



YOKOGAWA CORIOLIS MASSFLOWMETER - ROTAMASS

**Versatile and durable
Flow & Density measurements**



RotaMASS - Remote Version RotaMASS - Compact Version

Whenever the task is to measure massflow, density, temperature and volume flow, the RotaMASS is the right choice.

- ⇒ M/E fuel consumption
- ⇒ A/E fuel consumption
- ⇒ Process control
- ⇒ Bunker meter

The RotaMASS 3 Series is the best-in-class mass flowmeter featuring discrete, parallel, thick-walled, seamless tubes that are uniquely decoupled from process vibration and pipeline stress.

This highly precise **Coriolis measurement principle** is not affected by anything: neither through the physical properties of the medium, nor through environmental conditions. Even fluctuating pressures and changes in viscosity or temperature do not change the accuracy of the measurement results.

Coriolis principle: Electromagnetic forces set up resonant vibrations of the measurement tubes. Coriolis forces acting on the medium flowing through the tubes alter these vibrations by small amounts. The interaction between the resonance vibrations of the tubes and the small deviations caused by the Coriolis forces results in a small phase shift, which is detected by two electromagnetic pickups. It is this small phase shift, which is measure the mass flow. At the same time the resonance frequency serves to measure the density of the medium.



Performance data:

- ⇒ Direct flow measurement (mass an volume), Density and Temperature measurement
- ⇒ Online calculation of Density¹⁵ and Viscosity⁵⁰
- ⇒ AIR in oil detection
- ⇒ Full data log of every parameter available in the system
- ⇒ Unique "box-in-box" design
- ⇒ Paired balanced metering tubes
- ⇒ Excellent zero and long term stability
- ⇒ High accuracy and high stability over a wide range
- ⇒ Available in explosion proof versions
- ⇒ Simple installation
- ⇒ High temperature design (-200°C up to 350°C)
- ⇒ Up to 295 bar
- ⇒ No filter necessary
- ⇒ No by-pass needed
- ⇒ Mounting solutions: removabel, skids and fixed

Your reliable partner for marine measuring instruments and service



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Technical data

Available models:	Remote detector - RCCS34 to 39/XR: 2 tube design Integral detector - RCCT34 to 39/XR: 2 tube integral design
Nominal diameter:	DN15-DN200
<u>Mass Flow Measurement:</u>	
measuring range:	Qmax t/h 5 up to 600* Qnom t/h 3 up to 500*
Accuracy mass flow:	± 0,1% of flow rate (+/- zero point stability)*1
Repeatability:	± 0,05%*1
<u>Density Measurement:</u>	
measuring range:	0,3kg/l to 2kg/l*
Accuracy:	0,02g/cm ³ - 0,0015g/cm ³
Repeatability:	± 0,0005g/cm ³
Temperature Measurement:	± 1°C / ± 0,5% of reading
Process temperature:	-200°C - 150°C
Ambient temperature:	-50°C - 80°C
Communication Interface:	4-20mA, HART
Process connections:	Flanges DIN, ANSI, JIS (additional connections available)
Process pressure:	Up to 250bar
Display/Operation:	Free defineable up to 4-line backlight display
Power supply:	90-264V AC (47-63Hz); 20.5-28.8 V DC
I/O signal standard:	2 current outputs galvanic separated from other signals 2 pulse / frequency (0-10 000 Hz), status outputs or passive transistor contact output, active or passive status input

Mounting examples:



Extract of reference list:

- OW Otilia
- OW Copenhagen
- OW baltic
- OW Scandinavia
- OW Atlantic
- Väderö
- Highlander
- Wappen von Bayern
- Thor Alpha
- Thor Omega
- OW Aalborg

* depends on model / *1 additional information technical information

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