

ULTRASONIC FLOW METERS BY PANAMETRICS

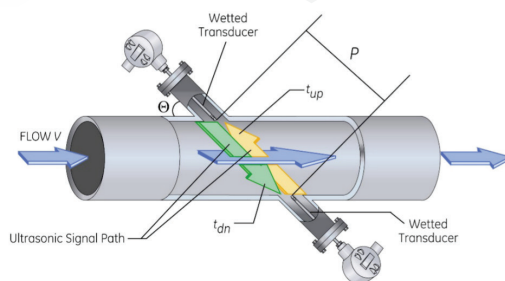
Maintaining Performance in Unstable Conditions

 Panametrics

ULTRASONIC FLOW METER SOLUTIONS

In many industries, process control relies on knowing how much fluid flows through the pipelines in order to optimize efficiency and maximize profit. Flow meters measure the flow rate, or quantity, of liquids, gases and steam using a variety of technologies.

Among these technologies, ultrasonics remains one of the fastest growing in the oil & gas industry because of its accuracy, reliability and diagnostic capabilities. With no moving parts to wear out and no obstruction to the flow, ultrasonic flow meters provide an overall cost of ownership lower than that of mechanical flow meters and older flow meter technologies.



KEY BENEFITS AND FEATURES

An ultrasonic flow meter utilizes ultrasound to measure the velocity of a fluid and is used in a variety of fluid applications. Ultrasonic flow meters are ideal for water and other liquids. Key benefits and features include:

- Measure flow using sound and are non-invasive
- Have a high turn-down ratio and provide no pressure drop
- Minimize the long-term cost of ownership
- Doppler based solutions
- Leverage transic time technology, the time differential between signals sent upstream and downstream
- Better accuracy than mechanical meters



ULTRASONIC INLINE FLOW METERS

Ultrasonic flow meters enable our customers to accurately measure the volume and velocity of various process liquids, whether polluted or ultra-pure. Panametrics' inline flow meters are better suited for permanent pipeline installations where accurate, reliable measurements are required.

► DIGITALFLOW GM868 GAS FLOW METER

General-purpose gas flow meter designed to measure gas flow in pipes or ducts.

The meter includes wide-range transducers that block obstructions and, because of its design, eliminates pressure drop. This accurate ultrasonic meter ensures reliable gas flow that requires little or no maintenance.



► DIGITALFLOW GS868 ULTRASONIC STEAM METER

An ultrasonic steam meter that measures steam while avoiding pressure drop.

The GS868 flow meter can cover a wide range of flow rates that reduce capital and installation costs.



► DIGITALFLOW GF868 FLARE GAS MASS ULTRASONIC FLOW METER

The GF868 and XGF868i not only improves the efficiency of petrochemical plants, refineries and offshore platforms but is used to conserve energy and reduce product loss by identifying sources of leaks into flare systems. It uses a proprietary algorithm to determine instantaneously the molecular weight and mass flow rate of the flare gas. It also improves



► DIGITALFLOW XGM868i ULTRASONIC STEAM METER

Panametrics DigitalFlow XGS868i is a complete ultrasonic flow metering system for measuring saturated and superheated steam. The electronics are housed in a compact transmitter that can be installed right at the flow measurement point, making transducer wiring easier, and reduces operation problems.



► PANAFLOW Z1G & Z2G

ULTRASONIC FLOW METER SYSTEMS FOR GAS

The PanaFlow ultrasonic flow meter systems are high-performance, affordable solutions for a variety of gas and liquid flow applications.

The Z1G provides a one-path configuration gas flow meter, while the Z2G is a two-path gas flow meter. Both offer a broad range that is accurate and reliable, and available in robust, sleek designs.



► PANAFLOW Z3

THREE-PATH WETTED METER FOR LIQUIDS

The PanaFlow Z3 by Panametrics is a three-path wetted meter designed specifically for dependable, accurate, and repeatable flow measurement of process liquids.

With a sleek industrial design and ultra-reliable electronics, it provides a top-of-the-line choice for process and industrial applications.

