

# FLEXIM FLUXUS® ST-LT

The Global Innovation:  
Measuring Steam Flow from Outside

Non-Intrusive | Accurate | Highly Dynamic



FLEXIM

  
EMERSON™





# FLEXIM FLUXUS® ST-LT

The smart way to measure steam flow: from the outside.

## Non-Intrusive 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. Emerson Flexim products have continuously been a source of impulses which drive this development forward. Heat, cold, compressed air, technical gases and now steam: Flexim FLUXUS®, the flowmeter by Emerson, measures everything that flows. With the Emerson Flexim FLUXUS® ST-LT, Flexim increases the scope of its non-intrusive measuring technology to include an important source of energy: saturated steam.

## Highly Dynamic and Without Loss of Pressure

FLUXUS® ST-LT is non-intrusive and measures the volume of steam from the outside of the pipe. Non-intrusive 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 0.03 ft/s to 200 ft/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.

## 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. Many Flexim products also offer Advanced Meter Verification, a proprietary software that allows users to always be aware of the state of their measuring points.

## Application Versatility

Process Control

Energy Monitoring

Consumption Metering

## Stationary and Portable

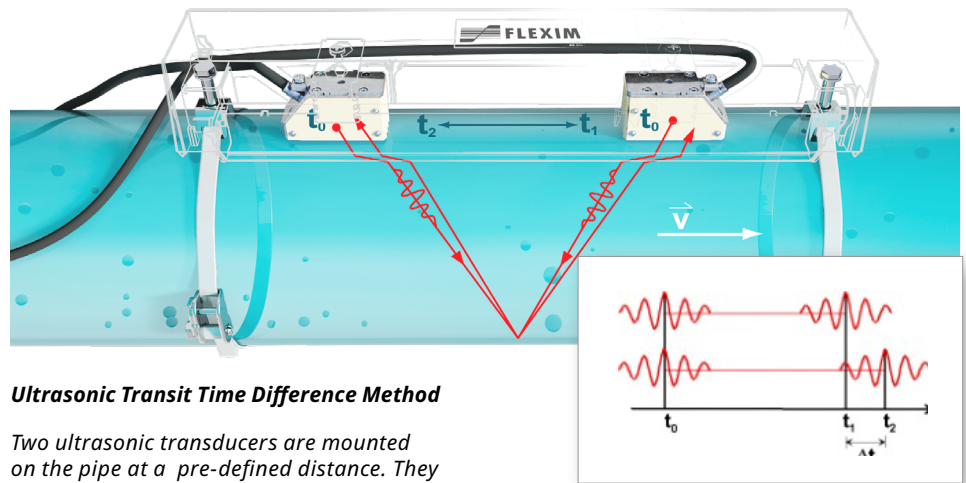
FLUXUS® ST-LT is suitable for measuring the volumetric and mass flow rate of saturated and overheated steam at temperatures up to 356 °F and is available in the following variants:

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 Synchronized Channel Averaging guarantee the highest accuracy of measurement. FLUXUS® G722 ST-LT is approved for use in explosive atmospheres (FM Class I Div. 2).

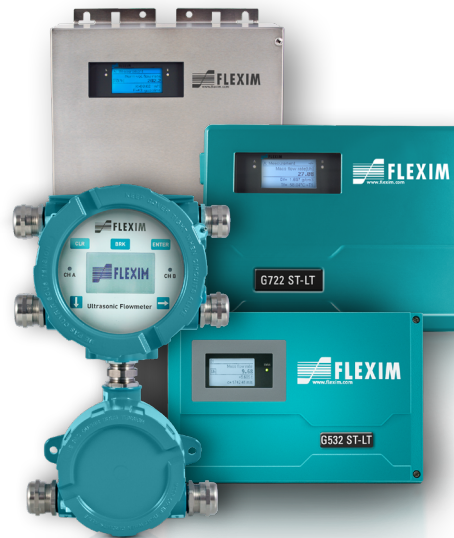
FLUXUS® G831 ST-LT is approved for use in FM Class I Div. 1. This makes it the steam meter of choice for chemical and refinery applications.

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



### **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.*

**Advanced Meter  
Verification**



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 FACTS

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. 356°F FM Class I Div. 2: max. 329 °F
Pressure	Min. 44 psia
Range of pipe sizes	0.91 – 39.4 inch*
Flow velocities	0.03 ft/s to 200 ft/s **
Measurement uncertainty (volumetric flow rate)	±0.3 % MV ±0.019 f/s
Measurement uncertainty at the measuring point	±1 ... 3% of measured value ±0.02 ft/s, depending on application
Calibration	Factory calibrated, traceable to NIST

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

\*\* Depending on sensor frequency and pipe diameter, see technical specifications.



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