISO 1127 pipe	345	11.2 (284)	1.34 (34)
ISO clamp DN15; ISO 2852 facing/DIN 11850 pipe	346	11.2 (284)	1.34 (34)
Nickel alloy sensors			
1/2-inch ANSI CL150 lap joint flange	520	12.64 (321)	3 1/2 (89)
1/2-inch ANSI CL300 lap joint flange	521	13.00 (330)	3 3/4 (95)
JIS 15mm 10K lap joint flange	522	12.98 (330)	3 3/4 (95)
DN15 PN40 lap joint flange; DIN 2656 type C face	523	13.22 (336)	3 3/4 (95)
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	13.22 (336)	3 3/4 (95)
1/4-inch NPT female Swagelok size 4 VCO fitting	323	12.16 (309)	—
Swagelok compatible size 4 VCO union fitting	334	12.16 (309)	—

(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[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
High-pressure models CMFS010P and CMFS015P			
Nickel alloy sensors with stainless steel fittings			
1/4-inch NPT female Swagelok size 4 VCO fitting	323	12.16 (309)	—
Swagelok compatible size 4 VCO union fitting	334	12.16 (309)	—
1/2-inch NPT female Swagelok size 8 VCO fitting	319	11.52 (293)	—
Swagelok compatible size 8 VCO union fitting	335	11.52 (293)	—
1/4-inch tube compression fitting	324	12.16 (309)	—
6 mm tube compression fitting	325	12.16 (309)	—
1/2-inch ANSI CL900/1500 weld neck raised face flange	150	14.48 (368)	4.75 (121)
1/2-inch ANSI CL2500 weld neck raised face flange	191	15.48 (393)	5.25 (133)
High-pressure model CMF010P			
316L stainless steel sensors			
1/4-inch NPT female Swagelok size 4 VCO fitting	323	6 7/16 (164)	—
Swagelok compatible size 4 VCO union fitting	334	6 7/16 (164)	—
1/4-inch tube compression fitting	324	6 7/16 (164)	—
6 mm tube compression fitting	325	6 7/16 (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[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF010			
316L stainless steel sensors			
1/2-inch ANSI CL150 weld neck raised face flange	313	7 7/8 (199)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	314	8 3/16 (209)	3 3/4 (95)
1/2-inch ANSI CL600 weld neck raised face flange	315	8 11/16 (221)	3 3/4 (95)
1/2-inch sanitary fitting (Tri-Clamp compatible)	321	6 15/16 (177)	1 (25)
DN15 PN40 weld neck flange; DIN 2635 type C face	300	7 7/16 (189)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	7 7/16 (189)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	7 7/16 (189)	3 3/4 (95)
DN15 PN100 weld neck flange; DIN 2637 type E face	302	8 (203)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form B2	177	8 (203)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	8 (203)	4 1/8 (105)
DN25 PN40 Weld Neck Flange; EN 1092-1 Form B1	172	7 9/16 (193)	4 1/2 (115)
DN25 PN40 Weld Neck Flange; EN 1092-1 Form D	183	7 9/16 (193)	4 1/2 (115)
JIS 15mm 10K weld neck raised face flange	304	7 3/16 (183)	3 3/4 (95)
JIS 15mm 20K weld neck raised face flange	305	7 3/16 (183)	3 3/4 (95)
1/4-inch NPT female Swagelok size 4 VCO fitting	323	6 7/16 (164)	—
Swagelok compatible size 4 VCO union fitting	334	6 7/16 (164)	—
1/4-inch tube compression fitting	324	6 7/16 (164)	—
6 mm tube compression fitting	325	6 7/16 (164)	—
304L stainless steel sensors			
1/2-inch ANSI CL150 weld neck raised face flange	413	7 7/8 (199)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	414	8 3/16 (209)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2526 type C face	423	7 7/16 (189)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	421	7 7/16 (189)	3 3/4 (95)
Nickel alloy sensors			
1/2-inch ANSI CL150 lap joint flange	520	7 7/8 (199)	3 1/2 (89)
1/2-inch ANSI CL300 lap joint flange	521	8 3/16 (209)	3 3/4 (95)
DN15 PN40 lap joint flange; DIN 2656 type C face	523	9 7/16 (240)	3 3/4 (95)
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	9 7/16 (240)	3 3/4 (95)
JIS 15mm 10K lap joint flange	522	8 3/16 (208)	3 3/4 (95)
1/4-inch NPT female Swagelok size 4 VCO fitting	323	6 7/16 (164)	—
Swagelok compatible size 4 VCO union fitting	334	6 7/16 (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[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF025			
316L stainless steel sensors			
Wafer style; 1/2-inch ANSI (150 lb; 300 lb; 600 lb bolt kit)	009	2 3/8 (60)	1 13/16 (46)
Wafer style, 15mm DIN 2526; type C face (PN40 bolt kit)	016	2 3/8 (60)	1 13/16 (46)
Wafer style; 15mm DIN 2512; type N grooved face (PN40 bolt kit)	017	2 3/8 (60)	1 13/16 (46)
Wafer style; 15mm DIN 2526; type E face (PN100 bolt kit)	018	2 3/8 (60)	1 13/16 (46)
Wafer style; 15mm DIN 2512; type N grooved face (PN100 bolt kit)	019	2 3/8 (60)	1 13/16 (46)
Wafer style; 15mm; standard JIS facing (10K; 20K bolt kit)	029	2 3/8 (60)	1 13/16 (46)
1/2-inch ANSI CL150 weld neck raised face flange	313	6 3/4 (172)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	314	7 1/8 (181)	3 3/4 (95)
