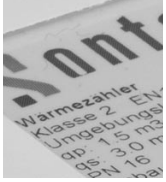
Sontex

Thermal Energy Flow Metering

Superstatic 449

Compact fluid oscillator heat meter



Superstatic 449
The compact heat meter with the fluid oscillation principle -the consistent further development

The new compact heat and cooling meter Superstatic 449 from Sontex is the consistent further development who apply the successfully fluid oscillation principle which established itself in the recent years more and more, and offers exceptional measurement accuracy and measurement stability.

The Superstatic 449 is based, like the proved Superstatic 440, on the static measurement principle of the fluid oscillation.
All these advantages and features are embedded in a new compact form for low flow from qp 0,6 - 2,5 m^3/h, integrated and combined with the use of modern materials with Swiss precision and innovation.

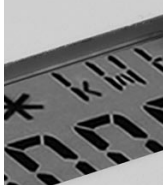
The fluid oscillation flow meter Superstatic 449 is available with a spittable multifunctional integrator, himself completed with a large variety of communication modules and allows a large field of applications and an easy integration into district heating or building management system.

Overview and technical information
Flowmeters qp 0.6 - 2.5 m^3/h

Nominal flow qp	Threaded connection	Flanged connection	PN	Mounting length	Maximal flow qs	Minimal flow qi	Low flow threshold value (50°C)	Pressure loss at qp	Threaded hole for sensor	Weight	Material
m^3/h	G"	DN	PN	mm	m^3/h	l/h	l/h	bar		kg	
*0.6	3/4"	(15)	16	110	1.2	6	-	-	Yes	-	brass
1.5	3/4"	(15)	16	110	3	15	10	0.2	Yes	1.3	brass
*1.5	1"	(20)	16	130	3	15	10	-	Yes	-	brass
*1.5	3/4"	(20)	16	190	3	15	10	0.02	Yes	1.4	brass
*2.5	1"	(20)	16	130	5	25	-	-	Yes	-	brass
*2.5	1"	(20)	16	190	5	25	-	-	Yes	-	brass

Metrological Classe 2 EN1434

* In preparation



Superstatic 449
The compact static heat meter with the unique measurement principle

Superstatic 449- the compact heat meter who use the unique fluid oscillation measurement system.

The principle of the fluid oscillation was developed by Sontex to its perfection and ensures a stable and precise measurement in a robust and reliable design.

The concept of the Superstatic 449 is designed so that it can be ideally complemented and further developed in the future, it may be the flow sensor or the calculator.
The Superstatic 449 is a battery or mains-powered static compact heat and cooling meter. The Superstatic 449 meets the requirements of the European Measuring Instruments Directive MID 2004/22/EC and EN 1434 class 2.

Main features
The 449 Superstatic heat-and cold meters are optimized for measuring and calculating the energy consumption in building services or long-distance and local heating.

- For flows from qp 0.6 - 2.5 m^3/h
- Spittable calculator for flexible mounting and reading
- Compact and lightweight
- Corrosion-resistant materials
- No moving parts means no wear
- Measuring resistance and measuring exactly
- Direct scanning of the oscillating beam without reflectors
- Long-term stable, accurate and reliable measurement
- For heating or cooling measurement
- Multifunctional Supercal calculator with bi-directional radio, M-Bus, LON, Analog modules, etc.

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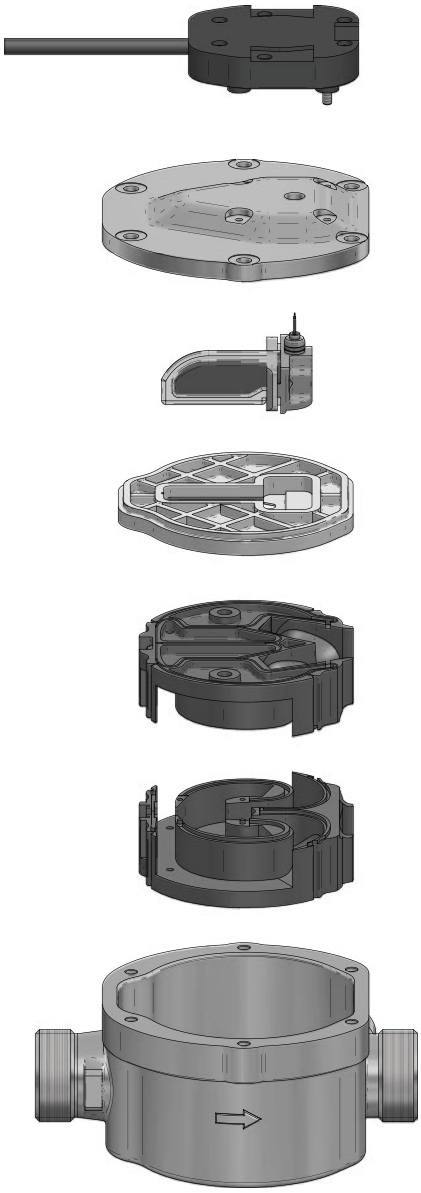

Functional description of the measuring principle

In the oscillator, the liquid is fed to a nozzle and accelerated to a jet (vibrating jet). Through one of the nozzle opposite to the tongue, in jet diverted left or right into a canal that leads to the measuring head who contains a piezoelectric sensor. The liquid produced by the pressure on the piezoelectric sensor, an electric pulse and flows back.
The flow is directed in the other channel where the prozess repeats. The piezoelectric sensor is surrounded by the liquid from the other side and another pulse is generated.
The prozess is repeated through the fluid in motion - the fluid oscillation. The frequency of the oscillation is proportional to the flow.
An additional positive benefit is a self-cleaning effect of the oscillating jet due to the increased speed of the jet.

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