

Simply The Best!



Flow Meters Flow Alarms Flow Transmitters Flow Meters Flow Alarms
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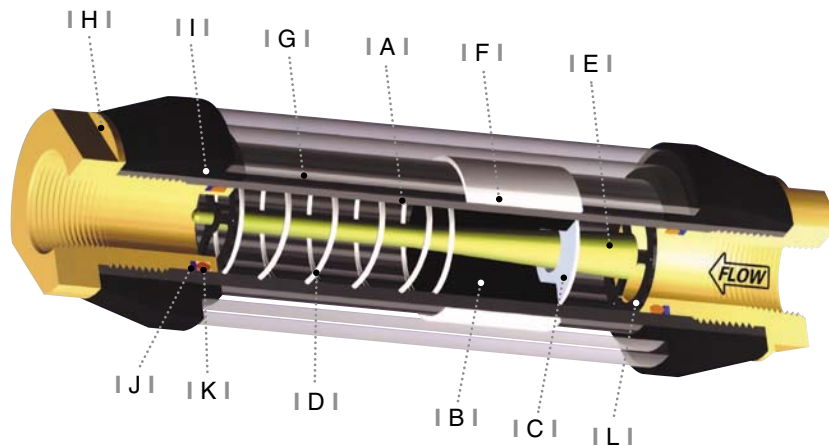
Consider the LAKE MONITORS Difference

| Our Design Tells the Story |

The basis for our product is the sharp-edged, variable orifice method that provides accurate and repeatable flow rate measurement for both liquids and gases.

| Operating Theory |

Enclosed within a high pressure casing (A), a high strength magnet (B) in tandem with the sharp-edged annular orifice disk (C), is pressed toward the zero flow rate position by a linear rate compression spring (D). A tapered metering pin (E) is positioned



- | | |
|-------------------------------------|--|
| I A High Pressure Casing | I G Window Tube |
| I B High Strength Magnet | I H End Port (2) |
| I C Sharp-Edged Annular Oriface | I I Window Tube Seal |
| I D Precision Spring | I J High-Pressure Backup Seal Ring (2) |
| I E Tapered Metering Pin | I K O-Ring Seal |
| I F Magnetically Coupled Follower | I L Pilot Disc |

concentrically within the annular orifice disk and provides a variable-area opening that increases by the square of linear displacement of the orifice disk. Fluid flow creates a pressure differential across the orifice disk, pressing the magnet/orifice disk duo against the compression spring. Flow rate is read by aligning the magnetically coupled follower (F) with the graduated scale located within the environmentally sealed window (G). The variable-area orifice design provides pressure differentials and orifice displacements that are linearly proportional to fluid flow rate.

| What makes one flow monitor better than another? |

Simply put, the design. Lake Monitors is recognized for their complete line of rugged flow rate gauges, alarms/switches, transmitters and hydraulic system analyzers.

Fundamentally, all of these products are based on the following Lake advantages:

- **Warranty:** 5 year parts and labor
- **3 Different Construction Materials:** Aluminum, Brass or #304 Stainless Steel
- **24 Different Port Sizes:** NPTF, SAE and BSP thread forms.
- **26 Flow Ranges** available:
 - Liquid - 0.05 – 1 to 12 -150 GPM
 - Air/Gas - 2 - 12 to 150 – 1300 SCFM
- **Accuracy:** ±4% of Full Scale
- **Operating Pressure:**
 - Liquid - 6000 PSI max
 - Air/Gas -1000 PSI max
- **Unrestricted Mounting Orientations**



Basic In-Line Monitors



- High value, direct-reading in-line flow monitor
- Can be used with petroleum and synthetic based oils as well as water based fluids
- Weather tight construction for outdoor use
- Operating temperature up to 240° F

Flow Rate Transmitters



- 4-20mA, 0-5 VDC and 1-5 VDC outputs
- Rugged cast aluminum NEMA type 4X enclosure
- Suitable for wash down and mobile/outdoor applications
- Provides local indication of flow rate

WARRANTY
5 year parts and labor

Pneumatic Flow Rate Monitors



- Low cost, direct-reading in line gauge
- May be used to verify air compressor outputs
- Custom calibrations available for alternate media/operating pressures

Visi-Rate Monitors



- Compact inline indicator
- Transparent body allows for visual inspection of fluid conditions
- Ideal for permanent installation in lubrication, cooling and hydraulic pump case drain systems

High Temperature Monitors



- Designed to handle the punishing fluid and ambient temperatures found in barrel heater and metal casting environments
- Maximum operating temperature ratings of 400° F and 600° F available

Flowstat® Turbine Flow Monitors



- Low cost, in-line turbine flow rate transmitter
- Measuring accuracy of $\pm 2\%$ of range
- Integrated hermetically sealed 2-wire, 4-20 mA interface
- Optional clear cover allows for viewing of impeller rotation

Flow Rate Alarms



- Provides continuous monitoring and control of flow rate levels
- Rugged cast aluminum NEMA type 4X enclosure
- Suitable for outdoor use
- Available with either one or two field adjustable limit switches

Test Analyzers



- Complete trouble shooting system
- No electrical hook-up needed
- Compact design allows for easy transport

Phosphate Ester Monitors



- Direct-reading in-line gauge
- Factory calibrated for phosphate ester fluids
- All materials of construction compatible with phosphate esters

Flow Analyzer/Flow Totalizer



- May be powered by 110 VAC or 12-24 VDC
- Interfaces with Flow Transmitter and FlowStat®
- Two programmable 10A relays
- Accepts analog inputs of 0-5V, 0-10V, 1-5V, 4-20mA and 0-20mA

Special Designs

Even with Lake Monitors' comprehensive product line, there are many requirements that may not fit the standard. A large portion of Lake Monitors' business consists of modified products to meet specific conditions required by our customers.

Feel free to call and speak with our technical staff about your specific needs.

| **Lake Monitors** . . . |

- o FLOW METERS
- o FLOW ALARMS
- o FLOW TRANSMITTERS

Simply The Best!



Lake Monitors provides the industry with high-quality, low-cost and virtually maintenance free flow monitors. Incorporating over 20 innovative and unique design features, Lake Monitors is, dollar for dollar, superior in quality to any other monitor available on the market.

For performance, value, and a 5-year Warranty, choose Lake Monitors.



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