

RHEOTHERM®
FLOW INSTRUMENTS

Models 100 & 400 Liquid and Gas Flow Meters


- No moving parts
- Field adjustable
- Maintenance-free
- Easy installation
- Choice of wetted materials
- Long-term reliability

Rheotherm flow meters feature advanced thermal flow sensing technology for highly reliable flow measurement in liquid or gas service. With no moving parts, INTEK's *Rheotherm* design is an excellent maintenance-free alternative to mechanical meters.


- Used with liquids, gases or slurries
- Insertion probes or non-intrusive inline sensors accommodate a wide range of flow rates
- No mechanical parts to stick, wear or break
- Factory calibration is readily adjustable in the field as application requirements change
- Rugged all-metal wetted surface
- Various process connection options make sensor integration simple
- Proprietary design uses unstressed components, providing years of reliable operation. The sensor is not harmed when process flow stops or the line empties
- All *Rheotherm* flow instruments are designed and manufactured under an ISO-9001:2008 certified Quality Assurance program. FM approved options are available on selected models



Model 100 with Remote Electronics




Inline sensor with tube stubs



Insertion probe with junction box (lid removed)

Electronics similar to those shown above are installed remotely from sensors



Flanged inline sensor with junction box

Model 400 with Integral Electronics



Inline sensor with integrated electronics in a NEMA 4X enclosure (lid removed)



Insertion probe with integrated electronics



Flanged inline sensor with integrated electronics

Rheotherm Flow Meters

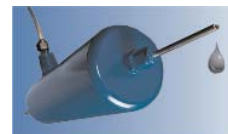
General Specifications	
Applications	Liquid, gas and slurries
Process Connection	
Inline Sensor:	Standard: Tube stubs
Probe Sensor:	Standard: 1" MNPT
Inline & Probe Sensor:	Optional: Flange, NPT, VCR, sanitary, compression, most others
Set Calibration Ranges*	Standard: Turndown 10:1 Option: 20:1
Inline Sensor:	
Liquids:	0.007 cc/min to 20 GPM
Gases:	0.001 to 320 SCFM
Probe Sensor:	
Gases:	50 to 60,000 SFPM
Response Time	1 second
Time Constant	4 - 6 seconds typical (60% of change)
Repeatability	± 0.5% of reading
Calibration Accuracy	± 1% of reading
Temperature Limits*	
Process:	Standard: 0 - 140°F (-18 - 60°C) Option: -20 - 500°F (-29 - 260°C)
Environment:	0-120°F (-18 - 50°C)
Fluid Temperature Stability	± 3% of reading over ± 30°F for most fluids
Wetted Material	Standard: 316 SS Options: Other metals
Pressure Limits	Per fitting and tubing working pressure limits
Intrinsically Safe Barrier (Model 100 only)	FM approved barrier for Class 1, Division 1, Groups A, B, C, and D sensor locations
Input Power	Standard: 115 Vac, 60 Hz Options: 230 Vac, 50/60 Hz 24-28 Vac, 60 Hz 24 Vdc
Output	Model 100: non-linear 4-20 mA Options: 0-5 Vdc 0-10 Vdc Model 400: non-linear 4-20 mA with one SPDT relay
Enclosure	Model 100: NEMA 4 Option: NEMA 7 Model 400: NEMA 4X

* Specify requirement

Rheotherm flow meters are precisely calibrated at INTEK's calibration laboratory. The measurement method ensures unparalleled accuracy at both the high and low ends of the calibrated flow range.

Inline Sensors

The inline sensor has an unobstructed flow tube for minimal pressure drop.



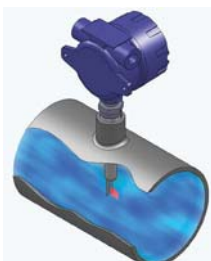
Whether employed in precision laboratories, harsh plant environments or the operating extremes of space flight, INTEK's inline sensors have a reliable, time-tested design appropriate to the application.

The standard 316 stainless steel wetted tube is compatible with most liquids and gases. For more aggressive fluids, other alloys and metals are available.

The sensor design allows for chemical or steam sterilization in place. Electropolished tubes can be specified for high purity applications.

Insertion Probes

Rheotherm insertion probe sensors provide reliable flow measurements in 1" or larger pipes and ducts. Primarily used for mass or standard volumetric gas flow rates, they can also be calibrated for low velocity liquid flow measurement. The one-piece sensor easily installs through a threaded, flanged, or hot tap coupling.



For assistance with any flow application, contact an application engineer at INTEK, *the leader in precision thermal flow metering*. Call **888-LOW FLOW (569-3569)**.



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