1/2-inch ANSI CL600 weld neck raised face flange	315	7 5/8 (194)	3 3/4 (95)
1/2-inch NPT female Swagelok size 8 VCO fitting	319	4 11/16 (119)	—
Swagelok compatible size 8 VCO union fitting	335	4 11/16 (119)	—
1/2-inch sanitary fitting (Tri-Clamp compatible)	321	4 11/16 (119)	1 (25)
DN15 PN40 weld neck flange; DIN 2635 type C face	300	6 5/16 (160)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	6 5/16 (160)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2635 type N grooved face	301	6 5/16 (160)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	6 5/16 (160)	3 3/4 (95)
DN15 PN100 weld neck flange; DIN 2637 type E face	302	6 15/16 (176)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form B2	177	6 15/16 (176)	4 1/8 (105)
DN15 PN100 weld neck flange; DIN 2637 type N grooved face	303	6 15/16 (176)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	6 15/16 (176)	4 1/8 (105)
DN25 PN40 Weld Neck Flange; EN 1092-1 Form B1	172	6 7/16 (164)	4 1/2 (115)
DN25 PN40 Weld Neck Flange; EN 1092-1 Form D	183	6 7/16 (164)	4 1/2 (115)
JIS 15mm 10K weld neck raised face flange	304	6 1/8 (156)	3 3/4 (95)
JIS 15mm 20K weld neck raised face flange	305	6 1/8 (156)	3 3/4 (95)
304L stainless steel sensors			
1/2-inch ANSI CL150 weld neck raised face flange	413	6 3/4 (172)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	414	7 1/8 (181)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2526 type C face	423	6 5/16 (160)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	421	6 5/16 (160)	3 3/4 (95)
Nickel alloy sensors			
1/2-inch ANSI CL150 lap joint flange	520	6 3/4 (172)	3 1/2 (89)
1/2-inch ANSI CL300 lap joint flange	521	7 1/8 (181)	3 3/4 (95)
DN15 PN40 lap joint flange; DIN 2656 type C face	523	7 5/16 (186)	3 3/4 (95)
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	7 5/16 (186)	3 3/4 (95)
JIS 15mm 10K lap joint flange	522	7 1/8 (181)	3 3/4 (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[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF050			
316L stainless steel sensors			
Wafer style; 1/2-inch ANSI (150 lb; 300 lb; 600 lb bolt kit)	009	3 1/2 (89)	1 13/16 (46)
Wafer style; 15mm DIN 2526; type C face (PN40 bolt kit)	016	3 1/2 (89)	1 13/16 (46)
Wafer style; 15mm DIN 2512; type N grooved face (PN40 bolt kit)	017	3 1/2 (89)	1 13/16 (46)
Wafer style; 15mm DIN 2526; type E face (PN100 bolt kit)	018	3 1/2 (89)	1 13/16 (46)
Wafer style; 15mm DIN 2512; type N grooved face (PN100 bolt kit)	019	3 1/2 (89)	1 13/16 (46)
Wafer style; 15mm; standard JIS facing (10K; 20K bolt kit)	029	3 1/2 (89)	1 13/16 (46)
1/2-inch ANSI CL150 weld neck raised face flange	313	7 15/16 (202)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	314	8 5/16 (211)	3 3/4 (95)
1/2-inch ANSI CL600 weld neck raised face flange	315	8 13/16 (224)	3 3/4 (95)
3/4-inch NPT female Swagelok size 12 VCO fitting	320	6 1/2 (165)	—
Swagelok compatible size 12 VCO union fitting	336	6 1/2 (165)	—
3/4-inch sanitary fitting (Tri-Clamp compatible)	322	6 1/2 (165)	1 (25)
DN15 PN40 weld neck flange; DIN 2635 type C face	300	7 1/2 (191)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	7 1/2 (191)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2635 type N grooved face	301	7 1/2 (191)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	7 1/2 (191)	3 3/4 (95)
DN15 PN100 weld neck flange; DIN 2637 type E face	302	8 1/16 (205)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form B2	177	8 1/16 (205)	4 1/8 (105)
DN15 PN100 weld neck flange; DIN 2637 type N grooved face	303	8 1/16 (205)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	8 1/16 (205)	4 1/8 (105)
DN25 PN40 Weld Neck Flange; EN 1092-1 Form B1	172	7 11/16 (195)	4 1/2 (115)
DN25 PN40 Weld Neck Flange; EN 1092-1 Form D	183	7 11/16 (195)	4 1/2 (115)
JIS 15mm 10K weld neck raised face flange	304	7 1/4 (184)	3 3/4 (95)
JIS 15mm 20K weld neck raised face flange	305	7 1/4 (184)	3 3/4 (95)
304L stainless steel sensors			
1/2-inch ANSI CL150 weld neck raised face flange	413	7 15/16 (202)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	414	8 5/16 (211)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2526 type C face	423	7 1/2 (191)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	421	7 1/2 (191)	3 3/4 (95)
Nickel alloy sensors			
1/2-inch ANSI CL150 lap joint flange	520	7 15/16 (202)	3 1/2 (89)
1/2-inch ANSI CL300 lap joint flange	521	8 5/16 (211)	3 3/4 (95)
DN15 PN40 lap joint flange; DIN 2656 type C face	523	8 1/2 (216)	3 3/4 (95)
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	8 1/2 (216)	3 3/4 (95)
JIS 15mm 10K lap joint flange	522	8 1/4 (210)	3 3/4 (95)

