ABLE INSTRUMENTS & CONTROLS

MICRONICS FLOW METERS

THROUGH MEASUREMENT COMES CONTROL

CLAMP-ON METERS FOR NON-INVASIVE SOLUTIONS

- Option for use in hazardous areas (ATEX Zone 1/2)
- Non-invasive, efficient, and easy installation, no process downtime
- Accuracy: Up to 0.5% with Process Calibration
- Repeatability: +/- 0.15%
- Separate Display (DCSIU) and Remote Measurement
- Unit (RMU) allows flexibility in installation
- Cost effective metering for harsh, heavy-duty applications
- Single and Dual Channel Options
- Remote System Setup and Monitoring
- Exceptionally low price point
- Fixed and portable variants available

ABLE

A LOW-COST SOLUTION TO LIQUID FLOW, HEAT AND ENERGY MANAGEMENT APPLICATIONS

Micronics Ltd specialises in the design, manufacture, and distribution of "Transit Time" ultrasonic flow measurement and process diagnostic equipment for both portable and fixed applications. Founded in 1985, they have established themselves as a reputable provider of non-invasive ultrasonic metering systems for various industries. This includes an extremely competitive alternative to the installed price of traditional, mechanical, in-line meters, NO interruption to process and NO down time whilst the units are installed or maintained.

WHY USE CLAMP-ON?

The clamp-on flow meter, also known as a non-invasive flow meter, has gained popularity across various industries due to its unique and practical design. Unlike traditional flow meters that require cutting into pipes or direct fluid contact, clamp-on meters measure flow from outside the pipe using ultrasonic technology.

UF3300 Fixed Clamp-On Heat Meter

- *DSP Measurement Technique*
- *Reynolds number correction*
- *Easy to install*
- *Simple to follow programming menu*
- *Clamp-on sensors*

This non-intrusive approach is particularly advantageous in harsh or corrosive environments, as it eliminates the need to cut or tap the pipeline, significantly reducing risks of leaks, contamination, or malfunctions. The ease of installation is another major benefit. These meters are externally mounted using clamps, meaning there's no need for direct contact with the fluid. As a result, they can be quickly and effortlessly installed without interrupting the flow or compromising the integrity of the pipeline.

Additionally, clamp-on flow meters are easy to maintain. They can be removed or replaced without any modifications to the pipe, minimising downtime and reducing costs. This flexibility makes clamp-on flow meters an ideal solution for measuring liquid flow in a wide range of applications, from water and chemicals to more challenging industrial fluids.

A VERSATILE METERING OPTION FOR A VARIETY OF INDUSTRIES

Clamp-on flow meters are indispensable tools across various industries, including water treatment, wastewater management, industrial process control, and heating systems. These devices excel in applications like heating and cooling, where they monitor the flow of hot or cold water to ensure system efficiency. In water treatment, they help optimize operations by accurately measuring liquid flow through pipelines.

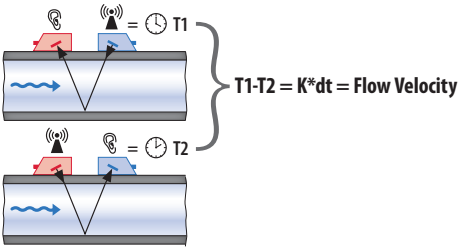
Available in different types, such as clamp-on water flow meters and clamp-on heat meters, these meters cater for diverse requirements. For businesses seeking flexibility, temporary options like clamp-on flow meter rentals provide a cost-effective way to experience their benefits without committing to permanent installations.

Whether for water sub-metering or industrial flow tracking, clamp-on flow meters are reliable, versatile, and cost-effective. Their ultrasonic technology delivers precise readings with easy installation and minimal maintenance, making them the ideal solution for accurate flow measurement in even the most demanding environments.

