





















# FLOW MEASUREMENT TECHNOLOGY

Serving a Broad Range of Industries

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## COMPANY OVERVIEW

The TASI Flow group of companies manufactures 8 flow metering technologies, sensors, monitors and controllers to meet the most demanding applications. AW-Lake Company is the US branch of TASI Flow with manufacturing, engineering, sales and marketing support for all flow brands. We offer standard products with fast, on-time deliveries as well as custom solutions designed to meet the specific needs of each application.

Our wide range of flow measurement technologies includes:

- Coriolis
- Positive Displacement
- Helical
- Turbine

- Thermal Mass
- Rotary Piston
  - Pelton Wheel
  - Variable Area

While AW-Lake's business and product portfolios have significantly grown over the years, our primary focus is still the same; **exceeding customer expectations.** 





### PD & TURBINE FLOW METERS FOR LIQUID

The AW Gear Meter product line encompasses both spur gear and helical gear (spindle-type) positive displacement flow meters, axial turbine meters, and a whole array of controllers, monitors, transmitters, and sensors. The positive displacement and 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 and materials of construction.

- Fifteen flow meter product families within the Positive Displacement and Turbine product lines
- Gear meters measure from 2 cc/min to 265 gal/min, turbine meters measure from .008 to 12,000 gal/min.
- Vast selection of specialized sensors and electronics available, including EX-rated



TRICOR<sup>®</sup> Coriolis Technology engineers have been intimately involved with the development and evolution of Coriolis flow instrumentation since the beginning. In fact, many of the critical patents for Coriolis technology bear our engineers' names. TRICOR constructed a global engineering team comprised of electrical, mechanical, software, test, and R&D engineers in the US, Germany, and Switzerland. Our state-of-the-art manufacturing facility in Germany is equipped with highly accurate calibration and test equipment that guarantees performance.

- Designed using the very latest computer technologies to improve upon the outdated designs of the competition
- TCM Coriolis mass flow meter sizes from 1/8" to 4" (11 lbs/min to 15,800 lbs/min)
- Numerous options, including: a high pressure model, net oil computing, and batching, as well as numerous mounting methods, interfaces, EX ratings, and cable lengths



#### THERMAL MASS FLOW METERS FOR GASES

Vogtlin Massflow manufactures thermal mass flow measurement and control instruments and is headquartered in Switzerland. Vogtlin supplies businesses worldwide with high-quality, innovative flow meter products, professional service, and commitment to a close partnership with clients. The **red-y** series of thermal mass flow meters offer 3 models, **Smart, Compact**, and **Industrial.** They are offered with Explosion-proof area classifications, as well as hundreds of different combinations of features so you can find the precise flow meter for your application.

- Swiss quality manufacturing and calibration
- Real gas calibration (air,  $\mathsf{O}_2,\,\mathsf{N}_2,\,\mathsf{He},\,\mathsf{Ar},\,\mathsf{CO}_2,\,\mathsf{H}_2,\,\mathsf{CH}_4,\,\mathsf{C}_3\mathsf{H}_8)$
- MEMS technology for high accuracy measurement
- Measuring ranges from 0 to 480 slpm





### PD & TURBINE FLOW METERS FOR LIQUIDS

KEM serves the TASI Flow family of companies as the state-of-the-art manufacturing headquarters. Located in Germany and occupying over 43,000 square feet of pristine manufacturing space, KEM provides world-class quality machining, welding, assembly, and calibration. KEM's highly skilled engineers have extensive experience in the flow measurement world, as well as a broad knowledge of the many industrial markets served.

- Measuring principles: Coriolis, turbine, spur gear, and helical gear.
- More than 50 years of experience manufacturing flow metering equipment
- Flow Ranges: Turbine Meters: .03-25,000 lpm Spur Gear Meters: .0021/min-1,000 lpm Helical Gear Meters: .01-400 lpm



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 and go up to 150 gpm (1.5 -1300 scfm for air meters)



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 and gas sector. Their rotary piston flow meter measures very low flow rates (as low as 0.05 cc/min), high pressures (up to 60,000 psi), relatively coarse filtered fluids, and pulsing flows. In addition to their standard flow meters, Litre Meter has an excellent reputation for designing customized flow measurement solutions.

