

HM 500.10

Paddle wheel flow meter



Description

■ paddle wheel flow meter as accessory for trainer HM 500

The vane impeller flow meter is installed in the water circuit of the HM 500 trainer.

The kinetic energy of the flowing water causes angular rotation of the paddle wheel, the frequency of which is proportional to the flow rate of the water. The angular frequency is measured by a ring magnet and converted by a Hall sensor into an analogue voltage signal. This voltage signal corresponds to the flow rate of the fluid.

A display indicates the flow rate. The necessary connections are provided so that the pressure loss can be determined with the HM 500. The transparent front makes the paddle wheel visible, thus aiding understanding of the operating principle.

Learning objectives/experiments

- familiarisation with the principle of operation
- flow measurement
- plotting a pressure loss curve
- comparison with other flow meters

Specification

- [1] paddle wheel flow meter as accessory for trainer HM 500
- [2] non-contact recording of rotation speed by ring magnet and Hall sensor
- [3] display indicating flow rate
- [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

Auxiliary power: 24VDC
Pipe connections: DN 32

Measuring ranges
flow rate: 2...2880L/h

LxWxH: 820x200x150mm
Weight: approx. 6kg

Scope of delivery

- 1 paddle wheel flow meter
- 1 set of instructional material

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Required accessories

HM 500 Flow meter trainer