



FLOW MEASUREMENT TECHNOLOGY FOR POWER AND ENERGY

ABOUT AW-LAKE COMPANY

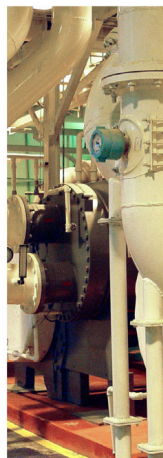
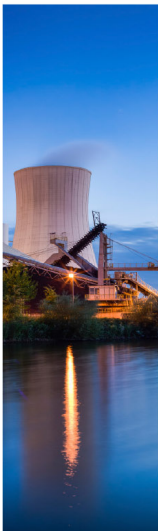
AW-Lake Company was founded in 1984 as a manufacturer of flow meters and flow monitoring equipment, servicing industrial paint and hydraulics applications. After a strong start in the Automotive sector, AW-Lake diversified into many other industrial markets, including Oil & Gas, Pharmaceuticals, Medical Equipment, Power Generation, General Manufacturing, and Industrial Processing. AW-Lake Company is now a division of the TASI Flow Group, with specialized flow instrumentation companies spanning the globe.



MJ Systems, LLC
Authorized AW Lake Representatives
502 N 8th St • La Porte, TX 77571
Off (281) 842-7600 • Fax (281) 842-7601
www.mjsusa.com • sales@mjsusa.com



8809 Industrial Drive
Franksville, WI 53126
off: **800-850-6110**
fax: **262-884-9810**
www.aw-lake.com





AW Gear Meters, a brand of AW-Lake Company, is recognized in the flow measurement industry for the highest quality products and superior customer service. Founded in 1984, AW Gear Meters has emerged as the leading manufacturer of flow control products in North America. Our products include spur gear flow meters, helical gear flow meters, electronic sensors, flow computers, in-line optical sensors and signal conditioners. Common products used for power and energy industries include:

Ball Bearing Spur Gear Meters (KG)



- Ranges span from 0.001 to 120 GPM
- Up to 5,000 PSI
- Lubricating fluids and fuels
- Six flow ranges available
- Bi-Directional
- Aluminum, 303 and 316 Stainless Steel body

High Pressure Spur Gear Meters (JVHS)



- Ranges span from 0.003 to 7 GPM
- 15,000 PSI
- Accuracy $\pm 0.5\%$
- Xylan or Inconel coated bolts
- Bi-Directional
- 316Ti Stainless Steel body

Sleeve Bearing Spur Gear Meters (CG)



- Ranges span from 0.001 to 20 GPM
- Up to 5,000 PSI
- Accuracy $\pm 0.5\%$
- Viscous fluids
- Six flow ranges available
- Bi-Directional
- 303 or 316 Stainless Steel body

Subsea PD Flow Meter



- Ranges span from 0.001 to 70 GPM
- Internal Pressure up to 15,000 PSI
- External Pressure up to 8,700 PSI
- 400:1 Turndown with linearization
- Choice of materials for body, rotor, shaft, bearings and seals

AW Gear Meters offers a wide variety of monitoring devices and controllers to meet your specific system requirements – from digital displays to batch controllers. Most oil & gas applications utilize:

Meter Mounted Monitors



- CSA explosion-proof rating available
- Battery, loop, or 15-24 VDC supply
- Hart communication protocol
- 4-20 mA rate and scaled pulse outputs
- Programmable outputs

Sensor Options Include:



- Pulse output
- Fiber optic
- mA output
- Voltage output
- Quadrature
- High temperature

Custom Engineering and Product Modification

AW-Lake Company is unmatched in the industry as a provider of custom engineering solutions for your flow metering needs. Our state-of-the-art computer design programs, custom machining facility at sister company KEM Kueppers and highly educated and experienced engineering staff are ready to work on your custom project.



AW Gear Meters also manufactures high performance, precision turbine flow meters and electronics, crafted on state of the art machining centers. Our turbine meters are wet tested on a flow calibrator to ensure accuracy and repeatability. With more than 50 years of experience, AW Gear Meters continually serves global customers in oil & gas, petrochemical, semiconductor, food & beverage, pharmaceutical and process control.

Standard Turbine Flow Meter (TRG)



- Ranges span from 0.08 to 5,000 GPM
- Up to 5,000 PSI
- Water, solvents, fuel & low viscosity fluids
- Accuracy $\pm 1\%$ of reading
- Bi-Directional
- 316 Stainless Steel body

High Pressure Turbine Flow Meters (HM)



- Ranges span from 0.08 to 32 GPM
- 20,000 PSI
- Accuracy $\pm 1\%$ of reading
- Available in 10 flow ranges
- Bi-Directional
- DIN 1.3980 body

Flanged Turbine Flow Meters (HM-F)



- Ranges span from 0.008 to 12,000 GPM
- Up to 15,000 PSI
- Accuracy $\pm 1\%$ of reading
- ANSI, tri-clamp, AutoClave, Graloc and Techlok
- Available in 25 flow ranges
- Bi-Directional
- 316 Ti body

Subsea Turbine Flow Meters



- Ranges span from 0.08 to 16 GPM
- Operating Pressure to 20,000 PSI
- External Pressure up to 7,200 PSI
- Amplified pulse or 4-20mA output
- Temperature ranges -40 to 250°F
- 316 Ti body

AW Gear Meters offers a complete line of compatible electronics for oil & gas including a explosion-proof displays, local meter-mounted and remote displays to meet your specific system requirements.

