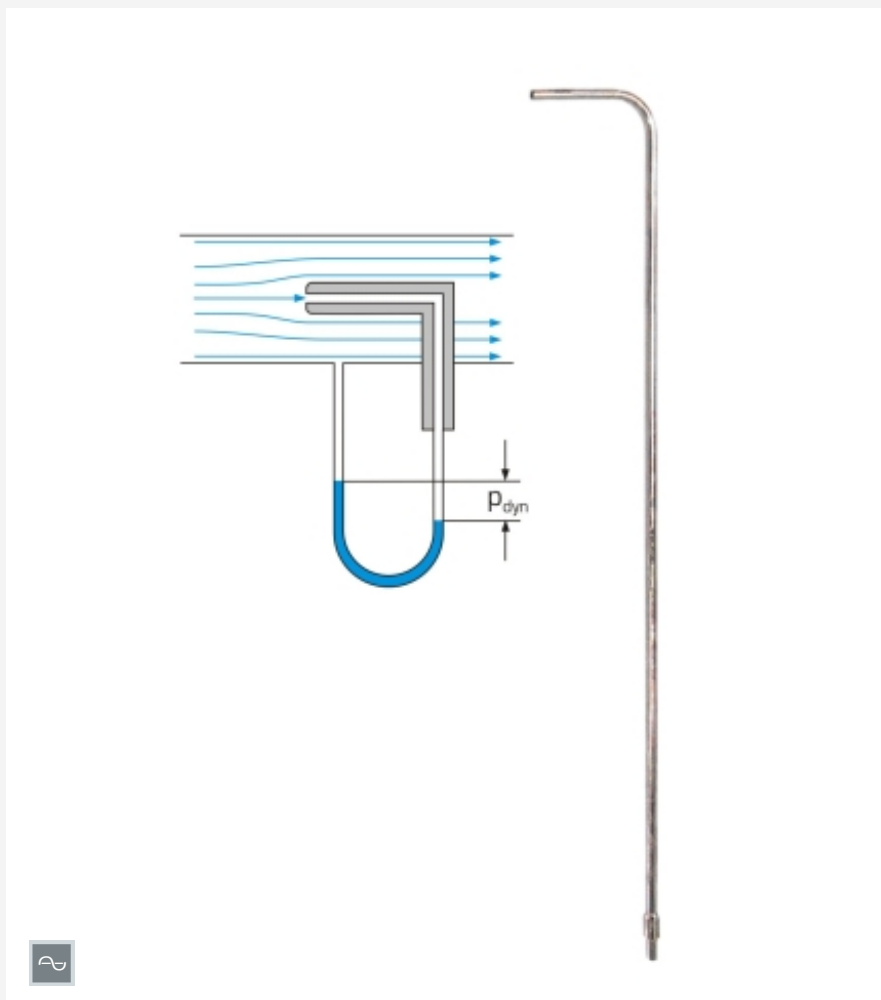


# HM 170.31

## Pitot tube



### 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 flowing fluid
- [2] accessory for the wind tunnel HM 170
- [3] Pitot tube made of brass
- [4] 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:  $\varnothing=3,1$  mm
- outer diameter:  $\varnothing=4$  mm

Weight: approx. 0,3kg

### 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 flowing fluid to be measured. The unit consists of a small tube that is positioned in the flow such that the opening is facing the 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.

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 170.31

## Pitot tube

### 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