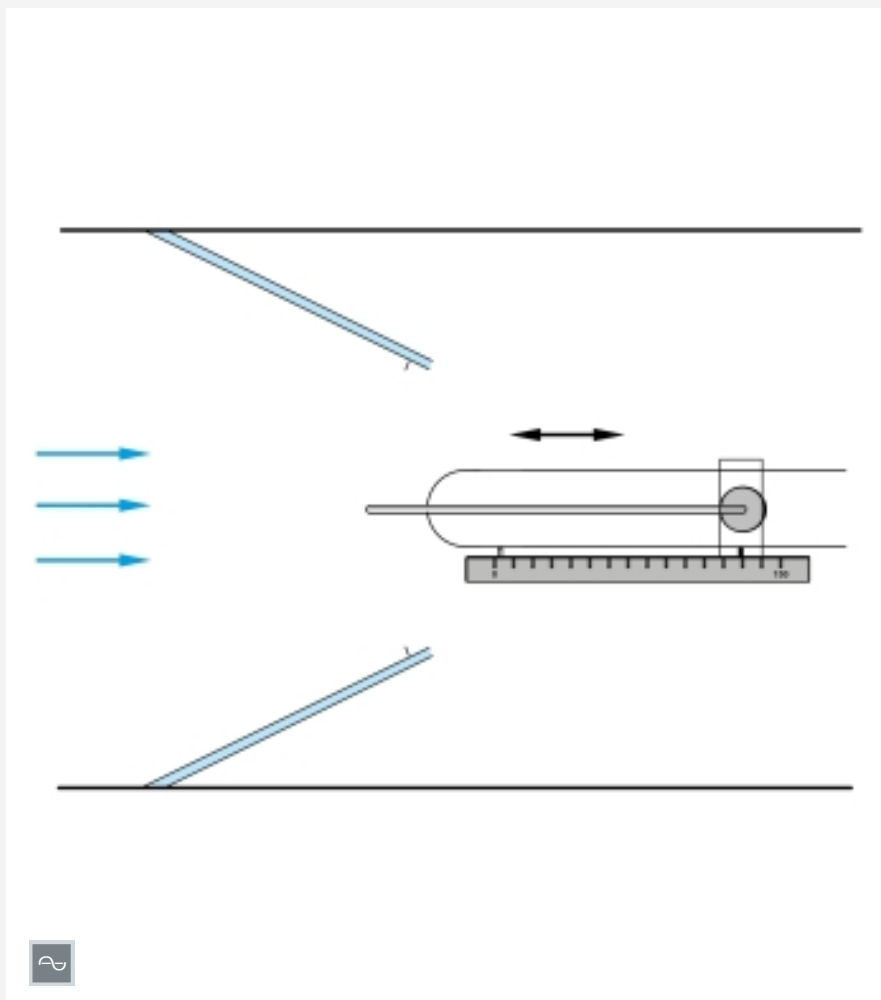


HM 170.25

Model "Bernoulli"



Description

■ model for checking the continuity equation and the energy equation

The experimental unit consists of two tapered inserts with which a gradual contraction of the measuring section in the wind tunnel is created. The dynamic and static pressure are measured using a Pitotstatic tube. During the experiments, the Pitotstatic tube is moved from the start of the contraction to the narrowest point, in this way the pressure as a function of position is measured. The apertures are fixed to the side walls of the measuring section using bolts, the Pitotstatic tube is placed in an opening on the bottom of the measuring section and moved along a slot in this position. The position of the probe can be read off in a scale beside the slot.

To indicate the pressure, the following units are optionally available: inclined tube manometer included in HM 170, differential pressure manometer HM 170.53, electronic pressure measurement HM 170.55 or system for data acquisition HM 170.60.

Learning objectives/experiments

- the continuity equation and the energy equation (Bernoulli) can be checked in experiments:
 - ▶ measurement of the dynamic pressure component on contraction of the flow cross-section
 - ▶ measurement of the static pressure component, related to atmospheric pressure

Specification

- [1] experimental unit with contraction of the flow cross-section and Pitotstatic tube
- [2] accessory for the wind tunnel HM 170
- [3] the following units can be used for pressure indication: inclined tube manometer included in HM 170, differential pressure manometer HM 170.53, electronic pressure measurement HM 170.55 or system for data acquisition HM 170.60

Technical data

Pitotstatic tube travel

- 150mm
- graduation: 15mm

Largest flow cross-section

- WxH: 292x292mm

Smallest flow cross-section

- WxH: 146x292mm

LxWxH: 360x292x345mm

Weight: approx. 0,8kg

Scope of delivery

- 1 experimental unit
- 1 manual

HM 170.25

Model "Bernoulli"

Required accessories

HM 170 Open wind tunnel

Optional accessories

HM 170.50 16 tube manometers, 600mm
HM 170.53 Differential pressure manometer
HM 170.55 Electronic pressure measurement for HM 170
HM 170.60 System for data acquisition