

# Universal IAQ instrument

testo 400 - the multitasker  
for IAQ professionals

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Measures all IAQ-related parameters: Flow, temperature, humidity, pressure, illuminance, radiant heat, turbulence, CO<sub>2</sub> and CO

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High-precision, location-independent and integrated differential pressure sensor

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High-quality digital probes and an intelligent calibration concept

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Document measuring values directly on the customer's site and send them by e-mail, or further analyze them using the testo DataControl PC software

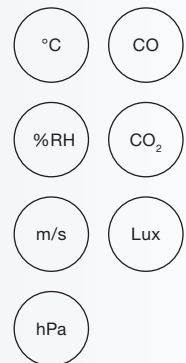
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Smart and intuitive measurement programs:

- HVAC grid measurement in accordance with EN ISO 12599 and ASHRAE 111
  - PMV/PPD in accordance with EN ISO 7730 and ASHRAE 55
  - Draught and degree of turbulence in accordance with EN ISO 7730 and ASHRAE 55
  - WBGT measurement in line with DIN 33403 and EN ISO 7243, NET measurement in accordance with DIN 33403
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testo 400 is the universal measuring instrument for all IAQ professionals, enabling them to measure, document and analyze all IAQ parameters with just one instrument. Your benefits:

- Smart support through stored measurement menus and evaluation of measuring values according to the traffic light principle – for error-free measurements
- Manage all the relevant customer data, including measuring points, directly in the instrument - work directly and efficiently on site
- Complete and send measuring values with full documentation, including photos, comments and your own logo directly on site – get to the next job faster



Compatible with a comprehensive selection of Bluetooth® and cable probes.



- Probe heads can be changed without restarting the instrument – easy handling with no lost time
- Calibration of probes which is independent of the measuring instrument and adjustment function at up to six measuring points for zero-error display – fewer downtimes and high-precision measurements

As consultants, experts, technical service providers or service technicians in the air conditioning and ventilation sector, the testo 400 therefore supports you in the truly smart performance of your measuring tasks. Relevant quality parameters in industrial production and manufacturing processes can also be reliably and accurately checked using the testo 400.

# Technical data

| Differential pressure (integrated)             |   |
|--|---|
| Measuring range                                | 0 to +200 hPa   |
| Accuracy (±1 digit)                            | ±(0.3 Pa ± 1% of m.v.) (0 to 25 hPa)<br>±(0.1 hPa + 1.5% of m.v.) (25.001 to 200 hPa)                                       |
| Resolution                                     | 0.001 hPa   |
| Absolute pressure (integrated)                 |   |
| Measuring range                                | 700 to +1100 hPa  |
| Accuracy (±1 digit)                            | ±3 hPa  |
| Resolution                                     | 0.1 hPa   |
| Temperature NTC (with appropriate probe)       |   |
| Measuring range                                | -40 to +150 °C  |
| Accuracy (±1 digit)                            | ±0.2 °C (-25 to 74.9 °C)<br>±0.4 °C (-40 to -25.1 °C)<br>±0.4 °C (+75 to +99.9 °C)<br>±0.5% of m.v. (remaining meas. range) |
| Resolution                                     | 0.1 °C  |
| Temperature TC type K (with appropriate probe) |   |
| Measuring range                                | -200 to +1370 °C  |
| Accuracy (±1 digit)                            | ±(0.3 °C + 0.1% of m.v.)  |
| Resolution                                     | 0.1 °C  |
| Temperature Pt100 (with appropriate probe)     |   |
| Measuring range                                | See probe data  |
| Accuracy (±1 digit)                            |   |
| Resolution                                     |   |

| General technical data |   |
|------------------------|---|
| Probe connections      | 4x Bluetooth®, 2x TUC*, 2x TC type K  |
| Interfaces             | Bluetooth®, WLAN, USB   |
| Operating temperature  | -5 to +45 °C  |
| Storage temperature    | -20 to +60 °C   |
| Power supply           | Rechargeable li-ion battery (5550 mAh)  |
| Battery life           | approx. 10 hrs continuous operation   |
| Display                | 5.0 inch HD touch display<br>1280 x 720 px resolution                                 |
| Camera                 | Main camera: 8.0 MP<br>Front camera: 5.0 MP   |
| Memory                 | 2 GB (corresponds to approx. 1,000,000 readings)                                      |
| Protection class       | IP40  |
| Dimensions             | 210 x 95 x 39 mm  |
| Weight                 | 510 g   |
| Data transmission      | Bluetooth®, e.g. for connection to Bluetooth probes, testo Smart Probes and testo 420 |

\*TUC connection (Testo Universal Connector): For the connection of fixed cable digital probes and NTC probes.

