

Coriolis Mass Flowmeter

Coriolis flow meter is a direct and precise measurement of fluid mass flow meter to the main structure of the novel, U-shaped two side-by-side tubes, so that the curved parts of the two tubes slightly vibrate, and then the straight vibration situated on both sides.

When the Coriolis mass flowmeter is working normally, the vibration of the measuring tube causes the Coriolis force of the measuring medium in the tube. The greater the Coriolis force, the greater the friction between the flowing medium and the measuring tube wall, and the greater the pressure loss of the flowmeter. The Coriolis force is proportional to the flow rate of the measurement medium. Therefore, when selecting the Coriolis mass flowmeter, the influence of the measured medium flow rate should be considered. The influence of the medium flow rate on the selection of the Coriolis mass flowmeter is related to the measurement principle of the Coriolis mass flowmeter.



Batch Control



Blending/ Filling/ Dosing

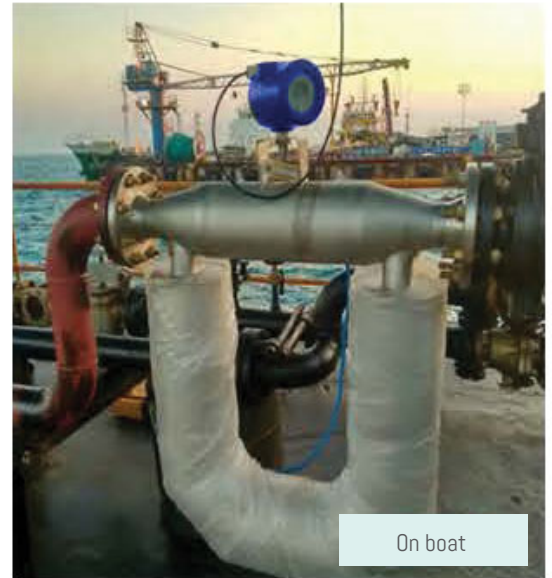


Custody Transfer

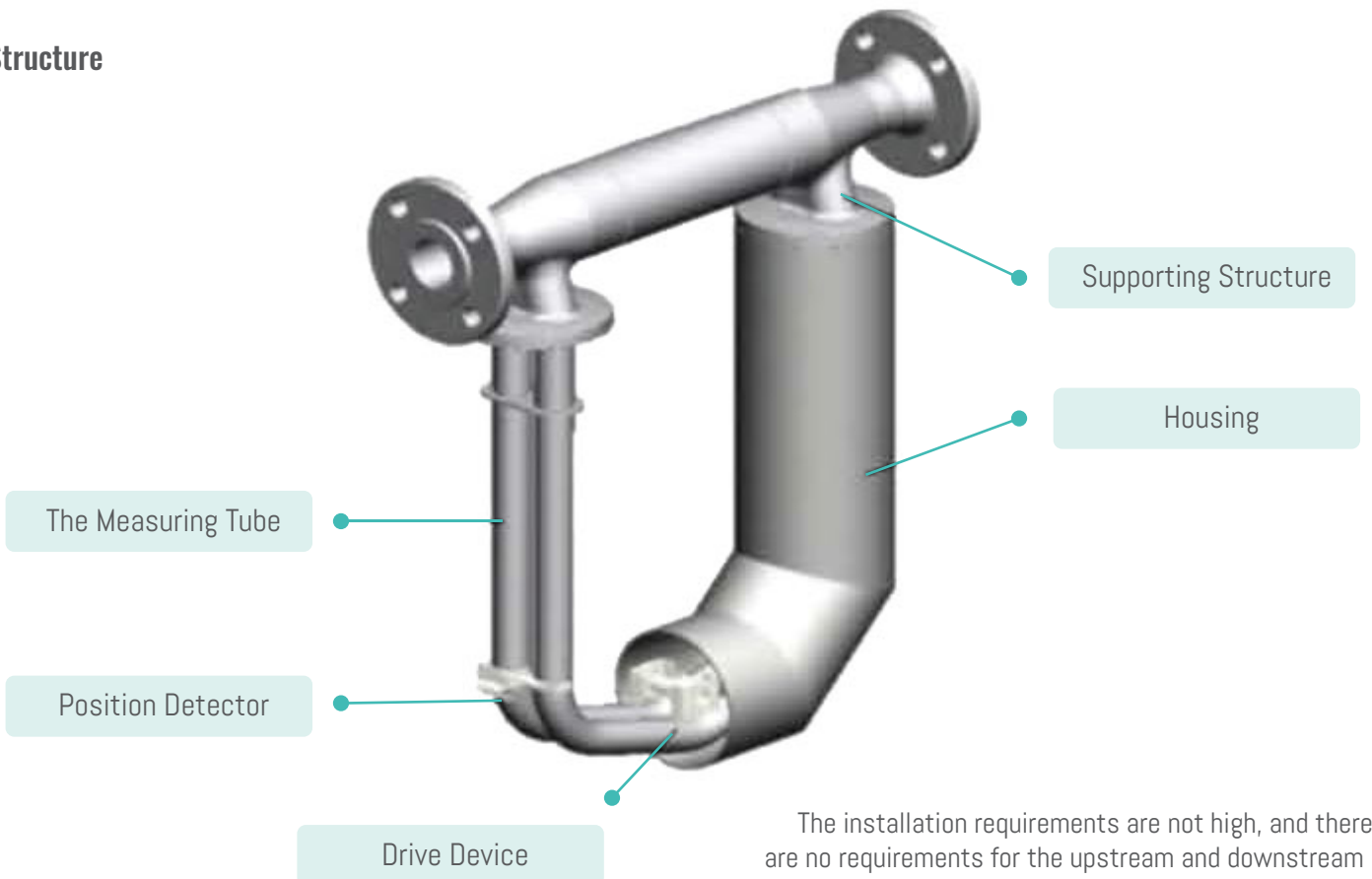
Obviously, the Coriolis mass flowmeter is mainly used to measure the mass flow rate of the medium or output the calculated volume flow rate. The selection parameters provided by the process professional only involve the medium mass flow rate or volume flow rate; therefore, the influence of the medium flow rate will be ignored. The measuring tube of Coriolis mass flowmeter has small amplitude, which can be regarded as no moving parts and no obstructing parts, and its measured value is not affected by the flow field in the pipeline.