Fitting options *continued*

	Fitting code[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF100			
316L stainless steel sensors			
Wafer style; 1-inch ANSI (150 lb bolt kit)	010	4 (102)	2 1/2 (64)
Wafer style; 1-inch ANSI (300 lb; 600 lb bolt kit)	011	4 (102)	2 1/2 (64)
Wafer style; 25mm type C face (PN40 bolt kit)	020	4 (102)	2 1/2 (64)
Wafer style; 25mm DIN 2512 type N grooved face (PN40 bolt kit)	021	4 (102)	2 1/2 (64)
Wafer style; 25mm type E face (PN100 bolt kit)	022	4 (102)	2 1/2 (64)
Wafer style; 25mm DIN 2512; type N grooved face (PN100 bolt kit)	023	4 (102)	2 1/2 (64)
Wafer style; 25mm; standard JIS face (10K; 20K; 30K bolt kit)	030	4 (102)	2 1/2 (64)
1-inch ANSI CL150 weld neck raised face flange	328	9 1/4 (235)	4 1/4 (108)
1-inch ANSI CL300 weld neck raised face flange	329	9 3/4 (248)	4 7/8 (124)
1-inch ANSI CL600 weld neck raised face flange	330	10 1/4 (260)	4 7/8 (124)
1 1/2-inch ANSI CL600 weld neck raised face flange	331	10 7/8 (276)	6 1/8 (156)
1-inch sanitary fitting (Tri-Clamp compatible)	339	8 3/8 (213)	2 (50)
DN25 PN40 weld neck flange; DIN 2635 type C face	306	8 5/16 (211)	4 1/2 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	179	8 5/16 (211)	4 1/2 (115)
DN25 PN40 weld neck flange; DIN 2635 type N grooved face	307	8 5/16 (211)	4 1/2 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	311	8 5/16 (211)	4 1/2 (115)
DN25 PN100 weld neck flange; DIN 2637 type E face	308	9 11/16 (246)	5 1/2 (140)
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	9 11/16 (246)	5 1/2 (140)
DN25 PN100 weld neck flange; DIN 2637 type N grooved face	309	9 11/16 (246)	5 1/2 (140)
DN25 PN100 weld neck flange; EN 1092-1 Form D	181	9 11/16 (246)	5 1/2 (140)
JIS 25mm 10K weld neck raised face flange	317	8 5/16 (211)	4 15/16 (125)
JIS 25mm 20K weld neck raised face flange	318	8 5/16 (211)	4 15/16 (125)
304L stainless steel sensors			
1-inch ANSI CL150 weld neck raised face flange	415	9 1/4 (235)	4 1/4 (108)
1-inch ANSI CL300 weld neck raised face flange	416	9 3/4 (248)	4 7/8 (124)
DN25 PN40 weld neck flange; DIN 2526 type C face	424	8 9/16 (217)	4 1/2 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	422	8 9/16 (217)	4 1/2 (115)
Nickel alloy sensors			
1-inch ANSI CL150 lap joint flange	530	9 1/4 (235)	4 1/4 (108)
1-inch ANSI CL300 lap joint flange	531	9 3/4 (248)	4 7/8 (124)
DN25 PN40 lap joint flange; DIN 2656 type C face	533	9 9/16 (243)	4 1/2 (115)
DN25 PN40 lap joint flange; EN 1092-1 Form B1	534	9 9/16 (243)	4 1/2 (115)
JIS 25mm 10K lap joint flange	532	9 5/16 (237)	4 15/16 (125)

