



PROCESS INSTRUMENTATION

6 reasons why Siemens clamp-on ultrasonic flow meters **should be your go-to choice**

usa.siemens.com/clamp

SIEMENS

1. Zero Maintenance – Hassle-Free Operation with “Fit and Forget” Reliability

No need for messy coupling compounds such as gels or greases. Siemens clamp-on ultrasonic flow meters offer a truly maintenance-free solution; Dry Coupling Pads, that allows you to “fit and forget” these devices in your application.



2. Accuracy – Unparalleled Precision, Out-of-the-Box

Siemens clamp-on ultrasonic flow meters deliver an impressive standard accuracy of ± 0.5 to 1% for flow velocities above 0.3 m/s (0.9 ft/s) without the need for any initial calibration of the transducers. This exceptional capacity for precision comes standard, ensuring you can trust the reliable measurements from the moment of installation.



3. Matched Transducers – Superior Low-Flow Performance, Engineered for Precision

The key to our clamp-on flow meters’ outstanding low-flow measurement capabilities lies in the precisely matched transducer pairs using ultra-stable materials. This carefully engineered design delivers best-in-class accuracy, even at the lowest flow rates, empowering you to capture critical data across your entire process.



4. Set-up – Streamlined, Hazardous-Area Approved Installation

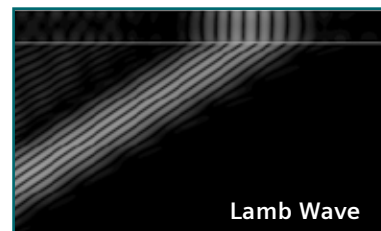
Siemens clamp-on flow meters feature an external digital sensor link (DSL) that can be installed right alongside the sensors. With FM Class 1 Division 1 approval, the DSL allows you to keep the transducer cables short and simple, eliminating the need to run multiple lengthy cables. All of the measurement data is transmitted digitally to the transmitter, via a single SSL cable, eliminating complex cable installations and enhancing noise immunity.



5. Lamb Wave/ Shear Wave – Precision-Tuned Transducers for Unparalleled Performance

Siemens clamp-on ultrasonic flow meters offer two specialized transducer types to handle a wide range of applications:

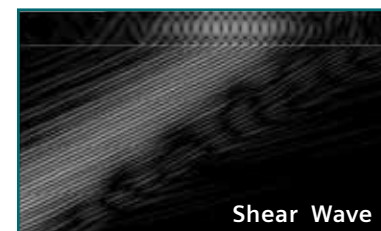
High-Precision Lamb Wave Transducer: Pioneered by Siemens for use on both Gas and Liquids, these transducers transmit a signal precisely tuned to the pipe’s resonant frequency and phase velocity for maximum accuracy and stability over the widest range of application conditions. Lamb wave transducers are the Siemens preferred selection for all applications, not just the challenging ones.



Lamb Wave

Universal Shear Wave Transducers: Ideal for standard liquid applications, our universal sensors also utilize software-tuned frequencies that perfectly match the pipe, ensuring reliable measurements across diverse process conditions.

Siemens advanced transducer technology, with frequencies tuned to the process pipe, ensure you always have the perfect transducer for your application, giving you unparalleled performance compared to conventional clamp-on flow meters.



Shear Wave

6. Temperature Compensation – Precise Temperature Compensation for Critical Accuracy

To ensure the most accurate measurements, we offer PT1000 external temperature sensors (RTD) as an optional add-on to our flow meters. This external sensor provides precision process temperature data to enable robust compensation in accordance with the ASME MFC-5.1-2011 standard. An external RTD delivers an improved process temperature reading over the integral transducer RTDs, used for temperature compensation of competitive transducers. Siemens is the only manufacturer to ensure no loss of performance due to temperature by offering Lamb Wave transducers in two different temperature ranges. Temperature measurement is required for demanding oil, gas, and other critical applications.

