

HM 500.06

Venturi 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] venturi nozzle for flow rate measurement as accessory for trainer HM 500
- [2] operation based on the differential pressure method
- [3] venturi nozzle with transparent front
- [4] display of pressure drop for calculation of flow rate via HM 500
- [5] connections to facilitate pressure loss measurement with the HM 500
- [6] vertical and horizontal installation possible

Technical data

Venturi nozzle

- cross-section upstream of constriction 18,4x18,4mm
- cross-section at constriction: 4,6x18,4mm
- material: PVC and PMMA

Pipe connections: DN 32

LxWxH: 820x200x200mm

Weight: approx. 4kg

Scope of delivery

- 1 venturi nozzle
- 1 set of instructional material

Description

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

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

A constriction of the nozzle cross-section causes an increase in velocity which results in a measurable decrease in pressure. Taking account of the geometry of the nozzle, 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 pressure loss using the HM 500. The transparent front makes the cross-sectional characteristic of the venturi nozzle visible, thus aiding understanding of the principle of operation.

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Required accessories

HM 500 Flow meter trainer