Feature

- High flow accuracy : 0.1% Optional and 0.2% Standard
- Wide medium temperature range - 200 °C to 300 °C
(For medium such as liquid nitrogen, oxygen and argon)
- High pressure handling up to 35 MPa in oil, Drilling well and etc
- Multiple parameters measured : Mass Flow, Volume Flow, Density and Temperature

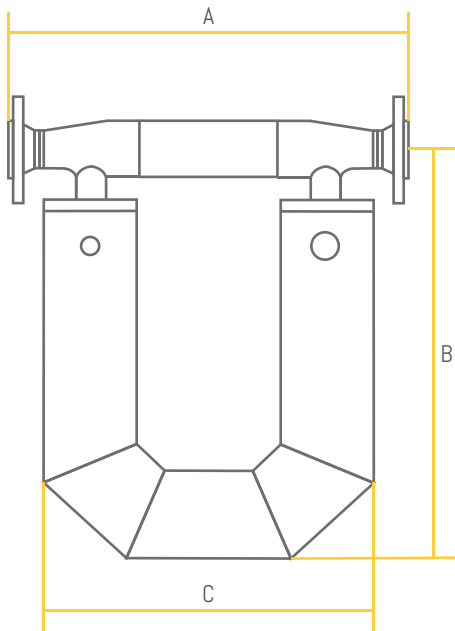


Structure

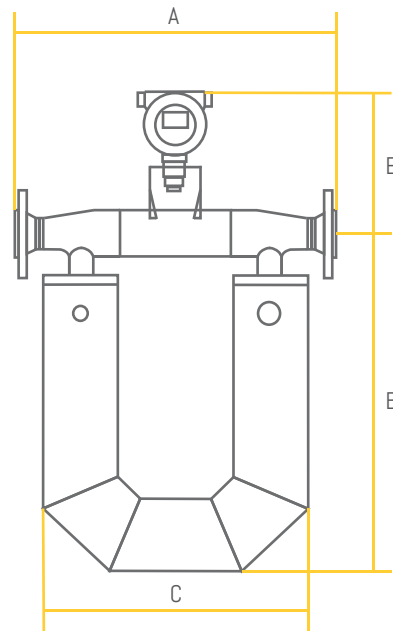
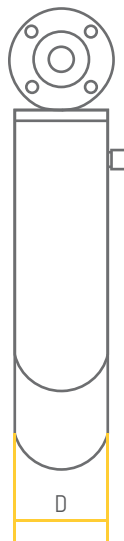


The installation requirements are not high, and there are no requirements for the upstream and downstream straight pipe sections.

