

Features:

- Different methods of flow rate measurement.
- Visualization of the pressure distribution in Venturi nozzle or measuring orifice/ measuring nozzle

Measuring the flow rate is an important aspect of measurement technology. There are several ways to measure the flow of fluids in pipes.

With Tesca Methods of Flow Measurement Apparatus, students can familiarize themselves with various methods for measuring flow in the pipe system and apply them in practice. The experimental unit contains different measuring instruments to determine the flow rate. These instruments are designed with transparent cases in order to visualize how they operate and function. The methods include, for example, rotameters, a Venturi nozzle or orifice plate flow meter, and a measuring nozzle.

Six tube manometers are used in order to determine the pressure distribution in the Venturi nozzle or the orifice plate flow meter and measuring nozzle. The total pressure is measured by a Pitot tube. The experimental unit is positioned easily and securely on the work surface of the 32097 Hydraulic Bench. The water is supplied and the flow rate measured by 32096. Alternatively, the experimental unit can be operated by the laboratory supply.

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Specifications:

- Different methods of flow rate measurement
- Measuring instruments: orifice plate flow meter/measuring nozzle, Venturi nozzle and rotameter
- 6-tube manometer to determine the pressure distribution in Venturi nozzle, orifice plate flow meter, and measuring nozzle
- Measurement of the total pressure with Pitot tube

Technical Specifications:

Venturi nozzle: $A=84...338\text{mm}$
 - angle at the inlet: $10,5^\circ$
 - angle at the outlet: 4°

Orifice plate flow meter: diameter=14mm

Measuring nozzle: diameter=18,5mm

Rotameter: max. 1700L/h

6-tube manometer: 390mmWC

Experiments:

- Flow measurement with
- Orifice plate flow meter and measuring nozzle
- Venturi nozzle
- Rotameter
- Pressure measurement with Pitot tube
- Comparison of different instruments for flow measurement
- Determining the corresponding flow coefficients
- Calibrating measuring instruments

Utility Required:

1. 'Tesca Hydraulic Bench 32097.

Note: Specifications are subject to change.

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