(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[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF200			
316L stainless steel sensors			
1 1/2-inch ANSI CL150 weld neck raised face flange	341	22 7/8 (581)	5 (127)
1 1/2-inch ANSI CL300 weld neck raised face flange	342	23 3/8 (594)	6 1/8 (156)
1 1/2-inch ANSI CL600 weld neck raised face flange	343	23 7/8 (606)	6 1/8 (156)
2-inch ANSI CL150 weld neck raised face flange	418	22 7/8 (581)	6 (152)
2-inch ANSI CL300 weld neck raised face flange	419	23 3/8 (594)	6 1/2 (165)
2-inch ANSI CL600 weld neck raised face flange	420	23 5/8 (600)	6 1/2 (165)
1 1/2-inch sanitary fitting (Tri-Clamp compatible)[2]	351	21 3/8 (543)	2 (51)
2-inch sanitary fitting (Tri-Clamp compatible)[2]	352	21 3/8 (543)	2 1/2 (64)
DN40 PN40 weld neck flange; DIN 2635 type C face	381	21 11/16 (551)	5 15/16 (150)
DN40 PN40 weld neck flange; EN 1092-1 Form B1	368	21 9/16 (547)	5 15/16 (150)
DN40 PN40 weld neck flange; DIN 2635 type N grooved face	383	21 11/16 (551)	5 15/16 (150)
DN40 PN40 weld neck flange; EN 1092-1 Form D	312	21 9/16 (547)	5 15/16 (150)
DN40 PN100 weld neck flange; DIN 2637 type E face	377	23 1/8 (587)	6 11/16 (170)
DN40 PN100 weld neck flange; EN 1092-1 Form B2	363	22 7/8 (580)	6 11/16 (170)
DN40 PN100 weld neck flange; DIN 2637 type N grooved face	379	23 1/8 (587)	6 11/16 (170)
DN40 PN100 weld neck flange; EN 1092-1 Form D	366	22 7/8 (580)	6 11/16 (170)
DN50 PN40 weld neck flange; DIN 2635 type C face	382	21 15/16 (557)	6 1/2 (165)
DN50 PN40 weld neck flange; EN 1092-1 Form B1	369	21 3/4 (553)	6 1/2 (165)
DN50 PN40 weld neck flange; DIN 2635 type N grooved face	384	21 15/16 (557)	6 1/2 (165)
DN50 PN40 weld neck flange; EN 1092-1 Form D	316	21 3/4 (553)	6 1/2 (165)
DN50 PN100 weld neck flange; DIN 2637 type E face	378	23 9/16 (598)	7 11/16 (195)
DN50 PN100 weld neck flange; EN 1092-1 Form B2	365	23 5/16 (593)	7 11/16 (195)
DN50 PN100 weld neck flange; DIN 2637 type N grooved face	380	23 9/16 (598)	7 11/16 (195)
DN50 PN100 weld neck flange; EN 1092-1 Form D	367	23 5/16 (593)	7 11/16 (195)
JIS 40mm 10K weld neck raised face flange	385	21 9/16 (548)	5 1/2 (140)
JIS 40mm 20K weld neck raised face flange	387	21 9/16 (548)	5 1/2 (140)
JIS 50mm 10K weld neck raised face flange	386	21 13/16 (554)	6 1/8 (156)
JIS 50mm 20K weld neck raised face flange	388	21 13/16 (554)	6 1/8 (156)

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

Fitting options *continued*

	Fitting code[(1)]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF200			
304L stainless steel sensors			
1 1/2-inch ANSI CL150 weld neck raised face flange	441	22 7/8 (581)	5 (127)
1 1/2-inch ANSI CL300 weld neck raised face flange	442	23 3/8 (594)	6 1/8 (156)
2-inch ANSI CL150 weld neck raised face flange	518	22 7/8 (581)	6 (152)
2-inch ANSI CL300 weld neck raised face flange	519	23 1/2 (597)	6 1/2 (165)
DN40 PN40 weld neck flange; DIN 2526 type C face	481	21 11/16 (551)	5 15/16 (150)
DN40 PN40 weld neck flange; EN 1092-1 Form B1	457	21 9/16 (547)	5 15/16 (150)
DN50 PN40 weld neck raised face flange; DIN 2526 type C face	482	21 15/16 (557)	6 1/2 (165)
DN50 PN40 weld neck raised face flange; EN 1092-1 Form B1	458	21 3/4 (553)	6 1/2 (165)
Nickel alloy sensors			
1 1/2-inch ANSI CL150 lap joint flange	540	22 7/8 (581)	5 (127)
1 1/2-inch ANSI CL300 lap joint flange	541	23 3/8 (594)	6 1/8 (156)
2-inch ANSI CL150 lap joint flange	544	22 7/8 (581)	6 (152)
2-inch ANSI CL300 lap joint flange	545	23 3/8 (594)	6 1/2 (165)
DN40 PN40 lap joint flange; DIN 2656 type C face	543	21 11/16 (551)	5 15/16 (150)
DN40 PN40 lap joint flange; EN 1092-1 Form B1	548	21 11/16 (551)	5 15/16 (150)
DN50 PN40 lap joint flange; DIN 2656 type C face	547	21 15/16 (557)	6 1/2 (165)
DN50 PN40 lap joint flange; EN 1092-1 Form B1	549	21 15/16 (557)	6 1/2 (165)
JIS 40mm 10K lap joint flange	542	21 9/16 (548)	5 1/2 (140)
JIS 50mm 10K lap joint flange	546	21 13/16 (554)	6 1/8 (155)