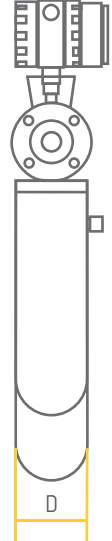
Dimension



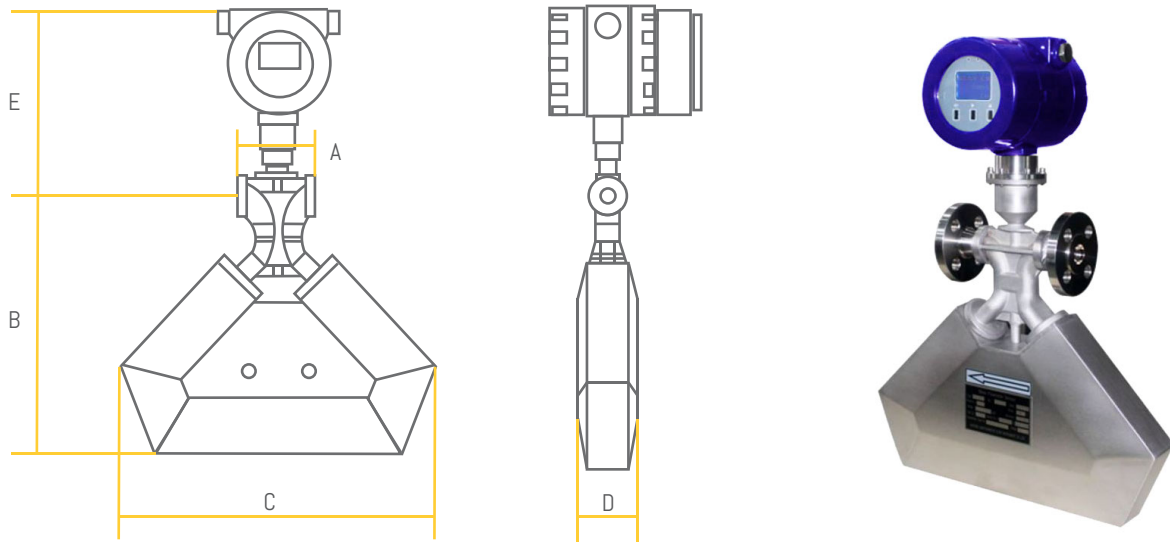
Remote Type



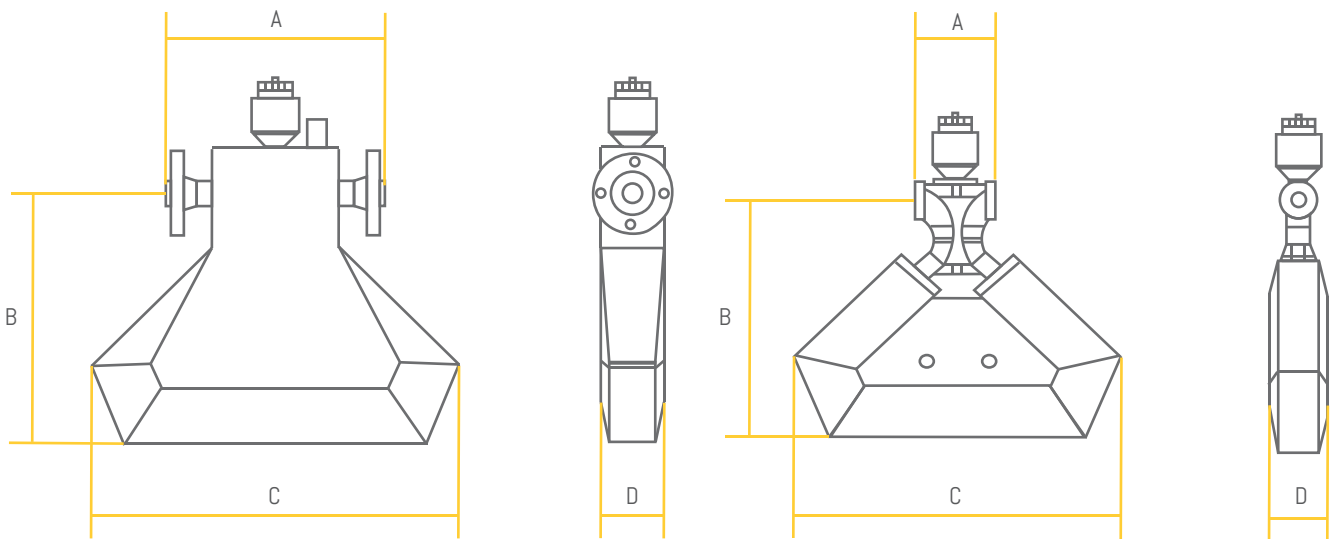
Compact Type



Model	A	B	C	D	E	N.W. (Only Sensor)
	mm	mm	mm	mm	mm	kg
CMF-020	250	448	500	89	233	17
CMF-025	550	500	445	108	238	17.5
CMF-032	550	500	445	108	240	24
CMF-040	600	760	500	140	245	32
CMF-050	600	760	500	140	253	36
CMF-080	850	1050	780	220	315	87.5
CMF-100	1050	1085	840	295	358	165
CMF-150	1200	1200	950	320	340	252
CMF-200	1200	1193	1000	400	358	350



