

# Variable Area Flow Meters

## Basic In-line Flow Meters

Hedland offers a complete line of over 15,000 variable area flow meters to measure oil, phosphate esters, water and water-based fluids, as well as air and other compressed gases. In addition to the basic in-line model, these variable area flow meters are available in high temperature models and test kits with pressure gauge.

- Rugged, durable construction featuring aluminum, brass and stainless steel bodies
- Most models available in sizes from 1/4" to 3"
- Accuracy of  $\pm 2\%$  of full scale
- Temperatures to 240 °F (116 °C); 400 °F (204 °C) for high temperature models
- Pressures up to 6000 psi (414 bar)
- Operates in any position
- No flow straighteners or special piping required
- 360° rotatable scales
- Custom scales available



## Flow-Alert™ Flow Switches

The Flow-Alert flow switches provide both visual flow indication and the capability to signal alarms, open or close circuits, trigger warning lights and buzzers, and shut down pumps or other equipment.

- Micro switch (latching) or reed switch (proximity) models available
- Choice of one or two switches per meter
- Available in meter sizes from 1/4" to 1 1/2"
- Accuracy of  $\pm 2\%$  of full scale



## MR Flow Transmitters

The MR flow transmitters feature non-contact sensor electronics and are designed to operate as part of a totally integrated electronic process control /data acquisition system.

- Digital flow rate and total flow indication
- In-field compensation for application specific fluid parameters eliminates the need for custom scales
- Provides 4-20 mA, 0-10 Vdc or 0-5 Vdc analog output
- CE compliant



## EZ-View® In-line Flow Meters

The EZ-View product line is a reliable, trouble-free flow rate indicator for low pressure applications. Constructed of high-impact polysulfone plastic, these meters provide a low cost, rugged flow measurement solution for both liquid and air/gas applications.

- End fittings in brass, 303 stainless steel or PVC
- Available in sizes from 1/2" to 2"
- Temperatures to 250 °F (121 °C)
- Pressures up to 325 psi (22.4 bar)
- Accuracy of  $\pm 5\%$  of full scale
- Flow-Alert™ models available



# Additional Technologies



## HTTF Transit Time Ultrasonic Flow Meters

The HTTF Series utilizes a non-intrusive, clamp-on design for liquid measurement in pipe sizes from 1/2" to 100". Compact, integral models are available for pipe sizes from 1/2" to 2". Remote mount models provide flow measurement for the full range of pipe sizes.

- Easy, low cost installation
- Offered with or without a local display
- Provides rate and total (forward, reverse and net)
- 4-20 mA and pulse outputs for direct interface to data collection systems
- Designed for maintenance free operation
- Software utility allows in-field calibration and configuration
- Class I, Division 2 hazardous area certification



## HTP Portable Transit Time Ultrasonic Flow Meters

Hedland's HTP Series is a portable flow meter utilizing transit time ultrasonic technology. Featuring non-invasive, clamp on transducers, these meters are designed for long- or short-term flow measurement surveys on full pipe liquid systems for pipe sizes 1/2" and higher.

- Non-invasive meter clamps onto the outside of piping
- Easy, low cost installation
- No moving parts for maintenance free operation
- Pipe sizes from 1/2" and higher
- Bi-directional flow capability to measure forward total, reverse total and net total
- Optional, removable 200,000-event Data Logger
- Software utility allows configuration, calibration and troubleshooting via a wireless, infrared serial adapter
- Includes all required accessories in a compartmentalized, padded carrying case



## HB Turbine Flow Meters

Designed to withstand the demands of the most rigorous flow measurement applications of water and other liquids, the HB Series turbine flow meters feature rugged stainless steel and tungsten carbide construction. For a complete system, the HB2800 flow monitor provides a local indication of both flow rate and total flow. To integrate with other instruments, PLCs and computers, Hedland also offers additional electronic accessories.

