

# HM 170.27

## Pressure distribution on an aerofoil NACA 4415



### Learning objectives/experiments

- record pressure distribution on an aerofoil immersed in a flow
  - as a function of the angle of attack

### Specification

- [1] determining the pressure distribution on an aerofoil immersed in a flow
- [2] accessories for the HM 170 Open Wind Tunnel
- [3] aerofoil profile NACA 4415
- [4] 16 measuring points with hose connections
- [5] display of the static pressures on the tube manometers HM 170.50 or in the electronic pressure measurement HM 170.55

### Technical data

#### Aerofoil

- profile: NACA 4415, asymmetrical
- LxWxH: 100x60x15,5mm

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Weight: approx. 0,6kg

### Scope of delivery

- 1 aerofoil
- 1 set of hoses
- 1 set of instructional material

### Description

#### ■ experiments with different aerofoil angles of attack of the aerofoil profile NACA 4415

HM 170.27 with the airfoil profile NACA 4415 – used in the wind tunnel HM 170 – allows the pressure distribution to be recorded. The aerofoil is used in the wind tunnel's two-component force sensor. The angle of attack is varied by rotating the mount. The surface of the aerofoil is fitted with measuring holes, which are arranged so that interaction is virtually eliminated. Each measuring point is fitted with a hose connection. The aerofoil is enclosed by two side panels to prevent secondary flows.

The static pressures are displayed on the tube manometers HM 170.50 or in the electronic pressure measurement HM 170.55.

# HM 170.27

## Pressure distribution on an aerofoil NACA 4415

### Required accessories

070.17000	HM 170	Open wind tunnel
070.17050	HM 170.50	16 Tube Manometers, 600mm
or		
070.17055	HM 170.55	Electronic Pressure Measurement, 18x 0...500Pa