Coriolis mass flowmeter ROTA*MASS* 3 series

- TIIS explosion-proof type -

The ROTAMASS 3 series is a Coriolis mass flowmeter, which were jointly developed by Rota Yokogawa GmbH & Co. KG (Germany) and Yokogawa Electric Corporation, achieving high stability, high precision, and high performance based on an original structure and advanced signal processing.

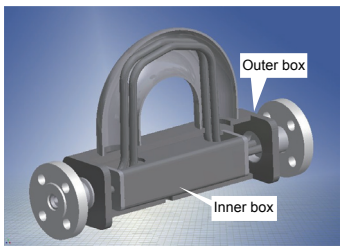
These flowmeters use the box-in-box structure, which is less subject to external vibration and distortion, and can accurately measure mass flow even at low flow rate with an excellent zero stability. It can also simultaneously measure density accurately as well as mass flow, that is, it can simultaneously and accurately measure multiple properties of a fluid such as volume flow and concentration. Moreover, it has various diagnostic functions and sends alarms upon detecting bubbles in the measurement pipe or its corrosion.

ROTAMASS 3 Series Coriolis Mass Flowmeter
(integral type RCCT34)

FEATURES

■ Robust box-in-box structure against disturbance such as vibration and distortion

Coriolis flowmeters measure mass flow and density by vibrating the measurement tubes of the detection part. Therefore, external vibration and stress, etc. on the measurement tube may cause lower measurement accuracy. The ROTAMASS 3 series flowmeters adopt the dual structure called "box-in-box" for the housing of the detection part. With this structure, external vibration and stress are absorbed by the outer box and they hardly affect the inner box in which the measurement tubes are installed. This helps the flowmeter achieve high stability and vibration resistance.



Box-in-box structure

■ Multi-flange structure for optimal model selection

The multi-flange structure allows a single model to support multiple process connection sizes. In other words, multiple models are provided for a specific process connection size. This allows customers to select an optimal model among multiple models depending on the flow rate range and pressure loss. (The process connection size and model need to be decided when ordering).

■ Accurately measuring density

Accurate density measurement of up to 0.0005 g/cm^3 is optionally possible, which leads to precise measurement of volume flow and concentration.

■ Diagnostic function

The flowmeter monitors the measurement condition and can display and output alarms upon detecting the existence of bubbles, and lack of fluid and corrosion of measurement tubes.

SPECIFICATIONS

● Flow rate ranges and models of ROTAMASS 3 series

Nominal flow rate* Qnom (t/h)	Maximum flow rate Qmax (t/h)	Model	
		Separated type	Integral type
0.045	0.1	RCCS30	
0.17	0.3	RCCS31	
0.37	0.6	RCCS32	
0.9	1.5	RCCS33	
2.7	5	RCCS34	RCCT34
10	17	RCCS36	RCCT36
32	50	RCCS38	RCCT38
100	170	RCCS39	RCCT39

* Nominal flow rate (Qnom) is the water flow rate with the pressure drop of about 0.1 MPa.

- TIIS explosion-proof type: RCCS34 to 39, RCCT34 to 39
- Process connection: 15 to 125 mm (flange), clamp and others
- Measurable quantities of fluid
  Mass flow rate, density, temperature, volume flow rate, cumulative flow rate, and concentration (option)
- Accuracy of mass flow measurement:
  Liquid: ± 0.1% of reading ± zero stability
  Gas: ± 0.5% of reading ± zero stability
- Accuracy of density measurement:
  ± 0.0015 to 0.008 g/cm^3 (depends on models)
  Max. 0.0005 g/cm^3 when an option specified
- Fluid temperature (depends on the specifications such as explosion-proof) :
  Integral type: - 50 to 150 °C; Remote type: - 70 to 150 °C
- Material of wetted parts:
  316 L stainless steel, Hastelloy C-22 or equivalent
- Diagnostic functions:
  Detection of multiphase flow (bubble mixing), tube-empty state, and corrosion
- Option:
  Concentration measurement, temperature extension, low temperature, special calibration, etc.

Contact us

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