Panametrics
a Baker Hughes business

Inline Flow Meters
Product Guide

Accurate, dependable and reliable flow measurement solutions for permanent installations.

Achieve your environmental and performance goals

Designed for permanent installations, Panametrics' inline flow meters provide accurate measurements across a wide range of process fluids.

With embedded diagnostics and digital connectivity, our flow meters deliver real-time insights directly to your plant, allowing process optimization.

Built with high-quality materials, Panametrics' inline flow meters withstand extreme conditions, including high pressure, high temperature, and even premium alloy applications

Scan this code for more information

Industry applications

Panametrics' process measurement solutions cover a wide range of industries and applications.

	Power Plant	Oil & Gas	Steel Plant	Hydrogen	Chemical	Geothermal	Biogas/Biofuels	Water & Wastewater
PanaFlow FLI		✓			✓			
DigitalFlow GM868		✓	✓	✓				
DigitalFlow XGM868i		✓	✓	✓				
DigitalFlow GS868		✓	✓			✓		
DigitalFlow XGS868i		✓	✓			✓		
PanaFlow ZxG		✓	✓	✓			✓	
PanaFlow Z3	✓	✓	✓	✓				✓
PanaFlow XMT1000 SIL	✓	✓						
PanaFlow HT SIL	✓	✓						
PanaFlow LZ	✓	✓	✓					✓

Key to industries

Power Plant · Oil & Gas · Steel Plant · Hydrogen

Chemical · Geothermal · Biogas/Biofuels · Water & Wastewater

PanaFlow FLI

Ultrasonic flowmeter for gas

PanaFlow FLI is a robust and reliable ultrasonic flow measurement system for monitoring wide ranging gas flow in challenging conditions. PanaFlow FLI is available in either a flowcell (spoolpiece) or nozzle only design providing flexibility to your existing or new flow requirements.

APPLICATIONS

Oil & Gas

Flare gas
Fuel gas
Vent gas
Waste gas
Shale gas
Natural gas
Biogas
Coal-seam gas
Steam

Chemical

Flare gas

FEATURES

- Trusted ultrasonic technology with no drifting measurements or need for periodic calibration requirements
- No restriction in the pipe to generate a pressure loss
- Wide rangeability from 0-100m/s (328 ft/s) monitoring during all process scenarios
- Robust and field proven legacy Panametrics titanium gas transducers; other materials available based on stream composition
- New compact insertion mechanism for 24hr/7day continuous operation and access to transducer
- Advanced diagnostics to understand and track the health and stability of the process

DigitalFlow GM868 and XGM868i

Gas flowmeter

The flow meter includes wide-range transducers to measure any gas. This accurate ultrasonic meter ensures reliable gas flow that requires little or no maintenance

APPLICATIONS

Oil & Gas

Fuel gas
Associated gas
Dehydration
Landfill gas
Boil off gas
Wet gas
Acid/sour gas
Recycle gas
Hydrogen gas
Quench gas
Gas after separation
Allocation metering
Flare gas
Air
Gas lift
Gas injection
Gas compression
Natural gas
Acid/sour gas
Hydrogen gas
Gas compression

Steel Plant

Coke gas and blast furnace gas
Feed gas
Stack gas
Air
Nitrogen

Hydrogen

Pure and blended hydrogen
Power gen for air, nitrogen

FEATURES

- Full-featured flowmeter package using a transmitter type electronics
- Transducer removable under line pressure (depending on meter set-up)
- No moving parts
- No pressure drop
- Wide rangeability with up to 1500 to 1 turndown ratio (application and transducer dependent)
- Non-obstructive flow measurement
- Tolerance to dirty streams
- Low maintenance
- Suitable for high temperatures
- Two-path measurement available for better accuracy
- Binary gas mixture content determination (optional)
- Accuracy ±1% of reading ±2% of reading

DigitalFlow GS868 and XGS868i

Steam ultrasonic flowmeter

Both the GS868 and XGS868i are designed to measure the mass flow rate of saturated or superheated steam. It offers a unique combination of no pressure drop, wide rangeability, ease of installation, low maintenance and high accuracy in a full-feature flowmeter package. The XGS868i offers a rugged transducer, weatherproofing, and is approved for use in hazardous environments. It offers the same performances as the GS868 in a more cost-effective set up with only fewer I/Os possibilities.

APPLICATIONS

Oil & Gas

Saturated steam and superheated steam
Process steam

Steel Plant

Saturated steam

Geothermal

Steam flow
Power for saturated
Superheated steam measurement

FEATURES

- Full-featured flowmeter package using a transmitter type electronics
- Built-in steam tables for mass flow calculation
- Transducer removable under line pressure (depending on meter set-up)
- No moving parts
- No pressure drop
- Wide rangeability with up to 1500 to 1 turndown ratio (application and transducer dependent)
- Non-obstructive flow measurement
- Tolerance to dirty streams
- Low maintenance
- Suitable for high temperatures
- Two-path measurement available for better accuracy
- Accuracy ±1% of reading ±2% of reading

PanaFlow Z1G and PanaFlow Z2G

Gas ultrasonic flow meter systems

High-performance, affordable solutions for a variety of gas flow applications. The PanaFlow Z1G provides a one-path configuration gas flow meter, while the PanaFlow Z2G is a two-path gas flow meter. Both offer a broad range that is accurate and reliable, and available in robust, sleek designs.

