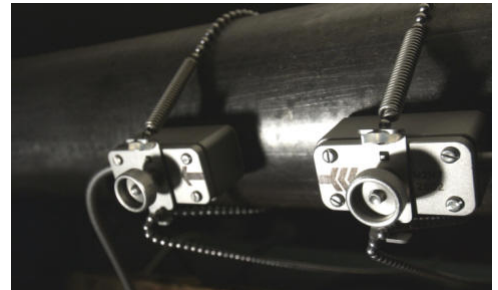


Katronic Technologies Ltd. is a leading UK-based technology company specialised in the production of ultrasonic clamp-on flowmeters and non-invasive process measurement instrumentation.

Products & Services

Established in 1996 the company employs the latest developments in advanced electronics and sensor technology to create ultrasonic flowmeters that are both highly reliable and easy to operate.

Katronic's clamp-on flowmeters apply non-invasive and **contactless** ultrasonic measurement techniques. As the sensors are clamped onto the pipe wall, the instruments can be **installed without the need to open pipelines** and are virtually **maintenance free**.



Ultrasonic sensors strapped onto pipe surface.

Advantages

- Easy, quick and cost-effective installation on existing pipelines
- No need to close pipes or shut down plants for installation
- No sensor contact with the substance in the pipe
- No pressure drop and no risk of leakage
- No moving parts which could wear out



Katronic Technologies has been ISO 9001 certified by SGS since 2003.

Quality Management & Product Range

The quality management system for the production of Katronic's flowmeters has been certified by SGS since 2003 to be in conformance with **ISO 9001**. This also covers the production of our ATEX approved instruments for hazardous area applications.

Our current range of ultrasonic clamp-on flowmeters comprises the hand-held KATflow 200, the portable KATflow 230 and the fixed installed KATflow 150 including **ATEX certified versions**.

Additionally, we also offer further instruments applying ultrasound such as **contactless flow monitors and level meters**.

Katronic's ultrasonic flowmeters can be applied on a wide range of liquids (water, waste water, chemicals, beverages and many more), pipe materials (all common metals, plastics and more) and diameters (from 10 mm to 3,000 mm).

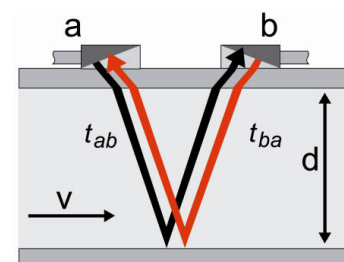
Flowmeter Specifications

- **Installation:** Portable & Fixed Installed
- **Inputs:** PT100 temperature sensors
- **Outputs:** Current, Digital open collector, Digital realy
- **Medium:** All common liquids
- **Pipe Materials:** All common metals, plastics and more
- **Pipe Diameters:** 10 to 3,000 mm
- **Flow Velocities:** 0.01 to 25 m/s
- **Accuracy:** Up to $\pm 0.5\%$ for volume flow and flow velocity

Measurement Principle

The flow measurement technique as applied by Katronic is based on the principle that sound waves are influenced by every flowing medium.

All instruments of Katronic's KATflow series measure the flow within pipes from the outside by passing ultrasonic waves across the pipes and evaluating the sound signals' subsequent time differences, frequency variations and phase shifts. This measurement technique (so called transit time method) has **no effect on the flowing medium** and provides **reliable and precise results** for a wide range of liquids.



Transit time measurement technology as applied by Katronic's flowmeters.

Our Ultrasonic Flowmeter Range: KATflow 200, 230 and 150

Equipped with a **set-up wizard** and **sensor positioning assistant**, which are guiding the user step-by-step through the installation process, Katronic's new instruments are very easy to operate.

Shared Features of the KATflow 200, 230 and 150

- Equipped with RS232 / USB interfaces for quick data transfer
- Include a set-up wizard and sensor positioning assistant
- Cover a pipe diameter range from 10 mm to 3,000 mm
- Provide the user with a digital oscilloscope function
- Hold up to 100,000 measurement samples

Hand-held Ultrasonic Flowmeter KATflow 200

Light, compact, hand-held ultrasonic flowmeter with **one flow channel** for straightforward spot measurements.

It can be **battery operated for over 24 hours**. As the meter can easily be carried into confined spaces, the KATflow 200 is an ideal tool for any application which requires engineers to enter close rooms.

Portable Ultrasonic Flowmeter KATflow 230

Portable flowmeter with **various process in- and outputs** (current, digital open collector, digital relay) for applications which require comprehensive measurement options and high mobility alike.

The flowmeter can be battery operated for over 24 hours and offers **two flow channels**. Thus the instrument can monitor two pipes simultaneously or only one in the so called two-path mode.

The KATflow 230 is also **capable of measuring temperature related energy consumption** (e.g. of HVAC systems) and can be employed for temporary or permanent **process monitoring and regulation**.

Fixed-Installed Ultrasonic Flowmeter KATflow 150

Adjustable meter for ultrasonic flow measurements on simple and advanced applications alike designed for permanent installation.

The KATflow 150 is capable of **measuring flow** as well as temperature related **energy consumption**. Its comprehensive output options also enable the instrument to **monitor and regulate flow processes**. By employing the optional speed-of-sound measurement function, the flowmeter can be applied for **concentration monitoring** tasks or as part of a non-invasive product recognition system.



Hand-held ultrasonic clamp-on flowmeter KATflow 200 with one flow channel.



Portable ultrasonic clamp-on flowmeter KATflow 230 with two flow channels.



Adjustable, fixed installed ultrasonic clamp-on flowmeter KATflow 150 with up to two flow channels and various optional process in- and outputs.

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