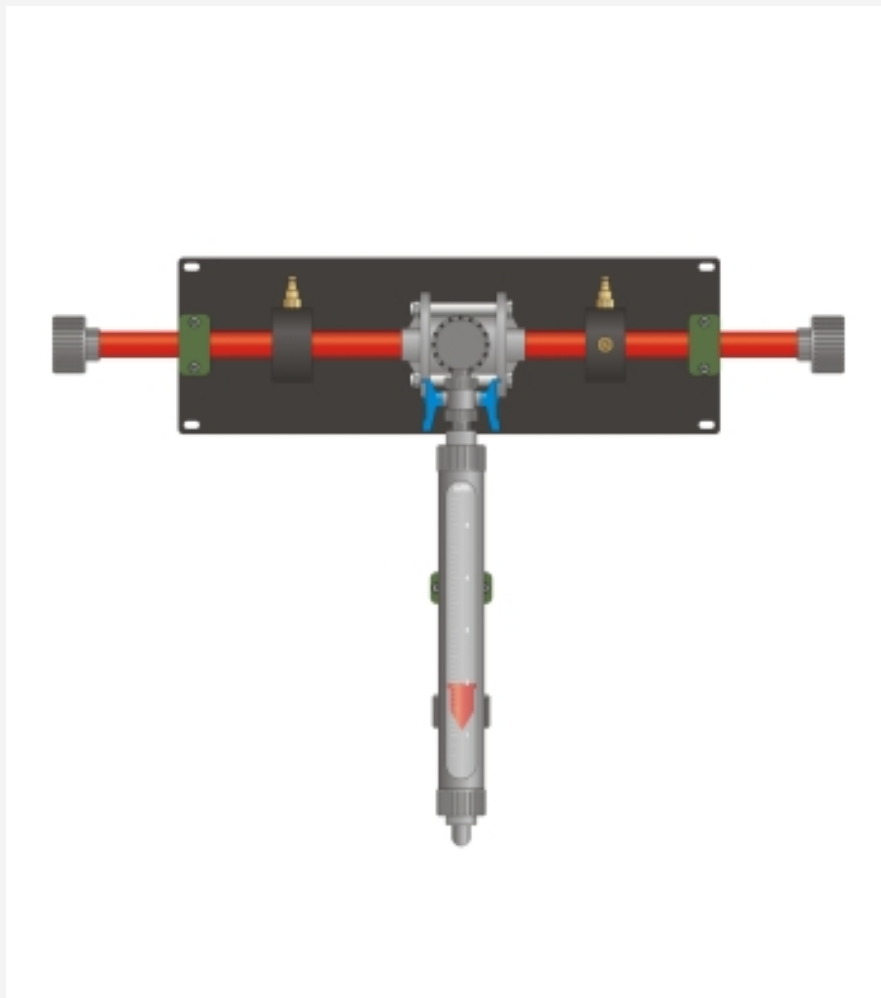


# HM 500.15

## Bypass flow meter



### Learning objectives/experiments

- familiarisation with the principle of operation
- flow measurement
- plot a pressure loss curve when installed horizontally
- comparison with other flow meters

### Specification

- [1] bypass flow meter as accessory for HM 500 trainer
- [2] orifice plate flow meter in main flow
- [3] bypass flow due to pressure difference upstream and downstream of the orifice plate flow meter
- [4] rotameter in bypass flow
- [5] flow rate read from position of float on the scale
- [6] connections for measuring the pressure loss when installed horizontally
- [7] operation with water
- [8] vertical or horizontal installation
- [9] all connections designed for HM 500 trainer

### Technical data

DN 32 pipe connections

Measuring ranges

- flow rate: 800...3500L/h

LxWxH: 820x360x200mm

Weight: approx. 9kg

### Scope of delivery

- 1 bypass flow meter
- 1 set of instructional material

### Description

- **bypass flow meter as accessory for HM 500**
- **installation independent of position**

The bypass flow meter is installed in the water circuit of the HM 500 trainer. The flow rate is determined via an orifice plate flow meter in the main flow and a rotameter in the bypass flow.

The orifice plate flow meter constricts the cross-section in the pipe. The decrease in cross-section causes an increase in speed, which results in a drop in pressure. The bypass flow is created by the pressure difference. A rotameter is located in the bypass flow. The flow rate is read off the position of the float on a scale.

To display correct values, the rotameter must always be vertical. The rotameter in the bypass flow can be rotated relative to the orifice plate flow meter in the main flow so that it is always vertical.

This means the bypass flow meter can be installed regardless of location.

In addition, the pressure drop across the bypass flow meter can be measured using pressure measuring points. This only makes sense if installed horizontally.

# HM 500.15

## Bypass flow meter

Required accessories

HM 500                      Flow meter trainer