APPLICATIONS

Oil & Gas

Fuel gas
Flare gas
Associated gas
Gas after separation
Dehydration
Landfill gas
Coal seam gas
Wet gas
Gas compression
Air
Nitrogen
Recycle gas
Quench gas
Hydrogen blending

Steel Plant

Feed gas
Air
Oxygen
Natural gas

Hydrogen

Hydrogen blending

Biogas/Biofuels

Biogas with methane content determination

FEATURES

- No drifting, no periodic calibration required
- No pressure drop
- No restriction in the pipe
- No filters or strainers
- No moving parts
- Explosion-proof transducer design
- Bi-directional measurement
- Binary gas mixture content determination (optional)
- Accuracy ±1% of reading ±1.5% of reading

PanaFlow Z3

Three-path liquid ultrasonic flow meter

Designed specifically for dependable, accurate, and repeatable flow measurement of process liquids with a very tight accuracy down to +/- 0.25% of reading under reference conditions.

APPLICATIONS

Power Plant

Water/glycol

Oil & Gas

Condensate (HC)
Produced water
Water injection
Allocation metering
Leak detection
Oil
Blending lines
Water after separation
Water
LPG and other light HC
Fuel oil
Water and cooling water

Steel Plant

Water
Tar

Hydrogen

Demineralized water

Water & Wastewater

Potable water
Raw water
Waste water
Chemicals

FEATURES

- No drifting, no periodic calibration required
- No pressure drop
- No restriction in the pipe
- No filters or strainers
- Bi-directional measurement
- No moving parts
- Field replaceable transducers
- All cast design
- Explosion-proof transducer design
- All modern communication protocols (HART, Modbus, FF FISCO)
- Accuracy ±0.25% of reading
- SIL rated (optional)

PanaFlow XMT1000 SIL

Ultrasonic flow transmitter for liquids

Certified for hazardous installations, such as petrochemical and chemical processing, and supports up to three paths for more accurate measurement.

APPLICATIONS

Power Plant

Boiler feed water
Water
Brine

Oil & Gas

Oil after separation
Water after separation
Condensate (HC)
Produced water
Water injection
Sea water intake
Oil
LNG
LPG and other light HC
Heavy residue
Liquid sulfur
Fuel oil
Water
Leak detection
Allocation metering
Water and cooling water
Quench oil
Blending lines

FEATURES

- One, two or three-channel operation
- No drifting, no periodic calibration required
- No pressure drop
- No restriction in the pipe
- No filters or strainers
- Bi-directional measurement
- No moving parts
- Field replaceable transducers
- All cast design
- Explosion-proof transducer design
- All modern communication protocols (HART, Modbus, FF FISCO)
- Suitability for a wide range of pipe sizes and materials.
- Accuracy ±0.3% of reading
- SIL certification

PanaFlow HT SIL

Reliable extreme temperature liquid ultrasonic flow meter

Ideal for harsh applications, such as delayed coker units, fluidic catalytic cracking, vacuum distillation, crackers, hydrotreaters, visbreakers, crude oil, and LNG. It is rated for hazardous areas and extreme processes with temperatures from -200°C to 600°C.

APPLICATIONS

Power Plant

Boiler feed water

Oil & Gas

Heavy residue
Liquid sulfur
Slurry oil
Hydrocarbon liquid
Chemicals
Safety critical liquid flow

FEATURES

- One or two-channel, in single double, triple or quadruple set up
- No drifting, no periodic calibration required
- No pressure drop
- No restriction in the pipe
- No filters or strainers
- Bi-directional measurement
- No moving parts
- Field replaceable transducers
- Explosion-proof transducer design
- All modern communication protocols (HART, Modbus, FF FISCO)
- Suitability for a wide range of pipe sizes and materials.
- Accuracy ±0.5% of reading
- Flow measurement in extremely high and low temperature conditions from 73K to 873K applications
- SIL certification

PanaFlow LZ

Ultrasonic flow meter system for liquid applications

Offered as a one- or two-path wetted, ultrasonic flow meter that brings all of the advantages of ultrasonic technology at a very affordable value.

APPLICATIONS

Power Plant

Boiler feed water
Water/glycol (facility mgt/ campus energy)

Oil & Gas

Condensate (HC)
Produced water
Water injection
Leak detection
Allocation metering
Oil
LPG and other light HC
Fuel oil
Blending Lines
Oil after separation
Water after separation
Water and cooling water
Quench oil

Steel Plant

Tar
Water

Water & Wastewater

Potable water
Raw water
Waste water
Chemicals

FEATURES

- One or two-channel
- No drifting, no periodic calibration required
- No pressure drop
- No restriction in the pipe
- No filters or strainers
- Bi-directional measurement
- No moving parts
- Field replaceable transducers
- Explosion-proof transducer design
- All modern communication protocols (HART, Modbus, FF FISCO)
- Suitability for a wide range of pipe sizes and materials
- Accuracy ±0.5% of reading
- SIL certification (option)
- Flow measurement in extremely high and low temperature conditions from 73K to 873K applications

Panametrics, a Baker Hughes business, provides solutions in the toughest applications and environments for moisture, oxygen, liquid and gas flow measurement.

Experts in flare management, Panametrics technology also reduces flare emissions and optimizes performance.

With a reach that extends across the globe, Panametrics' critical measurement solutions and flare emissions management are enabling customers to drive efficiency and achieve carbon reduction targets across critical industries including: Oil & Gas; Energy; Healthcare; Water and Wastewater; Chemical Processing; Food & Beverage and many others.

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