# Ordering data

**testo 400**

testo 400 universal IAQ instrument, including transport case for volume flow measurement, connection hose, mains unit with USB cable and calibration protocol.



Order no. 0560 0400

**IAQ data logger**

IAQ data logger for long-term measurements with the testo 400 including mains unit with USB cable and calibration protocol.



Order no. 0577 0400

## Ordering data for kits

### testo 400 air flow kit with hot wire probe

- testo 400 universal IAQ instrument, including transport case for volume flow measurement, silicone hoses, mains unit with USB cable and calibration protocol
- Hot wire probe with Bluetooth®, including temperature and humidity sensor (comprising hot wire probe head, telescope (extendable to 1.0 m) handle adapter and Bluetooth® handle), 4 x AA batteries and calibration protocol
- Vane probe head (Ø 100 mm), including temperature sensor and calibration protocol
- High-precision humidity/temperature probe head, including calibration protocol
- 90° angle for connecting vane probes (Ø 100 mm)

Order no. 0563 0400 71



### testo 400 air flow kit with 16 mm vane probe

- testo 400 universal IAQ instrument, including transport case for volume flow measurement, silicone hoses, mains unit with USB cable and calibration protocol
- Vane probe (Ø 16 mm) with Bluetooth®, including temperature sensor (comprising 16 mm vane probe head, telescope (extendable to 1.0 m), handle adapter and Bluetooth® handle), 4 x AA batteries and calibration protocol
- Vane probe head (Ø 100 mm), including temperature sensor and calibration protocol
- High-precision humidity/temperature probe head, including calibration protocol
- 90° angle for connecting vane probes (Ø 100 mm)

Order no. 0563 0400 72



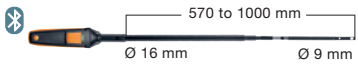
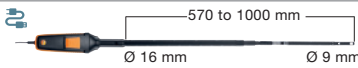
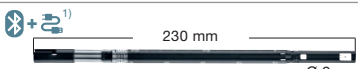
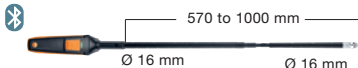

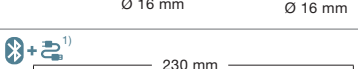



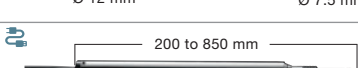
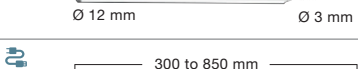






### testo 400 IAQ and comfort kit with tripod

- testo 400 universal IAQ instrument, including transport case for comfort level measurement, silicone hoses, mains unit with USB cable and calibration protocol
- CO<sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor, (comprising CO<sub>2</sub> probe head and Bluetooth® handle), 4 x AA batteries, table stand and calibration protocol
- Turbulence probe with fixed cable, including calibration protocol
- Globe thermometer Ø 150 mm with fixed cable, TC type K, for measuring radiant heat
- Measuring tripod for comfort level measurement, consisting of folding stand, mounting rod, 4 x probe mounts, including bag