(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[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF300			
316L stainless steel sensors			
3-inch ANSI CL150 weld neck raised face flange	355	33 11/16 (856)	7 1/2 (191)
3-inch ANSI CL300 weld neck raised face flange	356	34 7/16 (875)	8 1/4 (210)
3-inch ANSI CL600 weld neck raised face flange	357	35 3/16 (894)	8 1/4 (210)
4-inch ANSI CL150 weld neck raised face flange	425	34 1/16 (865)	9 (229)
4-inch ANSI CL300 weld neck raised face flange	426	35 (889)	10 (254)
4-inch ANSI CL600 weld neck raised face flange	427	36 11/16 (932)	10 3/4 (273)
3-inch sanitary fitting (Tri-Clamp compatible)[2]	361	32 (813)	3 9/16 (90)
DN80 PN40 weld neck flange; DIN 2635 type C face	391	32 7/8 (835)	7 7/8 (200)
DN80 PN40 weld neck flange; EN 1092-1 Form B1	371	32 3/4 (832)	7 7/8 (200)
DN80 PN40 weld neck flange; DIN 2635 type N grooved face	393	32 7/8 (835)	7 7/8 (200)
DN80 PN40 weld neck flange; EN 1092-1 Form D	326	32 3/4 (832)	7 7/8 (200)
DN80 PN100 weld neck flange; DIN 2637 type E face	395	34 9/16 (878)	9 1/16 (230)
DN80 PN100 weld neck flange; EN 1092-1 Form B2	373	34 5/16 (872)	9 1/16 (230)
DN80 PN100 weld neck flange; DIN 2637 type N grooved face	397	34 9/16 (878)	9 1/16 (230)
DN80 PN100 weld neck flange; EN 1092-1 Form D	375	34 5/16 (872)	9 1/16 (230)
DN100 PN40 weld neck flange; DIN 2635 type C face	392	33 1/4 (845)	9 1/4 (235)
DN100 PN40 weld neck flange; EN 1092-1 Form B1	372	33 1/4 (845)	9 1/4 (235)
DN100 PN40 weld neck flange; DIN 2635 type N grooved face	394	33 1/4 (845)	9 1/4 (235)
DN100 PN40 weld neck flange; EN 1092-1 Form D	333	33 1/4 (845)	9 1/4 (235)
DN100 PN100 weld neck flange; DIN 2637 type E face	396	35 9/16 (903)	10 7/16 (265)
DN100 PN100 weld neck flange; EN 1092-1 Form B2	374	35 1/4 (896)	10 7/16 (265)
DN100 PN100 weld neck flange; DIN 2637 type N grooved face	398	35 9/16 (903)	10 7/16 (265)
DN100 PN100 weld neck flange; EN 1092-1 Form D	359	35 1/4 (896)	10 7/16 (265)
JIS 80mm 10K weld neck raised face flange	400	33 3/8 (848)	7 5/16 (186)
JIS 80mm 20K weld neck raised face flange	402	33 3/8 (848)	7 7/8 (200)
JIS 100mm 10K weld neck raised face flange	401	33 9/16 (853)	8 1/4 (210)
JIS 100mm 20K weld neck raised face flange	403	33 9/16 (853)	8 7/8 (225)
304L stainless steel sensors			
3-inch ANSI CL150 weld neck raised face flange	455	33 11/16 (856)	7 1/2 (191)
3-inch ANSI CL300 weld neck raised face flange	456	34 7/16 (875)	8 1/4 (210)
DN80 PN40 weld neck flange; DIN 2526 type C face	491	32 7/8 (835)	7 7/8 (200)
DN80 PN40 weld neck flange; EN 1092-1 Form B1	459	32 3/4 (832)	7 7/8 (200)
Nickel alloy sensors			
3-inch ANSI CL150 lap joint flange	550	33 11/16 (856)	7 1/2 (191)
3-inch ANSI CL300 lap joint flange	551	34 7/16 (875)	8 1/4 (210)
DN80 PN40 lap joint flange; DIN 2656 type C face	553	32 7/8 (835)	7 7/8 (200)
DN80 PN40 lap joint flange; EN 1092-1 Form B1	554	32 7/8 (835)	7 7/8 (200)
JIS 80mm 10K lap joint flange	552	33 3/8 (848)	7 5/16 (185)

