

HM 500.09

Measuring nozzle



Learning objectives/experiments

- familiarisation with the principle of operation
 - ▶ Bernoulli's principle
 - ▶ continuity law
- flow rate measurement
- plotting a pressure loss curve
- comparison with other flow meters

Specification

- [1] measuring nozzle for flow rate measurement as accessory for trainer HM 500
- [2] operation based on the differential pressure method
- [3] display of pressure difference via HM 500
- [4] connections to facilitate pressure loss measurement with the HM 500
- [5] meter housing made from transparent material
- [6] vertical and horizontal installation possible

Technical data

Measuring nozzle

- material: brass
- diameter: 14mm

Pipe connections: DN 32

LxWxH: 820x200x150mm

Weight: approx. 6kg

Scope of delivery

- 1 measuring nozzle
- 1 set of instructional material

Description

■ measuring nozzle for flow rate measurement as accessory for trainer HM 500

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

The measuring nozzle narrows the cross-section in the tube. The constriction of the cross-section causes an increase in velocity which results in a measurable decrease in pressure. Taking the nozzle geometry into account, the flow rate can be calculated from the decrease in pressure using Bernoulli's principle and the Continuity law.

The necessary connections are provided to measure and display the associated pressure loss with the HM 500. The transparent front makes the measuring nozzle visible, thus aiding understanding of the operating principle.

HM 500.09

Measuring nozzle

Required accessories

HM 500 Flow meter trainer