Order no. 0563 0401



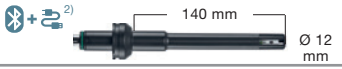


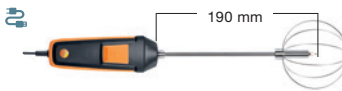

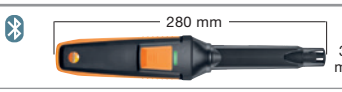




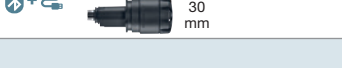

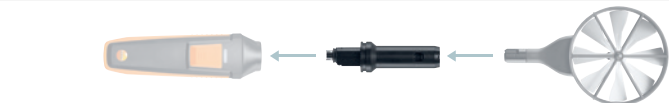


# Digital flow probes

| Probe type   |   | Measuring range  | Accuracy   | Resolution                               | Order no. |
|--|---|--|--|--|-----------|
| <b>Digital flow probes</b>   |   |  |  |  |           |
| Hot wire probe with Bluetooth®, including temperature and humidity sensor  |    | 0 to 50 m/s<br>-20 to +70 °C<br>5 to 95 %RH<br>700 to 1100 hPa | ±(0.03 m/s + 4% of m.v.)<br>(0 to 20 m/s)<br>±(0.5 m/s + 5% of m.v.)<br>(20.01 to 30 m/s)<br>±0.5 °C (0 to +70 °C)<br>±0.8 °C (-20 to 0 °C)<br>±3.0 %RH (10 to 35 %RH) <sup>3)</sup><br>±2.0 %RH (35 to 65 %RH) <sup>3)</sup><br>±3.0 %RH (65 to 90 %RH) <sup>3)</sup><br>±5 %RH (remaining meas. range) <sup>3)</sup><br>±3 hPa | 0.01 m/s<br>0.1 °C<br>0.1 %RH<br>0.1 hPa | 0635 1571 |
| Hot wire probe, fixed cable, including temperature and humidity sensor   |    |  |  |  | 0635 1572 |
| Hot wire probe head, including temperature and humidity sensor   |    |  |  |  | 0635 1570 |
| Vane probe (Ø 16 mm) with Bluetooth®, including temperature sensor   |    | 0.6 to 50 m/s<br>-10 to +70 °C                                 | ±(0.2 m/s + 1% of m.v.)<br>(0.6 to 40 m/s)<br>±(0.2 m/s + 2% of m.v.)<br>(40.1 to 50 m/s)<br>±1.8 °C   | 0.1 m/s<br>0.1 °C                        | 0635 9571 |
| Vane probe (Ø 16 mm), fixed cable, including temperature sensor  |    |  |  |  | 0635 9572 |
| Vane probe head (Ø 16 mm), including temperature sensor  |    |  |  |  | 0635 9570 |
| Hot wire probe, fixed cable, including temperature sensor  |   | 0 to 30 m/s<br>-20 to +70 °C<br>700 to 1100 hPa                | ±(0.03 m/s + 4% of m.v.)<br>(0 to 20 m/s)<br>±(0.5 m/s + 5% of m.v.)<br>(20.01 to 30 m/s)<br>±0.5 °C<br>±3 hPa   | 0.01 m/s<br>0.1 °C<br>0.1 hPa            | 0635 1032 |
| Hot wire probe (Ø 7.5 mm), fixed cable, including temperature sensor   |  | 0 to 20 m/s<br>-20 to +70 °C<br>700 to 1100 hPa                | ±(0.03 m/s + 5% of m.v.)<br>(0 to 20 m/s)<br>±0.5 °C<br>±3 hPa   | 0.01 m/s<br>0.1 °C<br>0.1 hPa            | 0635 1026 |
| Hot ball probe (Ø 3 mm), fixed cable, including temperature sensor   |  | 0 to 10 m/s<br>-20 to +70 °C<br>700 to 1100 hPa                | ±(0.03 m/s + 5% of m.v.)<br>(0 to 10 m/s)<br>±0.5 °C<br>±3 hPa   | 0.01 m/s<br>0.1 °C<br>0.1 hPa            | 0635 1051 |
| Vane probe (Ø 16 mm), fixed cable  |  | 0.6 to 50 m/s  | ±(0.2 m/s + 1% of m.v.)<br>(0.6 to 40 m/s)<br>±(0.2 m/s + 2% of m.v.)<br>(40.1 to 50 m/s)  | 0.1 m/s                                  | 0635 9532 |
| Fume cupboard probe, fixed cable (Measurement of flow velocity and volume flow at laboratory extractors based on DIN EN 14175-3/-4.) |  | 0 to 5 m/s<br>0 to +50 °C<br>700 to 1100 hPa                   | ±(0.02 m/s + 5% of m.v.)<br>(0 to 5 m/s)<br>±0.5 °C<br>±3 hPa  | 0.01 m/s<br>0.1 °C<br>0.1 hPa            | 0635 1052 |
| High-precision vane probe (Ø 100 mm) with Bluetooth®, including temperature sensor   |  | 0.1 to 15 m/s<br>-20 to +70 °C                                 | ±(0.1 m/s + 1.5% of m.v.)<br>(0.1 to 15 m/s)<br>±0.5 °C  | 0.01 m/s<br>0.1 °C                       | 0635 9371 |
| High-precision vane probe (Ø 100 mm), fixed cable, including temperature sensor  |  |  |  |  | 0635 9372 |
| High-precision vane probe head (Ø 100 mm), including temperature sensor  |  |  |  |  | 0635 9370 |
| Vane probe (Ø 100 mm) with Bluetooth®, including temperature sensor  |  | 0.3 to 35 m/s<br>-20 to +70 °C                                 | ±(0.1 m/s + 1.5% of m.v.)<br>(0.3 to 20 m/s)<br>±(0.2 m/s + 1.5% of m.v.)<br>(20.01 to 35 m/s)<br>±0.5 °C  | 0.01 m/s<br>0.1 °C                       | 0635 9431 |
| Vane probe (Ø 100 mm), fixed cable, including temperature sensor   |  |  |  |  | 0635 9432 |
| Vane probe head (Ø 100 mm), including temperature sensor   |  |  |  |  | 0635 9430 |

