



EUROLOOP ADVANCES HIGH-INTEGRITY GAS CALIBRATION WITH ULTRASONIC TECHNOLOGY

Customer

EuroLoop, The Calibration Company in Rotterdam, Netherlands, is one of the world's largest high-pressure, closed loop, gas calibration centers, delivering traceable, high-integrity measurement for the global energy industry.

Application

High-pressure natural gas flow calibration and reference measurement in a closed-loop facility requiring audit-ready, highly repeatable measurement to support custody transfer calibration—where gas metering accuracy directly impacts financial integrity.

Challenge

Calibration facilities traditionally relied on turbine meters for reference standards but faced high maintenance costs, limited flexibility, and restricted operational insight.

- Limited rangeability vs ultrasonic gas meters
- High maintenance and downtime from moving parts
- Limited automation and process visibility
- Prior ultrasonic technologies could not meet repeatability requirements

EuroLoop needed a solution that could deliver turbine-level repeatability while unlocking the operational advantages of ultrasonic measurement including broader rangeability, lower maintenance, and enhanced diagnostics.

Results

- Reduced infrastructure costs by downsizing from 16" to 12" meters
- Achieved reference-level repeatability, enabling transition from turbine meters
- Expanded measurement range with more linear, consistent performance
- Lowered total cost of ownership through reduced maintenance and optimized design
- Increased uptime with reliable, low-maintenance operation
- Automated calibration processes with real-time diagnostics and deeper process insight

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Solution

Emerson partnered with EuroLoop to deliver a breakthrough solution proving ultrasonic technology could meet the repeatability required for calibration reference measurement.

- Deployed Rosemount™ 3418 8-path Gas Ultrasonic Flow Meters delivering high-integrity custody transfer measurement accuracy
- Installed five ultrasonic gas meters as reference standards, supported by additional watchdog meters for ongoing validation
- Multi-path design maintains gas metering accuracy without extensive flow conditioning and compact installation
- Access to advanced diagnostic data and raw measurement outputs, enables full traceability and deeper operational insight

Through a phased validation approach, Emerson demonstrated that ultrasonic technology could achieve the repeatability required to replace turbine meters in reference applications. The solution also supports compliance with industry standards and enables more efficient, lower-impact operations.

Conclusion

As the first calibration facility to adopt ultrasonic gas meters as the reference standard, EuroLoop is setting a new benchmark for performance and innovation. This shift not only improves measurement performance but also redefines how calibration facilities can balance accuracy, efficiency, and long-term cost.

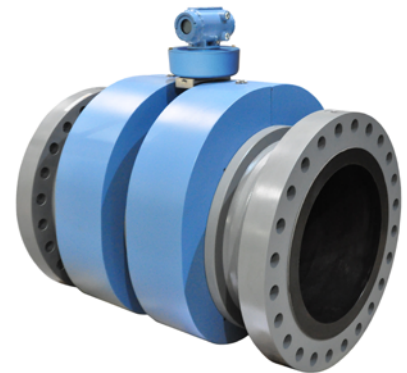
The result is a future ready calibration facility that operates with confidence in every measurement, reduced operational risk, and a foundation for automated, data driven performance—fully aligned with evolving industry and regulatory demands.

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Rosemount ultrasonic technology has delivered reference-level accuracy, enabling a breakthrough transition from turbine to ultrasonic reference meter measurement in high-pressure gas calibration.

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Ray van Hartingsveldt
Euroloop



Rosemount™ 3418 Eight-Path Gas Ultrasonic Flow Meter

For more information, visit
[Emerson.com/RosemountUltrasonic](https://www.emerson.com/RosemountUltrasonic)

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