CMF 010/ 015 Compact Type

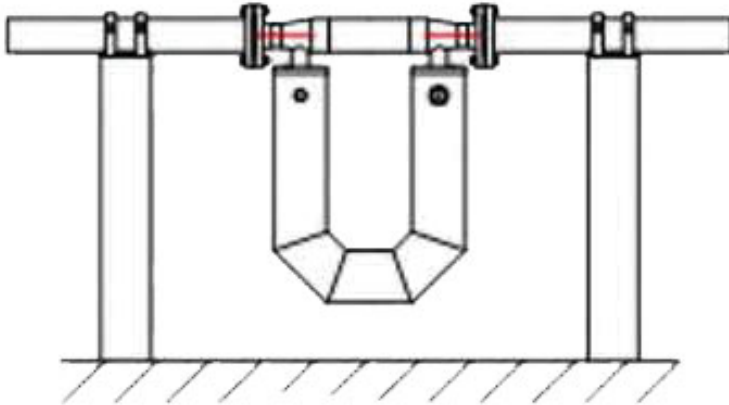


CMF 003 / 006 /008

CMF 010 / 015

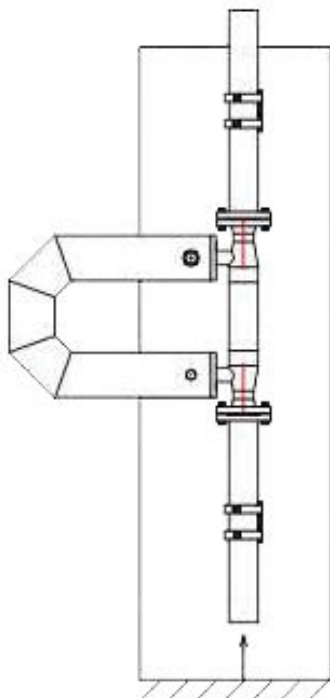
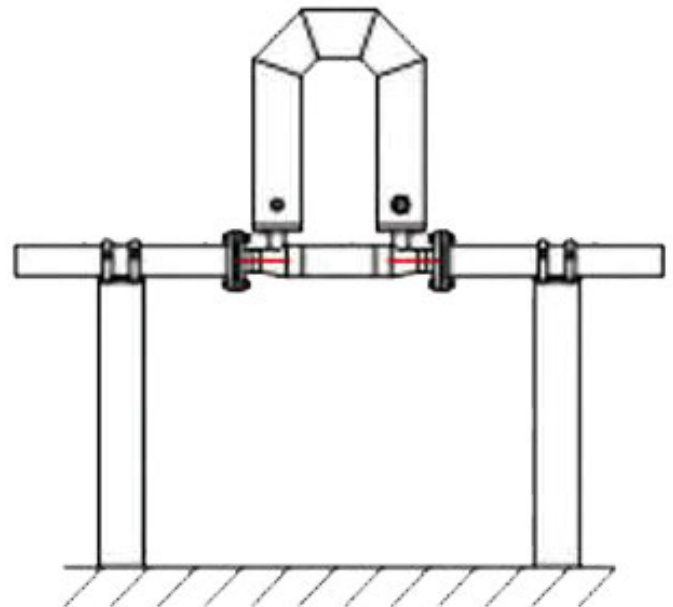
Model	A	B	C	D	E	N.W.
	mm	mm	mm	mm	mm	kg
CMF-003	178	176	250	54	244	4.8
CMF-006	232	263	360	70.5	284	8.1
CMF-008	232	275	395	70.5	290	8.2
CMF-010	95	283	370	70.5	242	6.5
CMF-015	95	302	405	70.5	242	6.5

Installation Method



The meter should be installed downward when measuring liquid flow, so that air can not get trapped inside the tubes.