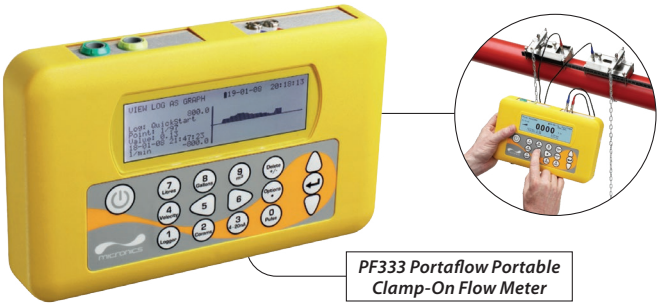
ABLE Instruments & Controls Ltd are **Micronics' exclusive sales and service representative** for the UX5000 in the UK and Ireland

HOW DOES IT WORK?

The Micronics Ultraflow UF3300 is a transit time ultrasonic flow meter designed to provide accurate liquid flow measurements within a closed pipe using non-invasive clamp-on transducers. Unlike traditional flow meters, it requires no mechanical parts to penetrate the pipe wall or interfere with the flow system. Installation is quick and straightforward, often completed in minutes, with no need to shut down operations or drain the system.



The UF3300 operates by transmitting ultrasound signals between transducers. When traveling in the direction of flow, the ultrasound velocity slightly increases, while it decreases when moving against the flow. The difference in transit times is directly proportional to the flow velocity within the pipe. Using the measured flow velocity and the pipe's cross-sectional area, the meter calculates the volumetric flow rate.



PF333 Portaflow Portable Clamp-On Flow Meter

For hydronic thermal energy applications, the UF3300 calculates heating or cooling load by combining the flow rate with the temperature difference (delta T) between the flow and return lines, ensuring compliance with EN1434 Section 6. This makes the UF3300 an efficient and reliable solution for both flow and thermal energy measurements.

micronics
Through measurement comes control

UX5000 ATEX ZONE 1 ULTRASONIC CLAMP-ON FLOW METER

ABLE Instruments is the exclusive sales and service representative in the UK and Ireland for the Micronics UX5000, a Fixed ATEX Approved Zone 1 Ultrasonic Clamp-On Flow Meter. The UX5000 provides a non-invasive, easy-to-install solution for accurate flow measurement, eliminating the need for process downtime. Certified for use in hazardous Zones 1 and 2, it features an intrinsically safe measurement system with wet-calibrated, matched transducers to ensure reliable accuracy.

Designed with flexibility in mind, the UX5000 includes a separate display unit (DCSIU) and measurement unit (RMU) for versatile installation. Manufactured in the UK, it is a cost-effective solution for harsh and heavy-duty environments. This flow meter is ideal for industries such as chemicals, water, and oil, with applications including liquid hydrocarbon measurement in oil processing and flow measurement in chemical processes.

For more information regarding Micronics Clamp-on Flow Meters, please email **info@able.co.uk**

Aegex100M™
Intrinsically Safe Tablet

To enhance this functionality and we can also offer the latest Zone 1 compatible Windows-based tablet hardware, the Aegex 100M. This device enables users to set up, commission, and communicate with the UX5000, as well as download logging data, all via Bluetooth. The key benefit is that this can be done directly in the Zone 1 area, eliminating the need for hotwork permits or process shutdowns, thus improving efficiency and safety.

MICRONICS UX5000 FEATURES & SPECIFICATIONS:

- ***Non-invasive, efficient, and easy installation, no process downtime***
- ***Certified for use in hazardous areas (ATEX Zone 1/2)***
- ***Reliable measurement accuracy***
- ***Separate Display (DCSIU) and Remote Measurement***
- ***Unit (RMU) allows flexibility in installation***
- ***Cost effective metering for harsh, heavy-duty applications***
- ***Single and Dual Channel Options***
- ***Remote System Setup and Monitoring***
- ***Exceptionally low price point***

Pipe Diameter (OD)	½" – 78" (12.7mm – 1981mm)
Measurement Technique	Cross-correlation transit time algorithm
Display	LCD Graphical
Transducer Operating Temp	-20°C to +120°C
Outputs	2 x Active 4-20mA, 3 opto-isolated relays, Modbus RTU
Equipment Group / Category	ATEX II 2 G Ex ia IIC T4 Gb
Environmental Protection	IP66
Accuracy	0.5% with process calibration
Repeatability	+/- 0.15%
Power	Recommended 21-24 VDC, 2W

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