Uncompromising flow rate measurement

Innovative flowmeter for applications with the highest hygienic requirements

bürkert
FLUID CONTROL SYSTEMS

INSPIRING ANSWERS | FLOWave

“Just a single tube”

Flowmeters must satisfy numerous requirements in applications with hygienic requirements. Until recently, the necessary cleaning processes could only be conditionally realised. The liquids to be measured came into contact with sensor components whose influence often posed a process risk.

The FLOWave flowmeter from Bürkert opens up entirely new possibilities for hygienic and process applications. With its unique SAW technology (Surface Acoustic Waves), the device has no sensor elements in the measuring tube and makes it easy to fulfil very high hygienic requirements.

FLOWave at a glance

- No sensor components come into contact with the medium. This means:
  - No seal problems
  - No material incompatibilities
  - No pressure drop
  - Cleaning processes are optimally supported
  - No maintenance work
- The measurement is not dependent on the conductivity of the liquid
- Modular layout for the greatest possible flexibility (variable positioning of the display module, arbitrary installation position)
- Light weight, small dimensions
- Low energy consumption
- High-resolution 2.4" display

Today's flow rate measurement – FLOWave from Bürkert

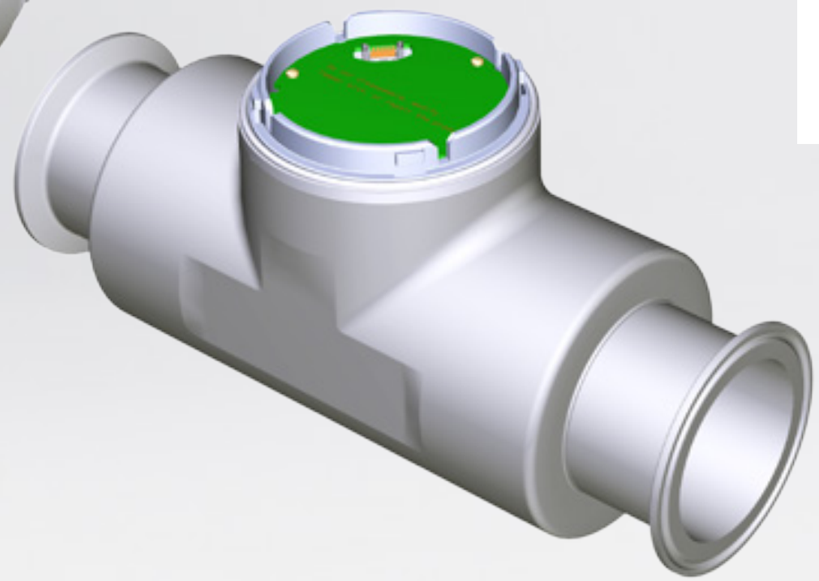
Hygienic and safe

Thanks to their special design, FLOWave devices are predestined for applications with the highest demands on hygiene and cleanability.

The design has convincing features like …
- a measuring tube without sensor elements coming into contact with the medium
- the all-stainless-steel design with the highest surface quality
- no screws or other connecting elements

The most innovative measuring principle

Surface Acoustic Waves (SAW) occur in nature during seismic activities, etc. We have used these effects in a patented technology for in-line flow rate measurement of liquids. According to the principle, there are absolutely no sensor elements coming into contact with the media in the measuring tube. Along with the measurement of flow rate and temperature, FLOWave is extended in the next step with additional measurements such as density and mass flow.



Intuitive user interface

A flexible user interface with intuitive, graphic user guidance, which can be adapted to individual needs, makes commissioning and operation of FLOWave devices particularly easy.

Simple and efficient

FLOWave devices are based on Bürkert's own EDIP electronic platform. EDIP stands for the 'Efficient Device Integration Platform' of the new Bürkert product generation with common user interface and digital communication, which not only makes using the devices considerably easier but also allows for extremely simple integration into existing field bus systems.

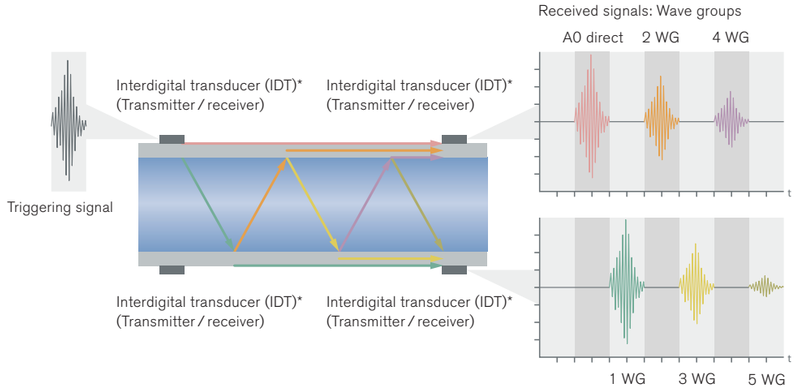
powered by EDIP

Flexibility thanks to modularity

With their modular design, FLOWave flowmeters provide outstanding performance in every installation situation. In addition, you can adjust the position of the display according to your needs: on top or in the front, and it can be pivoted in 90° increments.

We have taken an entirely new approach to flow rate measurement!

Surface Acoustic Waves (SAW) occur in nature during seismic activities, etc. We have used these effects in a patented technology for in-line flow rate measurement of liquids. According to the principle, there are absolutely no sensor elements coming into contact with the media in the measuring tube, and clear application advantages are provided over the entire product life cycle.