(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[1]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF400			
316L stainless steel sensors			
4-inch ANSI CL150 weld neck raised face flange	435	40 3/16 (1021)	9 (229)
4-inch ANSI CL300 weld neck raised face flange	436	41 (1041)	10 (254)
4-inch ANSI CL600 weld neck raised face flange	437	42 11/16 (1084)	10 3/4 (273)
4-inch ANSI CL900 weld neck raised face flange[2]	438	43 11/16 (1110)	11 1/2 (292)
6-inch ANSI CL150 weld neck raised face flange	451	40 5/16 (1024)	11 (279)
6-inch ANSI CL300 weld neck raised face flange	452	41 5/16 (1049)	12 1/2 (318)
6-inch ANSI CL600 weld neck raised face flange	453	43 1/2 (1105)	14 (356)
DN100 PN40 weld neck flange; DIN 2635 type C face	460	39 5/16 (999)	9 1/4 (235)
DN100 PN40 weld neck flange; EN 1092-1 Form B1	443	39 5/16 (999)	9 1/4 (235)
DN100 PN40 weld neck flange; DIN 2635 type N grooved face	462	39 5/16 (999)	9 1/4 (235)
DN100 PN40 weld neck flange; EN 1092-1 Form D	480	39 5/16 (999)	9 1/4 (235)
DN100 PN100 weld neck flange; DIN 2637 type E face	464	41 5/16 (1049)	10 7/16 (265)
DN100 PN100 weld neck flange; EN 1092-1 Form B2	445	41 5/16 (1049)	10 7/16 (265)
DN100 PN100 weld neck flange; DIN 2637 type N grooved face	466	41 5/16 (1049)	10 7/16 (265)
DN100 PN100 weld neck flange; EN 1092-1 Form D	447	41 5/16 (1049)	10 7/16 (265)
DN150 PN40 weld neck flange; DIN 2635 type C face	461	39 5/8 (1006)	11 13/16 (300)
DN150 PN40 weld neck flange; EN 1092-1 Form B1	444	40 1/16 (1018)	11 13/16 (300)
DN150 PN40 weld neck flange; DIN 2635 type N grooved face	463	39 5/8 (1006)	11 13/16 (300)
DN150 PN40 weld neck flange; EN 1092-1 Form D	478	40 1/16 (1018)	11 13/16 (300)
DN150 PN100 weld neck flange; DIN 2637 type E face	465	41 15/16 (1065)	14 (355)
DN150 PN100 weld neck flange; EN 1092-1 Form B2	446	43 1/4 (1099)	14 (355)
DN150 PN100 weld neck flange; DIN 2637 type N grooved face	467	41 15/16 (1065)	14 (355)
DN150 PN100 weld neck flange; EN 1092-1 Form D	448	43 1/4 (1099)	14 (355)
JIS 100mm 10K weld neck raised face flange	470	39 5/16 (999)	8 1/4 (210)
JIS 100mm 20K weld neck raised face flange	472	39 13/16 (1011)	8 7/8 (225)
JIS 150mm 10K weld neck raised face flange	471	39 5/8 (1006)	11 (280)
JIS 150mm 20K weld neck raised face flange	473	40 1/8 (1018)	12 (305)

(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 models CMF400A.

Fitting options *continued*

	Fitting code[(1)]	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
Model CMF400			
Nickel alloy sensors			
4-inch ANSI CL150 lap joint	907	42 5/8 (1083)	9 (229)
DN100 PN40 weld neck flange; EN 1092-1 Form B1	906	39 1/4 (997)	9 1/4 (235)
DN100 PN100 weld neck flange; EN 1092-1 Form B2	908	41 1/4 (1048)	10 7/16 (265)
DN100 PN160 weld neck flange; EN 1092-1 Form B2	910	42 (1067)	10 7/16 (265)
4-inch ANSI CL150 weld neck raised face flange	911	40 1/8 (1019)	9 (229)
4-inch ANSI CL300 weld neck raised face flange	912	40 15/16 (1040)	10 (254)
4-inch ANSI CL600 weld neck raised face flange	913	42 5/8 (1083)	10 3/4 (273)
4-inch ANSI CL900 weld neck raised face flange	914	43 5/8 (1108)	11 1/2 (292)
High-pressure model CMF400P			
316L stainless steel sensors			
JIS 100mm 20K weld neck raised face flange	472	39 13/16 (1011)	8 7/8 (225)
JIS 150mm 20K weld neck raised face flange	473	40 1/8 (1018)	12 (305)
4-inch ANSI CL600 weld neck raised face flange	437	42 11/16 (1084)	10 3/4 (273)
4-inch ANSI CL900 weld neck raised face flange	438	43 11/16 (1110)	11 1/2 (292)
4-inch ANSI CL1500 weld neck raised face flange	439	44 7/16 (1129)	12 1/4 (311)
6-inch ANSI CL600 weld neck raised face flange	453	43 1/2 (1105)	14 (356)
4-inch ANSI CL600 carbon steel/316L stainless steel lap joint flange	562	43 11/16 (1110)	10 3/4 (273)
4-inch ANSI CL900 carbon steel/316L stainless steel lap joint flange	563	43 11/16 (1110)	11 1/2 (292)

(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.

