

ROTAMASS LR



...in perfect balance...

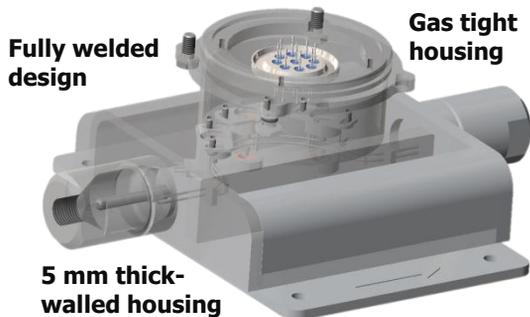
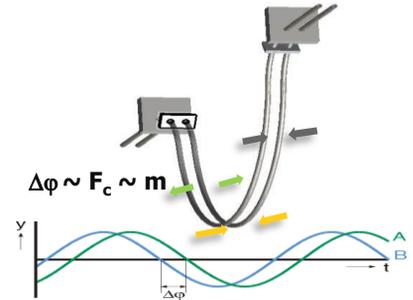


The world's smallest dual bent tube Coriolis mass flow meter

The new ROTAMASS LR continues the tradition of the proven dual bent tube and self-draining design and extends the ROTAMASS Low Flow Line for gas and liquid flow measurement in an extraordinary manner.

Dual bent tube design in perfect balance for:

- Optimum decoupling of the core measuring element
- Unaffected zero stability despite of medium density changes
- Independent performance from installation conditions
- Excellent zero stability over changing process variables

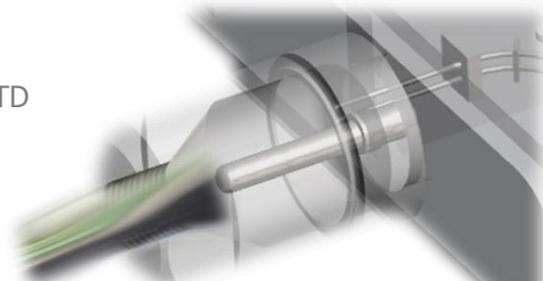


Robust and all stainless steel housing for:

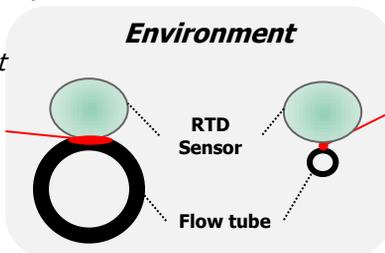
- Effective protection of core measuring element
- Highest insensibility against external influences
- Absolute gas tight secondary containment
- Highest rupture pressure of $\geq 65\text{bar}$ in low flow Coriolis market

Unique inline temperature measurement for:

- Direct process temperature measurement with fully wetted RTD
- Complete isolation from ambient temperature influences
- Unaltered mass flow and density measurement
- Stable zero point



Large RTD contact surface with tube surface minimizes external temperature influences

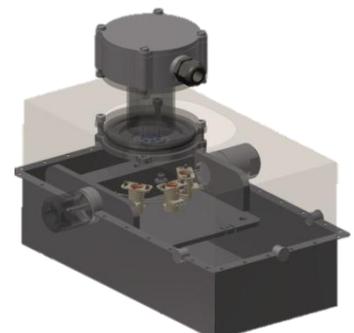


Temperature measurement with small RTD contact surface with tube surface is strongly effected by the ambient temperature leading to wrong tube temperature measurement

RTD sensor fully wetted by medium, completely isolated from ambient temperature shows highest accuracy and is unique in the market of low flow Coriolis meters

Standard insulation and heating jacket for:

- Most precise measurement by insulating from unsteady process environment conditions
- Significant energy conservation in production
- Prevention of fluid component separation or gas condensation
- Precise process temperature control in most demanding applications



ROTAMASS Low Flow Line

The ROTAMASS LR being a part of the ROTAMASS Low Flow Line is the ideal solution for multi variable process measurement in lowest flow applications.

ROTAMASS model		RCCS30LR	RCCS30	RCCS31	RCCS32	RCCS33
Flow ranges		21 kg/h 40 kg/h	45 kg/h 100 kg/h	170 kg/h 300 kg/h	370 kg/h 600 kg/h	950 kg/h 1500 kg/h
Mass flow accuracy [% of rate]	Liquids:	±0.15	±0.1			
	Gases:	±0.5	±0.5			
Repeatability	Liquids:	±0.075	±0.05			
	Gases:	±0.25	±0.25			
Density accuracy [g/cm ³] <i>*on request</i>		±0.020/ ±0.003*	±0.008/ ±0.003*	±0.004/ ±0.001	±0.004/ ±0.001	±0.004/ ±0.001
Process temperature		-50° C to +150° C				
Ambient temperature		-50° C to +80° C				
Pressure rating		up to PN 100 and ASME class 1500, P _{max} = 400bar				
Connection sizes		DN 6...15 (1/8" ...1/2")	DN 8...40 (1/4" ...1 1/2")			
Process connections		G and NPT threads, EN flanges and ASME flanges, JIS flanges, Tri-Clamp, DIN Clamp and threads acc. DIN11851				
Secondary containment		typical ≥ 65 bar				
Wetted parts material		SS 316L and Alloy C-22				
Outputs		HART® (4-20mA,pulse/frequency, status I/O), FOUNDATION Fieldbus, MODBUS				
Hazardous area		IECEX, FM, Inmetro, NEPSI, ATEX				
Insulation		Yes				
Insulation and heat tracing		Yes				

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WITH AGILITY

VigilantPlant is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

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