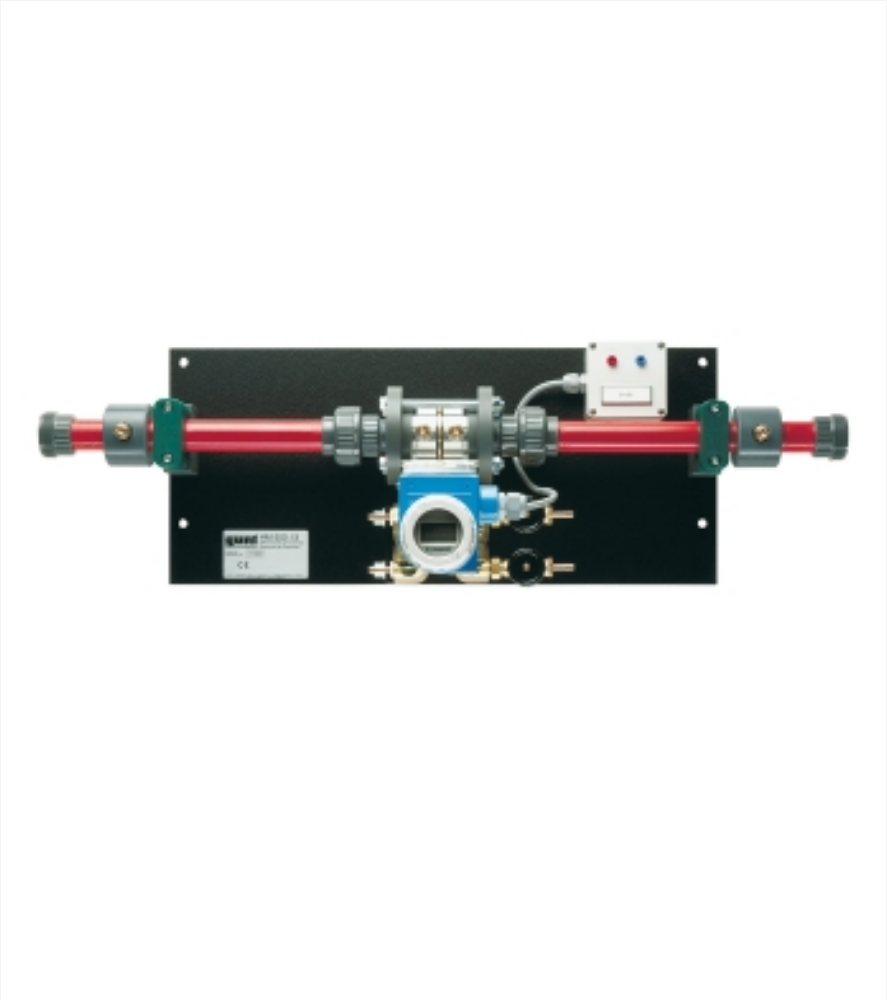
HM 500.13
Orifice Plate Flow Meter with Transducer



Learning objectives/experiments

- familiarisation with the operating principle
  - continuity law and Bernoulli's principle
  - transducer with capacitive sensing element
- flow rate measurement
- plotting a pressure loss curve
- comparison with other flow meters

Specification

[1] orifice Plate Flow Meter with electronic differential pressure transducer for flow rate measurement as accessory for trainer HM 500
[2] operation based on the differential pressure method
[3] display indicating differential pressure
[4] connections to facilitate pressure loss measurement with the HM 500
[5] connections to supply auxiliary power via the HM 500
[6] vertical and horizontal installation possible

Technical data

Orifice plate
- material: brass
- diameter: 18,5mm, with 45° chamfer

Transducer measuring range:
0...500mbar
Auxiliary power: 24VDC
Pipe connections: DN 32

LxWxH: 820x250x300mm
Weight: approx. 10kg

Scope of delivery

1 orifice plate flow meter with transducer
1 set of instructional material

Description

- **orifice Plate Flow Meter with electronic differential pressure transducer for flow rate measurement**

The orifice plate flow meter is installed in the water circuit of the HM 500 trainer. The flow rate measurement is based on the differential pressure method.

The orifice plate narrows the cross-section in the tube. The constriction of the cross-section causes an increase in velocity which results in a measurable differential pressure. A transducer based on variable capacitance (diaphragm method) is used to measure the differential pressure. It is indicated on a display.

Taking the orifice geometry into account, the flow rate can be calculated from the decrease in pressure using Bernoulli's principle and the Continuity law.

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Required accessories

HM 500	Flow meter trainer