► PANAFLOW HT SIL

SIL-RATED FLOW METER

The PanaFlow HT is a SIL-rated flow meter that offers the ability to take accurate measurements at the bottom of a refinery.

The PanaFlow HT is ideal for delayed coker units, fluidic catalytic cracking, vacuum distillation, crackers, hydrotreaters, visbreakers, crude oil, and LNG, and is rated for hazardous areas and extreme processes with temperatures from -200C to 600C.



PORTABLE & FIXED CLAMP-ON ULTRASONIC FLOW METERS

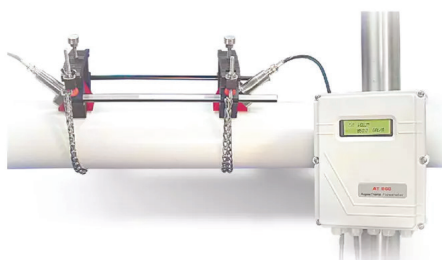
Ultrasonic clamp-on flow meters measure fluid flow in main applications. By using sound waves to determine the transit time of a gas or liquid, ultrasonic flow meters can accurately monitor any changes in flow, both upstream and downstream.

Easy to install without process shutdown, these meters are accurate and versatile for a variety of industries, fluids, and pipe thicknesses. Whether chain, wire rope, Velcro® strap, or a magnetic, bolt-on, or weldable steel yoke with metal band, our clamp-on meters make installation and removal a breeze, enabling your team to work more efficiently, and spot check flow at virtually any section of pipeline.

► AQUATRANS AT600

ULTRASONIC LIQUID CLAMP-ON FLOW METER

The Panametrics AquaTrans AT600 is a liquid clamp-on flow meter designed to be accurate, durable, and cost-effective. The AT600 combines state-of-the-art flow measurement capability with a low-cost transmitter package that can be installed right at the process measurement point. The AT600 has no moving parts and requires minimal maintenance.



► AQUATRANS AT868

ULTRASONIC CLAMP-ON LIQUID FLOW METER

The Panametrics AquaTrans AT868 ultrasonic liquid flow meter is a rugged, cost-efficient, low-maintenance transmitter package ideal for water applications. The all-digital AT868 has no moving parts and requires minimal maintenance. This convenient meter can be installed without shutting down your process, making it the perfect choice for municipal applications.



► DIGITALFLOW GC868

GAS FLOW METER

This ultrasonic gas flow meter is a fixed-installation clamp-on meter. It has clamp-on ultrasonic transducers that make this flow meter accurate and easy to use in process environments, with a patented transit time technique for many types of gas process measurements. Since no tapping or cutting of the pipe is required, permanent installation costs are significantly reduced.

► DIGITALFLOW DF868

ULTRASONIC CLAMP-ON LIQUID FLOW METER

The DigitalFlow DF868 is a full-featured, fixed-installation liquid flowmeter designed to meet all your flow metering and energy measurement needs. Its patented Correlation Transit-Time™ digital signal processing provides drift-free measurements in ultrapure and most “dirty” liquids. This includes fluids with gas bubbles and entrained solids that have previously required Doppler-type meters.



► PANALFLOW LC

CLAMP-ON FLOW METER

The Panametrics AquaTrans AT868 ultrasonic liquid flow meter is a rugged, cost-efficient, low-maintenance transmitter package ideal for water applications. The all-digital AT868 has no moving parts and requires minimal maintenance. This convenient meter can be installed without shutting down your process, making it the perfect choice for municipal applications.

► TRANSPORT PT900

CLAMP-ON FLOW METER

Single or dual-channel PT900 ultrasonic flow system configured to your specifications, portable for temporary or spot-flow measurement.



► PT878GC

CLAMP-ON FLOW METER

The Panametrics PT878GC clamp-on ultrasonic gas flow meter is a portable flow meter used to measure natural gas, compressed air, inert gas or any compressed gas application. The PT878GC can not only measure gas flow rates, but can also record and log data internally and then download it to a PC.