Ordering information

Model	Product description
	Standard models
CMFS010M	Micro Motion Coriolis ELITE sensor; 1/10 to 1/6-inch (2 to 4 mm); 316L stainless steel
CMFS010H	Micro Motion Coriolis ELITE sensor; 1/10 to 1/6-inch (2 to 4 mm); alloy C-22
CMFS015M	Micro Motion Coriolis ELITE sensor; 1/6 to 1/4-inch (4 to 6 mm); 316L stainless steel
CMFS015H	Micro Motion Coriolis ELITE sensor; 1/6 to 1/4-inch (4 to 6 mm); alloy C-22
CMF010M	Micro Motion Coriolis ELITE sensor; 1/10 to 1/6-inch (2 to 4 mm); 316L stainless steel
CMF010H	Micro Motion Coriolis ELITE sensor; 1/10 to 1/6-inch (2 to 4 mm); alloy C-22
CMF010L	Micro Motion Coriolis ELITE sensor; 1/10 to 1/6-inch (2 to 4 mm); 304L stainless steel
CMF025M	Micro Motion Coriolis ELITE sensor; 1/4 to 1/2-inch (6 to 13 mm); 316L stainless steel
CMF025H	Micro Motion Coriolis ELITE sensor; 1/4 to 1/2-inch (6 to 13 mm); alloy C-22
CMF025L	Micro Motion Coriolis ELITE sensor; 1/4 to 1/2-inch (6 to 13 mm); 304L stainless steel
CMF050M	Micro Motion Coriolis ELITE sensor; 1/2 to 1-inch (13 to 25 mm); 316L stainless steel
CMF050H	Micro Motion Coriolis ELITE sensor; 1/2 to 1-inch (13 to 25 mm); alloy C-22
CMF050L	Micro Motion Coriolis ELITE sensor; 1/2 to 1-inch (13 to 25 mm); 304L stainless steel
CMF100M	Micro Motion Coriolis ELITE sensor; 1 to 2-inch (25 to 50 mm); 316L stainless steel
CMF100H	Micro Motion Coriolis ELITE sensor; 1 to 2-inch (25 to 50 mm); alloy C-22
CMF100L	Micro Motion Coriolis ELITE sensor; 1 to 2-inch (25 to 50 mm); 304L stainless steel
CMF200M	Micro Motion Coriolis ELITE sensor; 2 to 3-inch (50 to 75 mm); 316L stainless steel
CMF200H	Micro Motion Coriolis ELITE sensor; 2 to 3-inch (50 to 75 mm); alloy C-22
CMF200L	Micro Motion Coriolis ELITE sensor; 2 to 3-inch (50 to 75 mm); 304L stainless steel
CMF300M	Micro Motion Coriolis ELITE sensor; 3 to 4-inch (75 to 100 mm); 316L stainless steel
CMF300H	Micro Motion Coriolis ELITE sensor; 3 to 4-inch (75 to 100 mm); alloy C-22
CMF300L	Micro Motion Coriolis ELITE sensor; 3 to 4-inch (75 to 100 mm); 304L stainless steel
CMF400M	Micro Motion Coriolis ELITE sensor; 4 to 6-inch (100 to 150 mm); 316L stainless steel
CMF400H	Micro Motion Coriolis ELITE sensor; 4 to 6-inch (100 to 150 mm); alloy C-22
	High-pressure models
CMFS010P	Micro Motion Coriolis ELITE sensor; 1/10 to 1/6-inch (2 to 4 mm); high pressure; nickel alloy with stainless steel fittings
CMFS015P	Micro Motion Coriolis ELITE sensor; 1/6 to 1/4-inch (4 to 6 mm); high pressure; nickel alloy with stainless steel fittings
CMF010P	Micro Motion Coriolis ELITE sensor; 1/10 to 1/6-inch (2 to 4 mm); high pressure; nickel alloy with stainless steel fittings
CMF400P	Micro Motion Coriolis ELITE sensor; 4 to 6-inch (100 to 150 mm); high pressure; nickel alloy with stainless steel fittings
	High-temperature models
CMF200A	Micro Motion Coriolis ELITE sensor; 2 to 3-inch (50 to 75 mm); high temperature; 316L stainless steel
CMF200B	Micro Motion Coriolis ELITE sensor; 2 to 3-inch (50 to 75 mm); high temperature; alloy C-22
CMF300A	Micro Motion Coriolis ELITE sensor; 3 to 4-inch (75 to 100 mm); high temperature; 316L stainless steel
CMF300B	Micro Motion Coriolis ELITE sensor; 3 to 4-inch (75 to 100 mm); high temperature; alloy C-22
CMF400A	Micro Motion Coriolis ELITE sensor; 4 to 6-inch (100 to 150 mm); high temperature; 316L stainless steel
CMF400B	Micro Motion Coriolis ELITE sensor; 4 to 6-inch (100 to 150 mm); high temperature; alloy C-22
Code	**Process Connections**
###	See process fitting options on pages 31–41.

Continued on next page

Ordering information *continued*

Code	Case options
	For all models *except* CMFS010 and CMFS015
N	Standard pressure containment
P	Purge fittings (see pages 22–25)
D	Rupture disks (two 400-psig [28 bar] disks) — Model CMF010P only
	For models CMFS010 and CMFS015
N	Standard case (300-series stainless steel)
J	Standard case (300-series stainless steel) with mounting bracket
M	316L stainless steel case
Q	316L stainless steel case with mounting bracket
H(1)	Hygienic; 32 Ra finish (0.8 μm); 316L stainless steel case
T(1)	Hygienic; 32 Ra finish (0.8 μm); 316L stainless steel case with mounting bracket
P	Purge fitting (see page 20); standard case
U	Purge fitting (see page 20); standard case with mounting bracket
Code	**Electronics interface**
	For all models *except* Model CMFS010, Model CMFS015, and high-temperature 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
J(2)	2-wire integrally mounted Model 2200S transmitter
U(2)	2-wire extended Model 2200S transmitter
R	9-wire polyurethane-painted aluminum junction box
S	9-wire 316L stainless steel junction box
H	9-wire extended mount polyurethane-painted aluminum junction box
T	9-wire extended mount stainless steel junction box
	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

Continued on next page

(1) Available only with process connection 321, 344, 345, or 346.

