

The global innovation:
Measuring steam flow from outside

FLUXUS® ST-LT

Non-invasive – Highly dynamic – Accurate

Process control

Energy monitoring

Consumption metering

FLEXIM Sets Standards
when measuring matters



FLUXUS® ST-LT

The smart way to measure steam flow: from outside.

Non-invasive and efficient

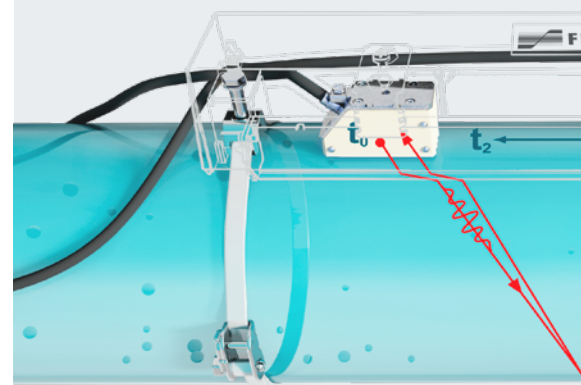
Owing to its obvious advantages, clamp-on ultrasonic technology has established itself as the standard procedure for flow measurement within all industries and for countless applications. FLEXIM has continuously been a source of impulses which drive this development forward. Heat, cold, compressed air, technical gases and now steam: FLUXUS®, the flowmeter by FLEXIM, measures everything that flows. With the FLUXUS® ST-LT, FLEXIM increases the scope of its non-invasive measuring technology to include an important source of energy: saturated steam.

Highly dynamic and without loss of pressure

FLUXUS® ST-LT is non-invasive and measures the volume of steam from the outside of the pipe. Non-invasive measuring of the steam volume means measuring does not interrupt any process or supply. As the clamp-on ultrasonic transducers are simply mounted on the outside, the installation only requires a minimum of effort and, most importantly, no opening of the pipe.

FLUXUS® ST-LT makes use of the proven transit time difference method. This offers extraordinarily high measuring dynamics, regardless of the direction of the flow, and even measures the lowest flow velocities. The large measuring range (flow velocities from 0.01 m/s to 60 m/s) means there is no need for restricting the diameter of the pipe, as is the case for vortex and orifice flowmeters in order to reach the minimum required flow velocity.

For the first time, FLUXUS® ST-LT makes it possible to measure steam volumes from the lowest to very high flow rates with one and the same instrument. For users, this means a huge improvement that facilitates interpreting steam measurements.

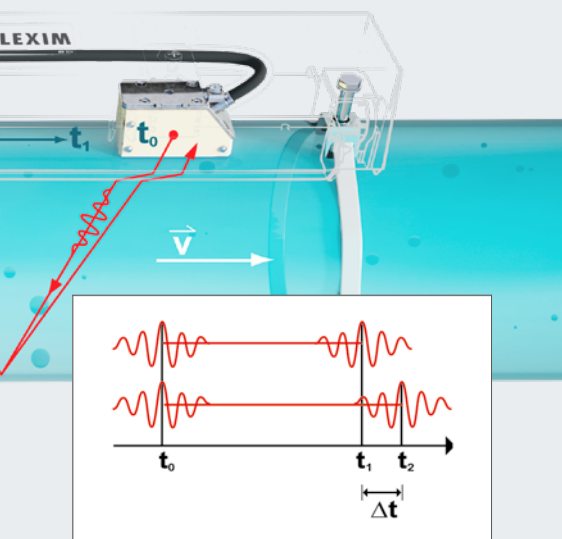


Ultrasonic transit time difference method

Two ultrasonic transducers are mounted on the pipe at a pre-defined distance. They emit ultrasonic signals with and against the direction of the flow. The measured transit time difference corresponds to the flow velocity.



FLUXUS® ST-LT is available as a field device for fixed installation or as a portable measuring system.



Free from wear and maintenance-free

The effort for regular maintenance, calibration and if necessary repairs is a major contributor to the life cycle costs for measuring technology. This is added to by production downtimes if inline measuring technology must be deinstalled.

FLUXUS® ST-LT measures from the outside, without direct contact with the medium flowing inside the pipe. The clamp-on ultrasonic transducers do not suffer from wear and tear and do not require maintenance, thanks to the use of permanent coupling foil. FLEXIM also offers AMV – Advanced Meter Verification. This allows users to always be aware of the state of their measuring points.

Stationary and portable

FLUXUS® ST-LT is suitable for measuring the volumetric and mass flow rate of saturated and overheated steam at temperatures up to 180 °C and is available in the following variants:

FLUXUS® G532 ST-LT is the compact, stationary flowmeter for most typical steam applications.

FLUXUS® G722 ST-LT is the high-performance, stationary steam meter for demanding applications like a short undisturbed inlet or outlet length. Two measuring channels with Synchronised Channel Averaging guarantee the highest accuracy of measurement. FLUXUS® G722 ST-LT is approved for use in explosive atmospheres (ATEX/IECEx Zone 2).

FLUXUS® G831 ST-LT is approved for use in ATEX/IECEx Zone 1. This makes it the steam meter of choice for chemical and refinery applications.

The portable FLUXUS® G601 ST is the ultimate multi tool for energy managers and maintenance technicians: Non-invasive measurement of steam, compressed air, heat, cold, flow rate – all combined in a single portable transmitter.

FLEXIM

More than 30 years of experience
in the area of non-invasive flow measurement
with clamp-on ultrasonic technology



FLUXUS® G532 ST-LT

FLUXUS® G722 ST-LT
FLUXUS® G722 ST-LT Stainless Steel

FLUXUS® G601 ST
FLUXUS® G608 ST

FLUXUS® G831 ST-LT

Technical data

FLUXUS® ST-LT	Portable or stationary clamp-on ultrasonic system for steam flow measurement
Medium	Saturated and overheated steam
Measuring values	Volumetric flow rate, mass flow rate, flow velocity
Steam temperature	Max. 180 °C Zone 2: max. 165 °C Zone 1: max. 155 °C
Pressure	Min. 3 bar absolute
Range of pipe sizes	23 – 1000 mm *
Flow velocities	0.01 m/s to 60 m/s **
Measurement uncertainty (volumetric flow rate)	±1 ... 3% of measured value ±0.005 m/s, depending on application
Calibration	Factory calibrated, traceable to international standards (PTB)

* Have the feasibility of your unique application evaluated by a test!

** depending on sensor frequency and pipe diameter, see technical specifications

For more detailed information please download the technical specifications here: www.flexim.com.

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