The meter should be installed upward when measuring gas flow, so that liquid can not get trapped inside the tubes.



The meter should be installed sideward when the medium is turbid liquid to avoid particulate matter accumulated in the measuring tube. The flow direction of medium goes from the bottom up through the sensor.

Technical Performance Parameters	
Flow Accuracy	± 0.2% Optional ± 0.1%
Diameter	DN3 - DN200 mm
Flow Repeatability	± 0.1 - 0.2%
Density Measuring Range	0.3 - 3.000 g/cm ³
Density Accuracy	± 0.002 g/cm ³
Temperature Measuring Range	- 200 to 300 °C (Standard Model - 50 to 200 °C)
Temperature Accuracy	± 1 °C
Output of Current Loop	4-20 mA, Optional Signal of FLOW Rate/ Density/ Temperature
Output of Frequency/ Pulse	0 - 10000 Hz Flow Signal (Open Collector)
Communication	RS485, MODBUS Protocol
Power Supply of Transmitter	18-36 VDC Power ≤ 7W or 85 - 265 VAC Power 10W
Protection Class	IP67
Material	Measuring Tube SS316L, Housing SS304
Pressure Rating	4.0 MPa (Standard Pressure)
Explosion - Proof	Exd (ia) IIC T6Gb
Environment Parameters	
Ambient Temperature	-20 to 60 °C
Environment Humidity	≤95% RH

Flow Range

Specification	DN (mm)	Flow Range (kg/h)	Zero Stability kg/h			NW (kg)	GW (kg)
			0.2%	0.15%	0.1%		
CMF-003	3	0 - 96 -120	0.018	0.012	0.012	8	19
CMF-006	6	0 - 540 -660	0.099	0.066	0.066	12	22
CMF-008	8	0 - 960 - 1200	0.18	0.12	0.12	12	23
CMF-010	10	0 - 1500 - 1800	0.27	0.18	0.18	11	24
CMF-015	15	0 - 3000 - 4200	0.63	0.42	0.42	12	25
CMF-020	20	0 - 6000 - 7800	1.17	0.78	0.78	20	34
CMF-025	25	0 - 10200 - 13500	2.025	1.35	1.35	21	35
CMF-032	32	0 - 18000 - 24000	3.6	2.4	2.4	27	45
CMF-040	40	0 - 30000 - 36000	5.4	3.6	3.6	35	55
CMF-050	50	0 - 48000 - 60000	9	6	6	40	60
CMF-080	80	0 - 120000 - 160000	24	16	16	90	150
CMF-100	100	0 - 222000 - 270000	40.5	27	27	170	245
CMF-150	150	0 - 480000 - 600000	90	60	60	255	350

Model Select

CLM		XXX	X	X	X	X	X	X	X	X	X	X	X	X	X	
Caliber (mm)	DN25 - DN200 Reference Code Please check caliber code table 1															
Nominal Pressure	0.6 MPa		1													
	1.0 MPa		2													
	1.6 MPa		3													
	2.5 MPa		4													
	4.0MPa		5													
	Others		6													
Connection	Flange			1												
	Tri-Clamp (Sanitary)			2												
	Thread			3												
	Others			4												
Accuracy	0.1				1											
	0.2				2											
Temperature	-20 °C to 200 °C					1										
	-50 °C to 200 °C					2										
	-50 °C to 300 °C					3										
Structure Type	Compact/ Integral							1								
	Remote							2								
Power Supply	AC220V								A							
	DC24V								D							
Output Signal	4-20 mA/ Pulse, RS485										A					
	4-20 mA, HART										B					
	Others										C					
Ex-proof	Without Ex-proof												0			
	With Ex-proof												1			
Process Connection	DIN PN10															1
	DIN PN16															2
	DIN PN25															3
	DIN PN40															4
	ANSI 150#															A
	ANSI 300#															B
	ANSI 600#															C
	JIS 10K															D
	JIS 20K															E
	JIS 40K															F
	Others															G

Table 1 : Caliber Code Table

Caliber	3	6	8	10	15	20	25	32	40	50	65	80	100	125	150	200
Code	003	006	008	100	150	200	250	320	400	500	650	800	101	125	151	201