(2) Available only with calibration option Z.

Ordering information *continued*

Code	Electronics interface
	For Models CMFS010 and CMFS015
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
M[(1)]	Integral FMT Filling Transmitter
N[(1)]	Integral FMT Filling Transmitter with improved surface finish (64 Ra)
J[(2)]	2-wire integrally mounted Model 2200S transmitter
U[(2)]	2-wire extended Model 2200S transmitter
Code	**Conduit connections**
	For electronics interface codes 0, 1, K, J, U, and C
A	Not applicable
	For electronics interface codes 2, 3, 4, 5, H, T, Q, and A
B	1/2-inch NPT — no gland
E	M20 — no gland
F	Brass/nickel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
G	Stainless steel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
	For electronics interface codes R 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**
	For electronics interface codes 0, 1, M, and N
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
2	CSA C-US (U.S.A. and Canada) Class I, Div. 2
V	ATEX — Equipment Category 3 (Zone 2) / PED compliant
3	IECEx Zone 2

Continued on next page

(1) Must be ordered with FMT Filling Transmitter. Transmitter is permanently attached to sensor case.

(2) Available only with calibration option Z.

Ordering information *continued*

Code	Approvals
	For electronics interface codes 2, 3, 4, and 5
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
A	CSA C-US (U.S.A. and Canada)
Z[(1)]	ATEX – Equipment Category 2 (Zone 1) / PED compliant
6[(1)]	ATEX – Equipment Category 2 (Zone 1, IIC modified) / PED compliant; Models CMF200, CMF300, and CMF400 only
I[(1)]	IECEx Zone 1
7[(1)]	IECEx Zone 1, IIC modified; Models CMF200, CMF300, and CMF400 only
P[(1)(2)]	NEPSI
8[(1)(2)]	NEPSI, IIC modified
	For electronics interface codes J and U
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
V	ATEX — Equipment Category 3 (Zone 2) / PED compliant
3	IECEx Zone 2
A	CSA C-US (U.S.A. and Canada)
Z	ATEX – Equipment Category 2 (Zone 1) / PED compliant
I	IECEx Zone 1
	For electronics interface codes Q, A, C, R, S, H, and T
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 (U.S.A. and Canada)
Z[(1)]	ATEX – Equipment Category 2 (Zone 1) / PED compliant
6[(1)]	ATEX – Equipment Category 2 (Zone 1, IIC modified) / PED compliant; Models CMF200, CMF300, and CMF400 only
I[(1)]	IECEx Zone 1
7[(1)]	IECEx Zone 1, IIC modified; Models CMF200, CMF300, and CMF400 only
P[(1)(2)]	NEPSI
8[(1)(2)]	NEPSI, IIC modified
Code	**Language**
A	Danish CE requirements document and English installation manual
D	Dutch CE requirements document and English installation manual
E	English installation manual
F	French installation manual
G	German installation manual
H	Finnish CE requirements document and English installation manual
I	Italian installation manual
J	Japanese installation manual
M	Chinese installation manual

Continued on next page

(1) Models CMF200, CMF300, and CMF400 are rated for Group IIB with standard ATEX approval code Z, IECEx approval code I, or NEPSI approval code P. The IIC modification option (approval codes 6, 7, and 8) should be used only when necessary for the specific area classification.

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

Ordering information *continued*

Code	Language (continued)
N	Norwegian CE requirements document and English installation manual
O	Polish installation manual
P	Portuguese installation manual
S	Spanish installation manual
W	Swedish CE requirements document and English 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	**Calibration options**
	For all models *except* CMFS010, CMFS015, CMF010, and high-temperature models
Z (1)	0.10% mass flow and 0.0005 g/cm^3 (0.5 kg/m^3) density
D (2)	0.10% mass flow and 0.0002 g/cm^3 (0.2 kg/m^3) density
2 (2)	0.05% mass flow and 0.0005 g/cm^3 (0.5 kg/m^3) density
3 (2)	0.05% mass flow and 0.0002 g/cm^3 (0.2 kg/m^3) density
	For models CMFS010 and CMFS015
C (3)	0.10% mass flow and 0.002 g/cm^3 (2.0 kg/m^3) density
K	0.10% mass flow and 0.0005 g/cm^3 (0.5 kg/m^3) density
2	0.05% mass flow and 0.0005 g/cm^3 (0.5 kg/m^3) density
	For model CMF010
Z (1)	0.10% mass flow and 0.0005 g/cm^3 (0.5 kg/m^3) density
2	0.05% mass flow and 0.0005 g/cm^3 (0.5 kg/m^3) density
	For high-temperature models
Z	0.10% mass flow and 0.0005 g/cm^3 (0.5 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) For gas applications, select calibration option Z. Mass flow accuracy on gas is ±0.35%.

(2) Requires electronics interface codes 0–5.

(3) For gas applications, select calibration option C. Mass flow accuracy on gas is ±0.35%.

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