<sup>1)</sup> For use with cable handle (order no. 0554 2222) or Bluetooth® handle (order no. 0554 1111) in conjunction with handle adapter (order no. 0554 2160).  
<sup>3)</sup> Please note the additional accuracy specifications on the hysteresis and long-term stability of humidity in the instruction manual.













# Other digital probes and probe accessories

| Probe type   |  | Measuring range  | Accuracy  | Resolution   | Order no. |
|--|--|--|---|--|-----------|
| <b>Digital humidity probes</b>   |  |  |   |  |           |
| Humidity/temperature probe with Bluetooth®                                       |     | 0 to 100 %RH<br>-20 to +70 °C  | ±2 %RH (5 to 90 %RH) <sup>3)</sup><br>±0.5 °C   | 0.1 %RH<br>0.1 °C                                    | 0636 9731 |
| Humidity/temperature probe, fixed cable  |     |  |   |  | 0636 9732 |
| Humidity/temperature probe head  |     |  |   |  | 0636 9730 |
| High-precision humidity/temperature probe with Bluetooth®                        |     | 0 to 100 %RH<br>-20 to +70 °C  | ±(0.6 %RH + 0.7% of m.v.)<br>(0 to 90 %RH) <sup>3)</sup><br>±(1.0 %RH + 0.7% of m.v.)<br>(90 to 100 %RH) <sup>3)</sup><br>±0.3 °C<br>(15 to 30 °C)<br>±0.5 °C<br>(remaining meas. range)  | 0.01 %RH<br>0.01 °C                                  | 0636 9771 |
| High-precision humidity/temperature probe, fixed cable                           |     |  |   |  | 0636 9772 |
| High-precision humidity/temperature probe head                                   |     |  |   |  | 0636 9770 |
| Robust humidity/temperature probe for temperatures up to +180 °C, fixed cable    |    | 0 to 100 %RH<br>-20 to +180 °C   | ±3 %RH (0 to 2 %RH) <sup>3)</sup><br>±2 %RH (2.1 to 98 %RH) <sup>3)</sup><br>±3 %RH (98.1 to 100 %RH) <sup>3)</sup><br>±0.5 °C (-20 to 0 °C)<br>±0.4 °C (0.1 to +50 °C)<br>±0.5 °C (+50.1 to +180 °C)   | 0.1 %RH<br>0.1 °C                                    | 0636 9775 |
| <b>Digital comfort probes</b>  |  |  |   |  |           |
| Turbulence probe, fixed cable  |   | 0 to +5 m/s<br>0 to +50 °C<br>700 to 1100 hPa                                    | ±(0.03 m/s + 4% of m.v.)<br>(0 to 5 m/s)<br>±0.5 °C<br>±3 hPa   | 0.01 m/s<br>0.1 °C<br>0.1 hPa                        | 0628 0152 |
| Lux probe, fixed cable   |   |  | 0 to 100,000 lux<br>DIN 13032-1 Appendix B<br>F1 = 6 % = V(Lambda) adjustment<br>F2 = 5 % = cos-true evaluation<br>Class C according to DIN 5032-7  | 0.1 lux<br>(< 10,000 lux)<br>1 lux<br>(≥ 10,000 lux) | 0635 0551 |
| CO <sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor |   | 0 to 10,000 ppm CO <sub>2</sub><br>5 to 95 %RH<br>0 to +50 °C<br>700 to 1100 hPa | ±(50 ppm + 3% of m.v.)<br>(0 to 5,000 ppm)<br>±(100 ppm + 5% of m.v.)<br>(5,001 to 10,000 ppm)<br>±3 %RH (10 to 35 %RH) <sup>3)</sup><br>±2 %RH (35 to 65 %RH) <sup>3)</sup><br>±3 %RH (65 to 90 %RH) <sup>3)</sup><br>±5 %RH<br>(remaining meas. range) <sup>3)</sup><br>±0.5 °C<br>±3 hPa | 1 ppm<br>0.1 %RH<br>0.1 °C<br>0.1 hPa                | 0632 1551 |
| CO <sub>2</sub> probe, fixed cable, including temperature and humidity sensor    |   |  |   |  | 0632 1552 |
| CO <sub>2</sub> probe head, including temperature and humidity sensor            |   |  |   |  | 0632 1550 |
| CO probe with Bluetooth®   |   | 0 to 100 ppm<br>100.1 to 500 ppm   | ±3 ppm (0 to 30 ppm)<br>±5 ppm (30.1 to 100 ppm)<br>±10 % of m.v.<br>(100.1 ... 500 ppm)  | 0.1 ppm  | 0632 1271 |
| CO probe, fixed cable  |   |  |   |  | 0632 1272 |
| CO probe head  |   |  |   |  | 0632 1270 |
| <b>Probe handles and adapters</b>  |  |  |   |  |           |
| Bluetooth® handle for connecting testo 400 testo 440 probe heads                 |   |  |   |  | 0554 1111 |
| Cable handle for connecting testo 400 / testo 440 probe heads                    |   |  |   |  | 0554 2222 |
| Handle adapter for connecting testo 400 / testo 440 flow probes                  |  |  |   |  | 0554 2160 |

