

OPTIMASS Coriolis Mass Flow & Density Meter

Application Information Form

Company name
 Address
 City, State, Zip
 Contact name:
 Phone number:

RFQ Number:
 Project Name:
 Tag Number (s)

Process Data

Media name:	Piping Details	Meter Orientation
Sp. gravity	Line size:	Horizontal
Density	Schedule:	Vertical
Viscosity		Inclined
Temperature	Is the fluid abrasive?	
Pressure:	Solids or gas present?	
Flow Rate:	Solid content (% by volume)	
	Gas content (% by volume)	

Signal Converter/ Transmitter Specifications

Converter Design		IO Options		
Signal Converter (type)	Hazardous Area Approvals	Output Signal	IO Communications	Measuring functions
MFC 400 C (compact)	without	Current	HART	Standard (mass, density, volume, temperature)
MFC 400 F (remote)	cFMus (Class 1, Div 1)	Pulse	Foundation Fieldbus	Standard + general concentration
MFC 010 C (Modbus direct)	ATEX	Status	Modbus RS485	Standard + alcohol concentration
			Profibus	Standard + API oil standard
Remote cable length	Power requirements	IO Modules		
Not required for compact	12-24 VDC	Base IO Module		
15 ft. (5m)	100-230 VAC	1st IO Module		
30 ft. (10m)		2nd IO Module		
60 ft. (20m)	Housing (material)			
	Die-cast Aluminum			
	316L SST			

Coriolis Mass Flow Sensor Specifications

Sensor Design	Process Connections	Materials of Construction	Design Options
KROHNE Model	Process Connections (size & type)	Measuring tube (materials)	Measuring Tube Surface Finish
OPTIMASS 1000	1/4" Threaded, NPT	316/316L dual certified	Standard finish
OPTIMASS 2000	1/2" Triclover clamp	316L SST	Electro-polished Ra 0.4 µm
OPTIMASS 3000	3/4" ASME 150 lb. RF	318 SST	Electro-polished Ra 0.5 µm
OPTIMASS 6000	1" ASME 300 lb. RF	Duplex SST	Electro-polished Ra 0.8 µm
OPTIMASS 7000	1.5" ASME 600 lb. RF	Super Duplex SST	
Measuring Tube (design)	2" ASME 900 lb. RF	Hastelloy C22	Calibration
Single straight tube	4" ASME 1500 lb. RF	Titanium	3-point mass flow + certificate (standard)
Twin straight tube	6"	Tantalum	5-point mass flow + UKAS certificate
Twin bent tube	8"		5-point mass flow 0.05% + UKAS certificate
Twin Z-shaped tube	10"		
	12"	Secondary Containment	Extended Options
Agency Approvals	14"	304/304L dual certified	High-temperature version
SIL 2/3	16"	316/316L dual certified	Cryogenic version
ASME Bio-processing		316L SST	Liquid/ steam heating jacket
3A (American Dairy)		Duplex	Insulation (casing only)
USA NTEP		without (Hermetically sealed)	Purge fittings (1/2" NPTF)
Measurement Canada			Burst disk in outer cylinder
NACE MR0175			

Coriolis Mass Flow & Density Meters

PRODUCT OVERVIEW



Repeatable 2-phase flow measurement

KROHNE's OPTIMASS series with Entrained Gas Management (EGM) allows reliable, continuous and uninterrupted measurement with 0 to 100% gas entrainment



	OPTIMASS 1400	OPTIMASS 2400	OPTIMASS 3400	OPTIMASS 6400	OPTIMASS 7400
	Economical Coriolis Process applications Twin straight tube design	Bulk measurement Coriolis Process or Custody transfer 2 or 4 straight tube design	Low flow Coriolis Twin Z-shaped tube design	High-performance Coriolis Cryogenic service High-temperature service Twin bent tube design	High-performance Coriolis Process or Custody transfer Single straight tube design
Measuring Functions	Mass or Volume flow Density Temperature Concentration measurement	Mass or Volume flow Density Temperature Concentration measurement	Mass or Volume flow Density Temperature Concentration measurement	Mass or Volume flow Density Temperature Concentration measurement	Mass or Volume flow Density Temperature Concentration measurement
Max Flow Rate	6,235 lbs/min 170,000 kg/h	169,021 lbs/min 4,600,000 kg/h	16.5 lbs/min 450 kg/h	36,743 lbs/min 1,000,000 kg/h	20,567 lbs/min 560,000 kg/h
Density Range	25 to 187 lb/ft ³	25 to 187 lb/ft ³	25 to 187 lb/ft ³	6 to 187 lb/ft ³	25 to 155 lb/ft ³
Measuring Accuracy	Liquids: ± 0.15% Gases: ± 0.35% Density: ± 0.13 lb/ft ³	Liquids: ± 0.1% (0.05%) Gases: ± 0.35% Density: ± 0.06 lb/ft ³	Liquids: ± 0.1% Gases: ± 0.5% Density: ± 0.13 lb/ft ³	Liquids: ± 0.1% (0.05%) Gases: ± 0.35% Density: ± 0.06 lb/ft ³	Liquids: ± 0.1% Gases: ± 0.35% Density: ± 0.13 lb/ft ³
Process Temperature	-40 to 266 °F	-40 to 266 °F	-40 to 300 °F	-328 to 752 °F	-40 to 302 °F
Process Pressure	-14.5 to 1,450 psi	-14.5 to 2,610 psi	-14.5 to 4,351 psi	to 2,900 psi	-14.5 to 1,450 psi
Process Connections	1/2" to 4" ASME 150...600 1" to 3" Triclover	4" to 16" ASME 150...1500	1/4" NPT-M 1/2" Triclover 1/2" ASME 150...300	1/2" to 12" ASME 150...1500	1/4" to 4" ASME 150...600 1/2" to 4" Triclamp
Measuring tubes	Duplex	Duplex Super Duplex	316L Hastelloy C22	316L Duplex Hastelloy C22	316L Titanium Tantalum Hastelloy C22
Secondary Containment	304/304L dual certified 316/316L dual certified	304/304L dual certified 316/316L dual certified Duplex	316L	Hermetically sealed	304/304L dual certified 316/316L dual certified
IO Communications	mA (HART) Foundation Fieldbus Profibus PA Profibus DP RS485 Modbus	mA (HART) Foundation Fieldbus Profibus PA Profibus DP RS485 Modbus	mA (HART) Foundation Fieldbus Profibus PA Profibus DP RS485 Modbus	mA (HART) Foundation Fieldbus Profibus PA Profibus DP RS485 Modbus	mA (HART) Foundation Fieldbus Profibus PA Profibus DP RS485 Modbus
Power supply	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC
Signal converter type	MFC 400 C (compact) MFC 400 F (remote) MFC 010 C (Modbus direct)	MFC 400 C (compact) MFC 400 F (remote) MFC 010 C (Modbus direct)	MFC 400 C (compact) MFC 400 F (remote) MFC 010 C (Modbus direct)	MFC 400 C (compact) MFC 400 F (remote)	MFC 400 C (compact) MFC 400 F (remote) MFC 010 C (Modbus direct)
Converter materials	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L
Hazardous area	cFMus (C1, D1) ATEX IECEX NEPSI	cFMus (C1, D1) ATEX IECEX NEPSI	cFMus (C1, D1) ATEX IECEX NEPSI	cFMus (C1, D1) ATEX IECEX NEPSI	cFMus (C1, D1) ATEX IECEX NEPSI
Agency Approvals	3A ASME Bio-processing	Custody transfer		SIL2/3 NTEP AGA	Custody transfer