

# Clamp-on Ultrasonic Flow Meter PCE-TDS 200 S-ICA incl. ISO-Calibration Certificate



Ultrasonic flowmeter with 32 GB data memory / measuring range  $\pm 32$  m/s /  
reproducibility  $\pm 0.5$  % of measured value / different measuring probes / alarm limit values /  
2.8 " LC display / for all media

The ultrasonic flowmeter has a measuring range of  $\pm 32$  m/s. With an accuracy of  $\pm 1.5$  % f.s. for a pipe diameter of  $DN \geq 50$ ,  $\pm 3.5$  % f.s. for a pipe diameter of  $DN < 50$  and a reproducibility of  $\pm 0.5$  % f.s., the Clamp-on Ultrasonic Flow Meter is a particularly precise measuring device. An installation aid is available for installing the sensors of the Clamp-on Ultrasonic Flow Meter. The installation aid graphically displays the signal quality of the Clamp-on Ultrasonic Flow Meter. In addition, it is graphically displayed whether the sensors of the Clamp-on Ultrasonic Flow Meter are positioned at the correct distance from each other. To carry out flow measurements with the Clamp-on Ultrasonic Flow Meter, the flow velocity, the volume flow and the volume are displayed after entering the pipe and medium specifications. The Clamp-on Ultrasonic Flow Meter displays the measured values in a wide range of units. For example:  $m^3$ , l, gal, igl, mgl, cf, bal, ib and ob.

During a measurement, it is possible to record the measured values via the data logger function of the Clamp-on Ultrasonic Flow Meter. Start and stop conditions and the storage interval from 1 second to 12 hours can be set for the Clamp-on Ultrasonic Flow Meter. A memory point of the Clamp-on Ultrasonic Flow Meter contains all measured values once. The measured values are stored on the 32 GB built-in memory of the Clamp-on Ultrasonic Flow Meter. 10 million measuring points can be stored on the Clamp-on Ultrasonic Flow Meter.

With the optional software, the recorded measured values can be read out from the Clamp-on Ultrasonic Flow Meter. For analysis, the measured values from the Clamp-on Ultrasonic Flow Meter can be displayed in tabular and graphic form. For further processing of the measured values from the Clamp-on Ultrasonic Flow Meter, they can be exported in .csv file format. Alternatively, a PDF report can be created via the software. For simplified operation, the Clamp-on Ultrasonic Flow Meter can be set via the software. A live view of the measured values from the Clamp-on Ultrasonic Flow Meter is also possible with the software.

In order to determine the amount of heat with the Clamp-on Ultrasonic Flow Meter, two additional thermocouples are required. These are available with the PCE-TDS 200+. The two thermocouples of the Clamp-on Ultrasonic Flow Meter are connected to the flow and return of a pipe system. Based on the temperature difference and the measured flow rate, the Clamp-on Ultrasonic Flow Meter can determine the amount of heat. If required, the Clamp-on Ultrasonic Flow Meter can calculate and display the costs per heat quantity unit simultaneously during the measurement. Thus, the Clamp-on Ultrasonic Flow Meter is used, for example, in the inspection of heating systems.

The LC colour display of the Clamp-on Ultrasonic Flow Meter has a size of 2.8" and is therefore easy to read.

Subject to change

#### PCE-TDS 200 S SENSOR

Small sensor pair for pipe diameters DN 15 ... 100 / 20 ... 108 mm. Suitable for particularly small pipes. The sensors have a particularly small dimension of 45 x 30 x 30 mm and a temperature resistance of -30 ... 160 °C. Thanks to the magnets on the underside, the sensors can be mounted on ferrous metals. In addition, the sensors for the Clamp-on Ultrasonic Flow Meter can be connected to the pipe by means of detachable cable ties.

- ▶ Measuring range  $\pm 32$  m/s
- ▶ USB-C interface for data transfer
- ▶ Optional software for analysing the measured values
- ▶ Reproducibility  $\pm 0.5$  % of measured value
- ▶ Heat quantity measurement
- ▶ Data memory for 10 million measuring points
- ▶ individually adjustable alarm limits

Subject to change



# Specifications

## Flow measurement

Measuring range	±32 m/s
Accuracy	0,001 m/s
Genauigkeit	DN ≥50 mm: ±1.5 % f.s. for velocities > 0.3 m/s DN <50 mm: ±3.5 % f.s. for velocities > 0.3 m/s
Reproducibility	±0.5 % of measured value

## PCE-TDS 200 S SENSOR

Sensor pair	
Pipe diameter	DN 15 ... 100 / 20 ... 108 mm
Temperature resistance	-30 ... 160 °C
Dimension	45 x 30 x 30 mm

Measuring method	Z, V, N, W
Medium	- water - sea water - oil - crude oil - methanol - ethanol - diesel - petrol - petroleum - user defined (manual input of the sound velocity from the medium)

All liquids with an impurity	<5 %
Pipe material	- copper CU - steel FE - stainless steel VA - aluminium AL - brass ME - cast iron CI - iron FE - nickel NI - titanium TI - zink ZI - acrylic AC - polyethylene PE - polypropylene PP - polyvinyl chloride PVC - nylon NY - user defined (manual input of the transversalsound velocity of the pipe material)

# More information

Manual



Software Manual



Brochure



More product info



Similar products



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Inner pipe lining	<ul style="list-style-type: none"> <li>- no lining</li> <li>- user defined</li> <li>- epoxy resin</li> <li>- rubber</li> <li>- mortar</li> <li>- polystyrene PS</li> <li>- polyethylene PE</li> <li>- polytetrafluoroethylene PTFE</li> <li>- polyurethane PU</li> <li>- polypropylene PP</li> <li>- user defined</li> </ul> (manual input of the longitudinal sound velocity of the inner lining of the pipe)
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Measurement parameters	flow velocity, volume flow and volume
Units (dimensions)	mm, in
Units (flow velocity)	m/s, ft/s
Units (volume flow)	m <sup>3</sup> , l, gal, igl, mgl, cf, bal, ib, ob
Time specification	seconds, minutes, hours, days
Units (volume)	m <sup>3</sup> , l, gal, igl, mgl, cf, bal, ib, ob

#### Further specifications

2.8" LCD	2,8" LCD
Menu	metrisch / imperial
Menu languages	German, English, French, Spanish, Italian, Dutch, Portuguese, Danish, Turkish, Polish, German Turkish, Polish, Russian, Chinese, Japanese
Operating and storage conditions	Temperature: -20 ... +65 °C Humidity: 10 ... 95 % r. h., non-condensing
Data logger	32 GB memory capacity / 10 million measuring points
Interface	USB (for online measurement, readout of the internal memory and for recharging the battery)
Protection class	IP52
Power supply Internal	Internal: LiPo battery (3.7 V, 2500 mAh) External: USB 5 VDC, 500 mA
Operating time	approx. 10 h
Dimensions	165 x 85 x 32 mm
Weight	255 g

Subject to change