SAW technology

Interdigital transducers* are triggered by an electrical signal and generate the surface acoustic waves. These waves spread over the pipe surface and couple into the liquid at a specific angle. The waves thereby generate reception signals with single and multiple passes through the liquid. This takes place both with and against the flow direction. The run-time differences are proportional to the flow rate. The comparison of single and multiple waves running through the liquid enables excellent measurement performance and additional evaluations with respect to the type and characteristics of the liquids.

* Interdigital transducers are provided to generate and detect surface acoustic waves.

The FLOWave display – all relevant data at a quick glance

A flexible user interface with intuitive, graphic user guidance, which can be adapted to individual needs, makes commissioning and operation of FLOWave devices particularly easy.

FLOWave offers you the greatest possible flexibility on the high-resolution 2.4" display. Freely defined measurement names and the optional display of up to four measurements, a trend curve and the parameter interface enable a display customised to your requirements. The intuitive user interface facilitates navigation and orientation in the menu system.

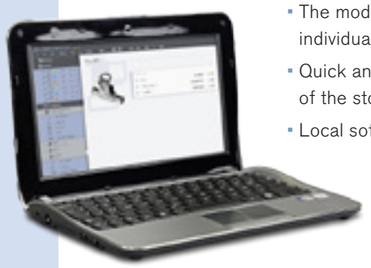
powered by EDIP

Our EDIP platform

After mechanical production systems were established worldwide, followed by mass production and process automation, the concept of “Industry 4.0” stands for the consistent digital orientation of industrial processes. With the introduction of the new device platform EDIP (Efficient Device Integration Platform) Bürkert opens the door to intelligent networking of its products. This platform comprises numerous functions, compatible HMI devices and other innovative services to facilitate the system integration of new devices.

EDIP basic functionalities

- User-friendly operating and display concept
- Simple transmission and saving of device settings
- Quicker and simpler commissioning
- Access to detailed device diagnosis via the digital interface
- The modular setup enables adaptation of the devices to individual application requirements
- Quick and simple parameter transmission with exchange of the storage medium for service tasks
- Local software updates



SOFTWARETOOL

Bürkert Communicator

COMMUNICATOR

The Bürkert Communicator enables parameter settings and access to comprehensive diagnostic functions. All measurements are available and parameter settings can be modified as an alternative to access via the display module. This Windows-based software can be downloaded free of charge from the Bürkert website.

ACCESSORIES SET

USB-/CAN-interface

bUS

The Bürkert system bus interface (büS) enables connection of FLOWave to a PC. It is based on CANopen, however, it works with auto-addressing and without a master in the system. The accessories set includes all necessary components for quick and convenient commissioning.

FLOWave in day-to-day use

Specific processes are controlled based on flow rate measurements for the production of pharmaceutical agents and in all clean utilities applications. This is where FLOWave is superior to conventional flow rate measuring devices and technologies.

The devices meet the highest hygiene standards and are durable and resistant to disruptive influences such as vibrations and magnetic fields. The lightweight and energy-saving devices can be operated in any installation situation and aid in the qualification and validation of production, cleaning, and sterilisation processes. By eliminating expensive maintenance work, FLOWave is able to reduce operating costs even further.

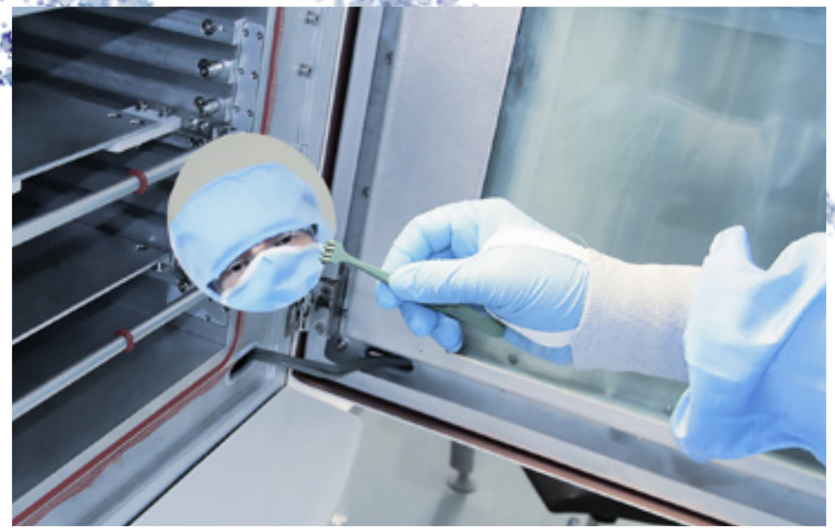
In-house know-how as a basis for success

Industrial use of the innovative SAW technology is only possible thanks to the highly specialised team of developers and development tools in our in-house electronics laboratory. An experienced team of specialists develops and produces the interdigital converters installed in FLOWave in our clean room at our French facility in Triembach au Val.

Specialists are in demand here

A multidisciplinary team of physicists, chemists, electrical engineers, and clean room specialists provides the specialist know-how required for the various tasks in sensor technology.

The entire production of the interdigital converters takes place in clean room conditions.



Only Bürkert's fully-equipped clean room can enable independent preparation of the required components.

Bürkert – always close at hand

You can find all the current address details at **www.burkert.com**

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