DPR2000 : on-line density measuring system : measuring cell DPR4122 XE / Anton Paar K.G.

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DPR 2000 on-line density measuring system

measuring cell

DPR 4122 XE

Special version with standard flanges

PAAR

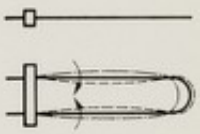
DPR 2000 on-line density measuring system

DPR 4122 XE MEASURING CELL

The measuring cell contains all the elements required for transformation of the "density" value into a frequency-analog output signal. Basic elements are the oscillator tube with housing and mounting plate as well as an excitation amplifier and terminal blocks for cable connection and furthermore, the necessary components for both measurement and transmission of sample temperature.
All precautions to ensure intrinsic safety have been taken.

DESCRIPTION

The DPR 4122 XE oscillator tube is built into a splash-proof and coated cast aluminium housing. As seen from the drafting, the U-shaped oscillator is caused to vibrate in the X-mode by an excitation amplifier. The sample temperature detected by a Pt 1000 sensor is coded with the oscillation signal and connected to evaluation electronics via a two-wire line.
This light weight measuring cell stands out for utmost easy handling and installation. Furthermore, the thermal inertia is small and the oscillator tube is hardly sensitive to pressure. The pressure drop in the cell corresponds to that of a tube of 1,000 mm length and 22 mm id.



TECHNICAL DATA

Material of oscillator tube	stainless steel 1.4571 (316 ti) other material upon request
Id of oscillator tube	22 mm
Measuring range	0 to 3 g cm^{-3}
Accuracy	0.1% of selected span
Sensitivity and repeatability	± $1x10^{-5}$ g cm^{-3} (overall range at constant measuring conditions)
Sample temperature range	—25 to + 125° C
Ambient temperature range	—25 to + 75° C
Temperature coefficient of oscillator tube	+ $3x10^{-3}$ g cm^{-3} K^{-1}
Pressure range	0 to 50 bars (test pressure 90 bars)
Pressure coefficient of oscillator tube	—$5x10^{-5}$ g cm^{-3} bar^{-1}

TYPES OF MEASURING CELLS

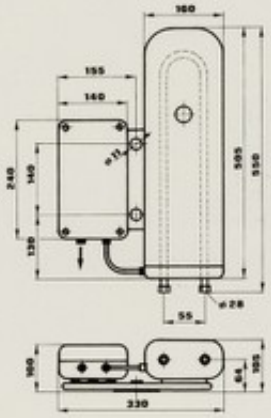
"E" electronic temperature measurement

The standard measuring cell is equipped with a Pt 1000 temperature sensor, the value of which is decoded at the evaluation electronics with a resolution of 0.1 K and either displayed, transmitted or used for density calculations — dependent on the instrument's version. Temperature compensation is possible within a wide range.

INSTRUCTIONS FOR MOUNTING

The measuring cell is to be mounted to a stable base by two screws M 10. We recommend an installation with the connectors directed downwards in order to avoid sedimentations in the oscillator tube. Connection to the sample flow is by 28 mm screw-on connectors (other connectors on request). Take care that no vibrations are transmitted to the measuring cell. This can be prevented by either supporting the pipes or using flexible tubings. No specified direction of flow is given. Direct sample flow-through up to approx. 10 m^3/h; higher flow rates require a bypass pipe.
The measuring cell is connected to the electronic evaluation unit by a two-wire line (line resistance 100 ohms max.). Splash proof feedthrough from the terminal block by PG screwing.

External dimensions of the cell	550x330x105 mm (length x width x height)
Mounting dimensions	140 mm (distance between fastening screws)
Weight	17 kg



ORDERING DATA

Cat. No.

60819 DPR 4122 XE standard measuring cell (SS 1.4571 / 316 ti)

Special versions of measuring cells available upon request

Specifications subject to change without notice

1.87

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