

Thermal air flow measuring head and humidity probe

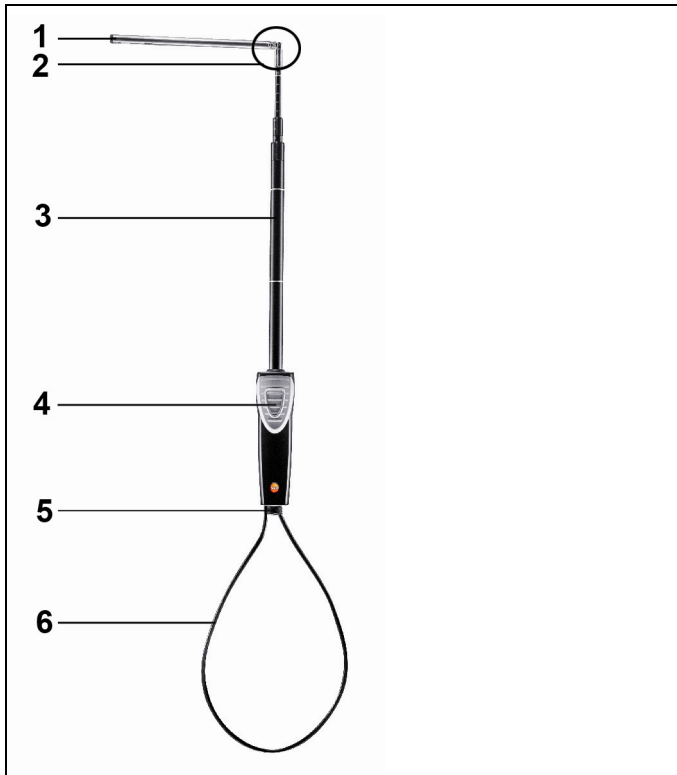
Application information



Application

The thermal air flow measuring head and humidity probe 0635 1543 is suitable in conjunction with testo 480 for flow and humidity measurements in ventilation channels and at ceiling/wall outlets.

Overview



- 1 Flow probe
- 2 Joint for 90° bend
- 3 Telescope with scale
- 4 Handle with integrated measurement button
- 5 Connection for plug-in head cable (art. no. 0430 0100)
- 6 Telescope cable

Technical data	
Feature	Values
Measurement range	0 to +20.00 m/s -20 to 70 °C 0 to 100%RH (non-condensing)
Accuracy: (at 22°C) ± 1 digit ¹	±(0.03 m/s, + 4% of meas. val.) ±0.5°C ±(1.8%RH + 0.7% of meas. val.) ±0.03%RH/K (based on 25°C)
	<div> <div>i</div> <div>At lower flow velocities, higher measurement inaccuracies can occur in temperature and humidity measurement!</div> </div>
Adjustment conditions	Adjustment in free jet Ø 350 mm, reference pressure 1013 hPa, based on testo reference Laser Doppler Anemometer (LDA)
Operating temperature, handle	0 to +40 °C
	<div> <div>i</div> <div> <p>The digital probe allows measurement values to be processed directly in the probe. This technology eliminates instrument measurement uncertainty.</p> <p>For calibration, the probe alone (without the hand instrument) can be sent away.</p> <p>Calculating the determined calibration data in the probe generates a zero-error display.</p> </div> </div>

¹ The measurement uncertainty for the relative humidity was calculated according to GUM and includes hysteresis, dispersion, linearity, uncertainties of adjustment and test site, and display resolution. This does not include the uncertainty values of long-term stability and drift in the case of long-term high humidity measurement.

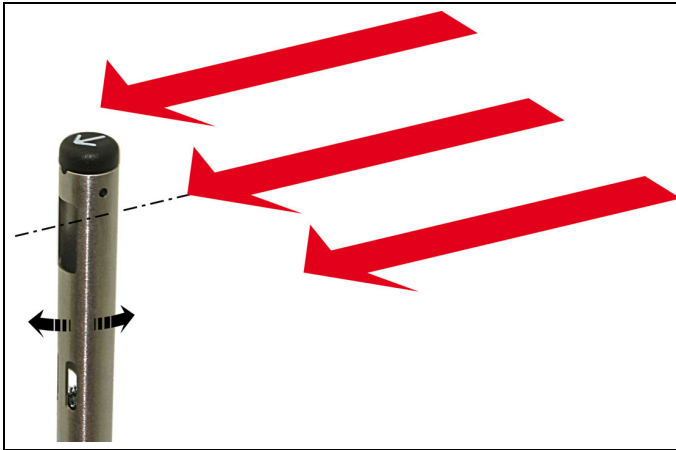
Preparing for measurement

- > Pull out the telescope to the required length. The individual joints of the telescope click into place.

Measuring flows

For velocity measurements with a known direction of flow, the arrow mark on the probe head must point in the direction of flow.

The correct measurement value is determined by rotating the probe slightly in both directions until the maximum value is displayed.



Identifying unknown flow directions

Procedure for measurements in channels with an unknown flow direction.

1. Remove protection cap from the probe head.
 2. Place the probe in the flow.
 3. Match up the probe axis with the assumed flow axis.
 4. Read the measurement value.
 5. Rotate the probe 180° and read off the measurement value again.
- The higher measurement value determines the flow direction.

Procedure when measuring in flows with an unknown flow axis.

- > Rotate the probe 360°. Keep a constant eye on the measurement value.

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- The maximum value determines the flow direction here, which can then be read via marking.

After the measurement

- > Pull the protection cap over the probe head.
- > Slide the telescope back, starting with the joints closest to the handle. Make sure that there are no kinks in the telescope cable.