Meter Mounted Monitors



- CSA explosion-proof rating available
- Battery, loop, or 15-24 VDC supply
- Hart communication protocol
- 4-20 mA rate and scaled pulse outputs
- Programmable outputs

HUB-4xEX Hazardous Area Flow Sensor



- Certifications cCSAus, IECEx or ATEX
- Supply voltage 10-24 VDC
- Pulse output
- Temperature ranges -4 to 140°F
- Terminal block or NPT connections
- Type 4X Enclosure

Custom Engineering and Product Modification

The AW turbine meters are manufactured in our German facility by highly skilled technicians with acute attention to detail. They can be customized to suit particular requirements with special electronics, array of controllers, transmitters, a vast selection of sensors and variety of materials of construction.



For over 30 years, Litre Meter has supplied businesses worldwide with a large selection of durable, industry-standard flow meters, and electronics. Litre Meter stands out in the upstream oil & gas sector. Their rotary piston flow meter measures very low flow rates, high pressures, relatively coarse filtered fluids, and pulsating flows. In addition to their standard flow meters, Litre Meter has an excellent reputation for designing customized flow measurement solutions.

VFF-LF Rotary Piston Flow Meters



- Ranges span from 0.001 to 22 GPH
- 0 to 60,000 PSI
- Accuracy $\pm 1\%$ of reading
- Wide viscosity range
- Variety of materials and process connections
- Turndown ratio up to 100:1

VFF-HF Rotary Piston Flow Meters



- Ranges span from 1 to 4,260 GPH
- Up to 60,000 PSI
- Accuracy $\pm 1\%$ of reading
- Hazardous area approved
- 316 Stainless Steel body standard
- Temperature ranges -40 to 150°C

VFF Measuring Chamber



- Precision turning
- Pressure balanced chamber available
- One moving part
- Low maintenance
- PVD Coated
- Low flow rates at extreme pressures

Pelton Wheel Flow Meters



- Ranges span from 0.001 to 8,000 GPH
- Up to 30,000 PSI
- Accuracy $\pm 2\%$ of reading
- Low viscosity fluids
- Low pressure loss
- Variety of materials and connections
- Sapphire ball bearing

Litre Meter offers safe area, hazardous area displays and instrumentation for use with the VFF and Pelton Wheel flow meters to suit a wide range of process conditions.

LM Flow Pod



- Direct or remote mounted
- Programmable card input
- Hart communication protocol standard
- 316 Stainless Steel body
- Certifications - ATEX, IECEX, CSA
- 2 or 4 wire 4-20mA
- Rotatable through 360°
- Standard and high resolution sensing
- 12-30 Vdc
- Toolless assembly; easy wiring

Custom Engineering and Product Modification

The Litre Meter company manufactures these flow meters in Buckinghamshire, UK. The wide range of meters feature customization options particularly suited to the harsh environments in the offshore oil & gas market. The materials available for construction, flow rates and pressure ranges set the standard for the demanding and specialized operating conditions used in upstream chemical injection.



Lake Monitors offers an extensive line of Variable Area flow meters, as well as Paddle Wheel flow meters. Founded in 1989, Lake Monitors serves the fluid power, flow control and processing markets with inline flow meters, switches/alarms, and transmitters for closed loop piping systems. Lake's high-quality, low-cost flow monitoring products can be utilized in either compressed gas or liquid systems and are available in high pressure (5000 psi) and high temperature (600°F) models. Lake's patented designs allow for installation in any orientation.



- Manufactured and calibrated onsite in Wisconsin, enabling expedited shipping
- Meters for specific applications: pneumatics, high temperature, case drain monitoring, and phosphate ester
- Measuring ranges starting at .05 gpm all the way up to 150 gpm (1.5 -1300 scfm for air meters)



LAKE MONITORS

POWER AND ENERGY INDUSTRIES SERVED



OIL & GAS

As the leading supplier of offshore chemical injection flow meters, AW-Lake is acutely aware of the unique challenges faced by our Oil & Gas customers. We lead the onshore industry with our TRICOR Coriolis meter that has Net Oil calculations built right in. Together we help customers increase process efficiency, save operation costs, and reduce down-time.



CHEMICAL/PETROCHEMICAL PROCESSING

We manufacture multiple lines of flow instrumentation well suited to the Chemical and Petrochemical industries. From organic chemicals to industrial solvents, resins, and adhesives, we supply meters capable of providing accurate measurement solutions to a wide variety of chemical applications.



FLUID POWER

Several of AW-Lake's product lines are particularly suited to around-the-clock monitoring of lubrication levels and process fluid quality to maintain optimal performance of hydraulic systems. Our broad line of electronics display flow measurement data at the meter or transmit that data to larger internal systems, computers or PLCs as needed.

