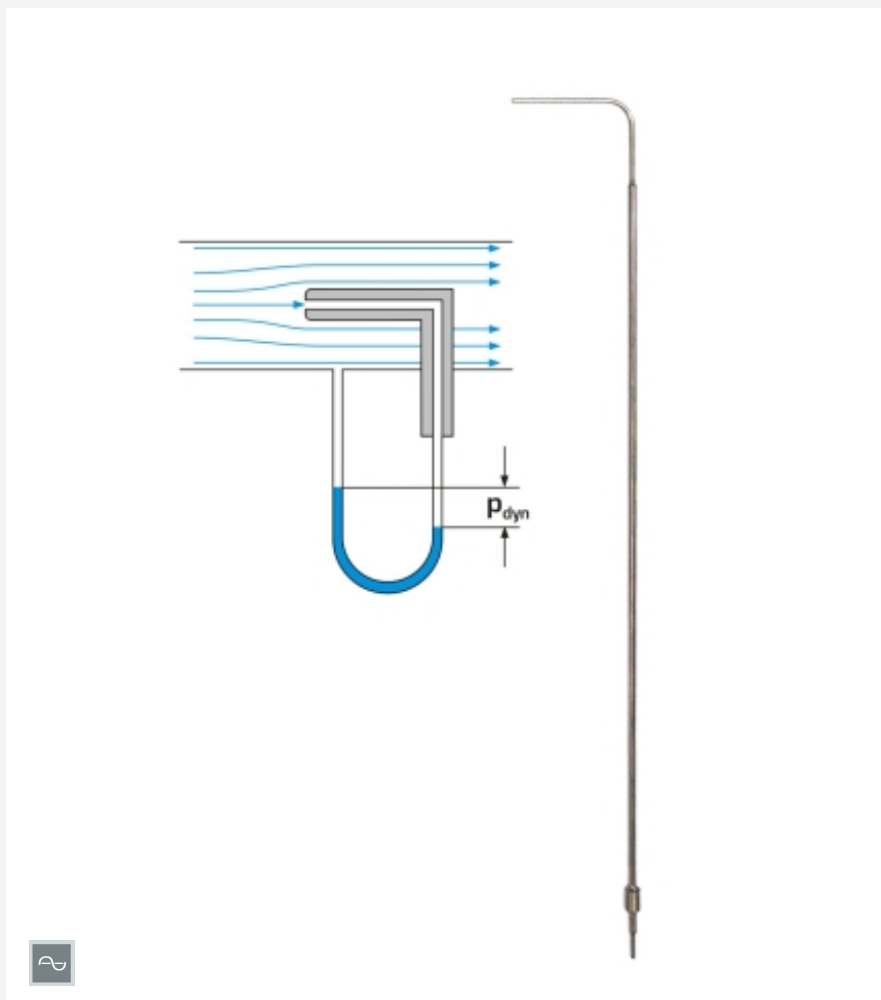


# HM 170.32

## Pitot tube, small



### Learning objectives/experiments

- measurement of the dynamic pressure component in a flowing fluid
- determination of the velocity in a flowing fluid

### Specification

- [1] Pitot tube for measuring pressure in a fluid flow
- [2] accessory for the wind tunnel HM 170
- [3] Pitot tube made of brass pressure
- [4] protective sleeve made of brass, soldered to Pitot tube
- [5] 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

#### Pitot tube

- effective length: 396mm
- bend radius: 15mm
- small limb: 47mm
- inner diameter:  $\varnothing=1,1$ mm
- outer diameter:  $\varnothing=2$ mm

#### Protective sleeve

- length: 310mm
- inner diameter:  $\varnothing=2,1$ mm
- outer diameter:  $\varnothing=3$ mm

Weight: approx. 0,2kg

### Scope of delivery

- 1 Pitot tube

### Description

- measurement of the dynamic pressure component in a flowing fluid
- determination of the velocity in a flowing fluid

The Pitot tube enables the total pressure in a fluid flow to be measured. The tube consists of a small tube with a bend, the tube is positioned in the flow such that the opening is facing the direction of flow.

A wall bore in the measuring section of HM 170 is used as static tube. The Pitot tube and the static tube are connected to a differential pressure manometer. The dynamic pressure can be read directly. The flow velocity is calculated.

On the small version, the Pitot tube is enclosed in a protective sleeve that prevents damage to the tube. Due to the smaller measuring tube, this version is well suited to boundary layer experiments.

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.

# HM 170.32

## Pitot tube, small

### Required accessories

HM 170            Open wind tunnel

### Optional accessories

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