



**Microflow Coriolis Flowmeter**  
**CoriMate**  
**MODEL CR002,CR003,CR004**

**GENERAL SPECIFICATION**  
**GS.No.GBN063-1-E**

■ **GENERAL**

Based on the knowledge and experience on coriolis technologies OVAL has gained over many years, the Corimate is a compactly built coriolis flowmeter integral with a transmitter and display. It is characterized by competitive price, outstanding performance, user friendliness, and operating safety to most effectively meet customer needs. It has expanded the range of precise metering at extreme low flow rates and the size of nonexplosionproof instruments market.

■ **FEATURES**

1. Low priced coriolis flowmeter series.
2. Single case construction with built-in probe and transmitter (with display).
3. Vibration-proof base not required.
4. Simple installation and easy to use.
5. Three meter sizes: 3mm, 1.5mm, and 0.7mm in nominal dia.
6. Wetted parts material: SUS316L
7. Flow range: 2.5 - 2700 g/min in three types.



■ **TYPICAL APPLICATIONS**

1. Pharmaceutical, cosmetic, and biochemical industries
2. Catalyst addition process

3. Laboratories
4. Process where mass flow measurement is required
5. Alternatives of thermal dispersion meters, PD meters, area meters
6. Processes where measurement of slurries (\*1) is required.

\*1: Mixtures of liquid and solid particles

■ **GENERAL SPECIFICATIONS**

● **Sensor Unit**

Item		Description		
Model		CR002	CR003	CR004
Nominal Size		Rc 1/8"		
Materials	Wetted parts ※1	SUS316L (Nickel brazing in part)		
	Base	SUS304		
	Housing and cover	ADC12		
	Display shield	Float glass		
Process connection		Rc 1/8		
Acceptable fluid		Liquid (Density range : 0.3~2.0g/mL)		
Operating temp. range		-10~+60°C (Free of dew condensation)		
Max. operating pressure		2MPa		
Flow directions		Forward flow only		
Power supply ※2		20~30VDC		
Power consumption		Max. 10W		
Furnished cable		AWG24×7-conductor, φ 6.8×3m		
Dustproof, waterproof construction		IP66		
Installation		<ul style="list-style-type: none"> <li>• Horizontal installation (clamp not required)</li> <li>• Vertical installation (optional bracket available)</li> </ul>		
Display		Backlit dot matrix : 8 digits		
Variables displayed		Instant mass flow, mass flow total, temperature		
Mass		approx. 6kg		
Communication interface		Bell 202 (using the HART protocol)		
Pulse output		Mass flow total Open collector output (30V, 50mADC max.) FS: 0.1~10000Hz selectable		
Analog output		4~20mADC Max. load 600Ω Instant mass flowrate Added damping: 0~200 sec.		

※1 : Corrosion resistance of nickel brazing used in wetted parts is equivalent to SUS314.

※2 : SU1303 power unit is not acceptable to this meter.

**OVAL Corporation**

<http://www.oval.co.jp>

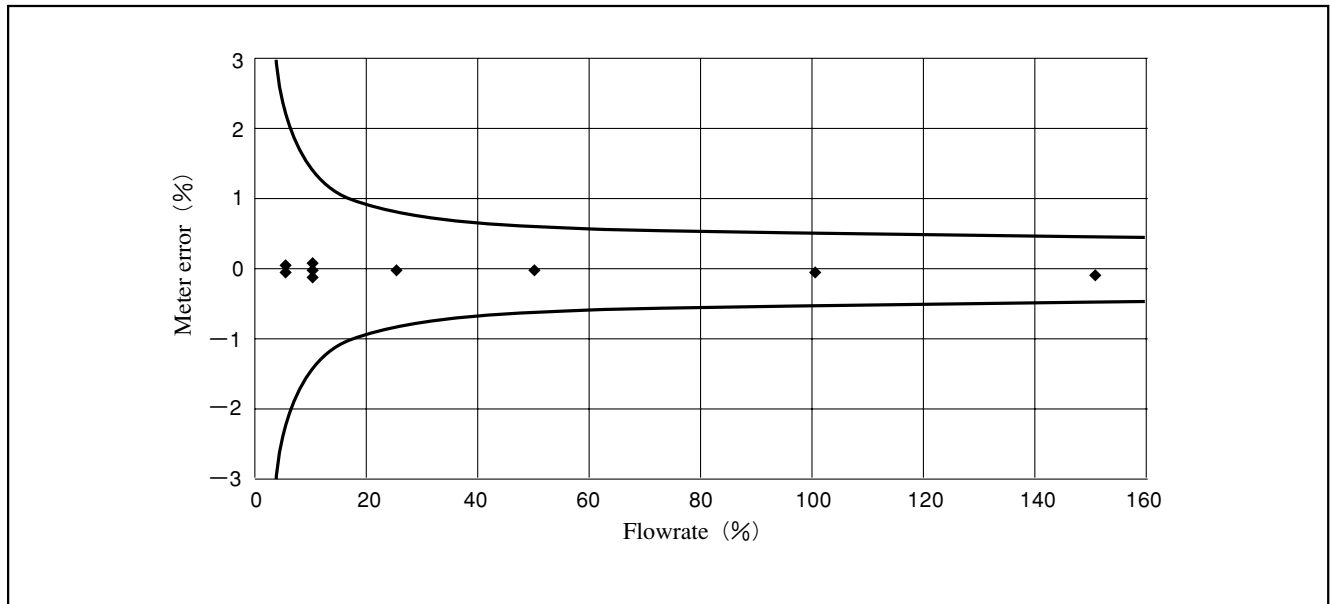
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## ■ GENERAL PERFORMANCE

Item		Description		
Model		CR002	CR003	CR004
Flowrate (liquid)	Max. service range g/min	50	200	1800
	Max. allowable range g/min	75	300	2700
	Min. range g/min	5	20	180
	Lower limit rate g/min	2,5	10	90
	Factory calibration accuracy	〔±0.4%±zero stability error〕 of reading		
	Repeatability	〔±0.2%±1/2 zero stability error〕 of reading		
Zero stability g/min		±0.05	±0.20	±1.80
Analog accuracy		Accuracy±0.1% of full scale		

$$\text{Zero stability error} = \frac{\text{Zero stability (g/min)}}{\text{Flow rate at that time (g/min)}} \times 100\%$$

## ■ METER ERROR



## ■ PRODUCT CODE EXPLANATION

### ● Sensor Unit

Item	Code No.												Description		
	①	②	③	④	⑤	⑥	—	⑦	⑧	—	⑨	⑩		⑪	⑫
Model	C	N													CoriMate
Nominal Size	0	0	2												Flow range (g/min) : 2.5~75
	0	0	3												Flow range (g/min) : 10~300
	0	0	4												Flow range (g/min) : 90~2700
Structural category	C	—													Designed for Installation in the field
Material						S	S	—							SUS316L
Process connection									2						Screw connection
Connection rule										0					Always "0"
Pressure category											0				Always "0"
Transmitter construction														N	One-piece construction with nonexplosionproof transmitter