- Developed their rotary piston flow meter for the low flow/high pressure chemical injection market
- Pioneered the development of the Pelton wheel flow meter
- Meters measuring from 0.05 cc/min up to 270 lit/min
- Exd display of rate and total 24Vdc, 2 or 4 wire with HART or 4-20mA output



SignalFire Telemetry manufactures wireless equipment designed to network different sensor types. The systems utilize SignalFire's unique mesh network technology. SignalFire systems have low power draw and long range capabilities making them ideal for remote, outdoor, large-scale monitoring and control applications. The systems work with level, pressure, temperature, flow, and other sensors and they also offer critical asset control of valves, pumps, fans, heaters and an array of other devices. SignalFire systems have been deployed in oil & gas fields, pipelines, petrochemical plants, irrigation systems, and a variety of other applications.

- Compatible sensors include Analog (4-20mA, 1-5V), Modbus, HART, Digital I/O, RTD, TC, Pulse, and others
- Wireless node setup is simple and straight forward with SCADA-capable diagnostics
- Battery power systems can power sensor and radio making local power unnecessary
- Wireless remote sensor and node configuration standard

## INDUSTRIES



### 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.



AW-Lake designed several flow meter lines that excel at measuring the flow of paints, coatings, sealants and adhesives found in automotive and general manufacturing. For decades, AW-Lake has produced meters that handle materials that are thick, abrasive, and subject to a broad range of system pressures.



Whether for subsea drilling operations, blowout prevention, ROV maintenance, valve actuation or subsea chemical injection AW-Lake's subsea PD and turbine flow meters are up to the task. Your offshore mission critical processes require the most reliable, highest accuracy instruments – those that were designed for the harsh subsea environment.

# INDUSTRIAL VEHICLE

Working with OEM manufacturers, AW-Lake has many years of experience providing flow measurement solutions to manufacturers of industrial, agricultural, and military vehicles. We help our customers safely monitor performance of cooling systems, lubrication systems, and other critical systems in these hard-working vehicles.





### MARINE

Since fuel usage directly affects operating costs in the maritime industry, accurate fuel consumption data is critical for controlling costs, decreasing fuel usage, and meeting EPA standards. Our ABS approved TRICOR Coriolis meters provide accurate mass flow measurements that help ship owners and operators keep their fleets globally competitive.

## 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.



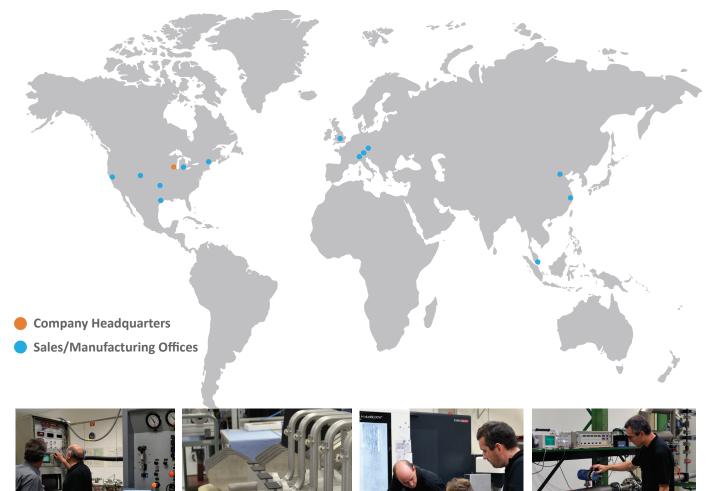




# DEDICATED SALES ORGANIZATION

Our network of sales offices and representative organizations at your disposal is designed with full coverage in mind. We operate manufacturing/sales offices in 6 countries (US, Germany, Switzerland, United Kingdom, China, Singapore), 6 locations across the US (Wisconsin, Colorado, Texas, Michigan, California, Oklahoma) and a global network of sales offices strategically located to support our customers. In-house at AW-Lake, we have market-specific sales specialists who are experts in their fields, as well as product-specific experts with our on-staff Business Development Managers (BDMs), dedicated sales representatives and distribution channels.

Oil & Gas Industry – Direct sales through in-house Oil & Gas BDMs and select industry partners Automotive Industry – Direct sales through in-house Automotive BDMs and select industry partners TRICOR Coriolis – In-house Coriolis BDMs and a network of dedicated sales representatives Vogtlin Massflow – In-house Thermal Mass BDM and a network of dedicated sales representatives LAKE Monitors – Sales through distribution channels



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