- Flow ranges from 0.6-3 to 500-5,000 GPM (2.27-11.36 to 1893-18,927 LPM)
- NPT, BSP, Victaulic®, or flange end connections from 1/2" to 10"
- Accuracy of ±1% of reading
- Temperatures to 350 °F (177 °C)
- Pressures up to 5000 psi (345 bar)
- CE compliant
- CSA Class I, Division 1, (intrinsically safe) certification

## Hydraulic Diagnostic Products

### Flo-Check® USB Hydraulic System Analyzer

The Flo-Check USB represents the next generation of hydraulic test equipment. The device simultaneously measures flow, pressure, temperature and power within a hydraulic system. This data is displayed and logged through a custom Windows®-based software application; data is received from the Analyzer through a standard USB cable (both software and cable are included with the unit). The Flo-Check USB is ideal for testing, troubleshooting and diagnosis in mobile and industrial hydraulic applications, and for setting hydraulic components such as pumps, valves and motors. The unit is bi-directional and includes a low-resistance load valve and internal pressure relief discs.



- ±1% of full scale accuracy
- Field selectable US or metric readings
- High and low set point alarms for flow, pressure, and temperature
- Captures pressure spikes up to 690 bar (10,000 psi) 0.2 milliseconds duration
- Exports saved data to Microsoft Excel® and other spreadsheet programs
- USB powered
- Easy to use, plug and play
- Calculates hydraulic power
- Select continuous monitoring or capture data manually
- Logs up to 12 hours
- Records alarm history

### Flo-tech Portable Hydraulic Testers

Flo-tech's compact, self-contained portable hydraulic testers provide fast diagnostic troubleshooting of all types of mobile or stationary hydraulic systems. Models available include the versatile PFM6, the PFM6BD for bi-directional applications and the all digital PFM8 which includes a dynamometer.

- Flow ranges from 1-15 to 7-199.9 GPM (4-56 to 26-757 LPM)
- Port sizes from SAE 12 to SAE 24 (G ¾ to G 1½)
- Accuracy of ±1% of full scale (forward flow)
- Temperatures to 300 °F (150 °C)
- Pressures up to 6000 psi (414 bar)



### Flo-tech Turbine Flow Sensors

Flo-tech's turbine flow sensors are available in a variety of configurations for measuring flow, as well as temperature and pressure, of hydraulic fluids or other compatible fluids. Four basic models are available – Activa™, Ultima, Classic and Quad.

- Flow ranges from 0.4-7 to 10-350 GPM (1.5-26 to 37-1324 LPM)
- Port sizes from SAE 8 to SAE 20, (G ¼ to G 1¼); SAE 20 to SAE 24, Code 61; and SAE 20 to SAE 32, Code 62
- Available with frequency or analog output for flow
- Optional pressure and temperature analog outputs
- Accuracy of ±1% of full scale (forward flow)
- Temperatures to 300 °F (150 °C)
- Pressures up to 6000 psi (414 bar)
- Bi-directional flow measurement available (Quad models)



### Flo-tech Digital Displays/Signal Processors

Flo-tech also offers a line of digital panel displays/signal processors to provide a complete flow measurement package. Various models are available that will accept either the 4-20 mA signal from Flo-tech's Activa Sensor Array or frequency signal input from the Ultima, Classic and Quad turbine flow sensors.

- Displays rate and/or total
- AC, DC, battery and loop powered versions
- Built-in sensor or transmitter power supply
- Optional analog output, digital communications and setpoint alarms
- CE compliant

**HEDLAND**  
hedland.com

**MAILING ADDRESS**  
P.O. Box 081580  
Racine, WI 53408-1580 USA

**SHIPPING ADDRESS**  
8635 Washington Avenue  
Racine, WI 53406-3738 USA

**TELEPHONE**  
262-639-6770  
800-HEDLAND  
800-433-5263

**FAX**  
262-639-2267  
800-CHK-FLOW  
800-245-3569

**E-MAIL**  
hedlandsales@racinefed.com

HEDLAND, EZ-VIEW, and FLO-CHECK are registered trademarks of Racine Federated Inc. Flow-Alert, Flo-tech and Activa are trademarks of Racine Federated Inc. Victaulic is a registered trademark of Victaulic Company. CSA is a registered trademark of Canadian Standards Association. Windows and Excel are registered trademarks of Microsoft Corp. © 2009 Racine Federated Inc., all rights reserved.

Form No. 315 7/09 Printed in USA