<sup>2)</sup> For use with cable handle (order no. 0554 2222) or Bluetooth® handle (order no. 0554 1111).

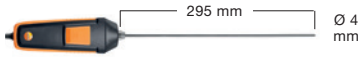
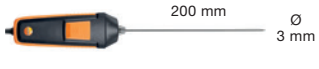
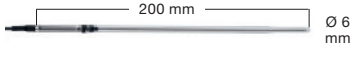

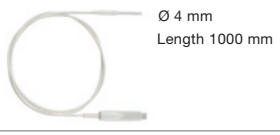

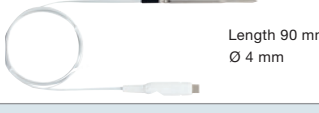


<sup>3)</sup> Please note the additional accuracy specifications on the hysteresis and long-term stability of humidity in the instruction manual.

# Testo Smart Probes

| Testo Smart Probes  |   | Measuring range  | Accuracy ±1 digit  | Resolution         | Order no.    |
|---|---|--|--|--------------------|--------------|
| <b>Temperature</b>  |   |  |  |                    |              |
| <b>testo 115i</b><br>Clamp thermometer with smartphone operation, for measurements on pipelines with diameters of 6 to max. 35 mm, including batteries and calibration protocol                                       |    | -40 to +150 °C   | ±1.3 °C (-20 to +85 °C)  | 0.1 °C             | 0560 2115 02 |
| <b>testo 915i – with flexible probe</b><br>Wireless Smart Probe testo 915i with flexible probe (TC Type K), incl. batteries and calibration protocol  |    | -50 to +400 °C   | ±1.0 °C (-30 to +80 °C)<br>±(0.7 °C + 1 % of m.v.) (-50 to -30 °C)<br>±(0.2 °C + 1 % of m.v.) (+80 to +400 °C)   | 0.1 °C             | 0563 4915    |
| <b>testo 915i – with air probe</b><br>Wireless Smart Probe testo 915i with air probe (TC Type K), incl. batteries and calibration protocol  |    | -50 to +400 °C   | ±1.0 °C (-50 to +100 °C)<br>±1 % of m.v. (remaining meas. range)   | 0.1 °C             | 0563 3915    |
| <b>testo 915i – with immersion/penetration probe</b><br>Wireless Smart Probe testo 915i with immersion/penetration probe (TC Type K), incl. batteries and calibration protocol  |    | -50 to +400 °C   | ±1.0 °C (-50 to +100 °C)<br>±1 % of m.v. (remaining meas. range)   | 0.1 °C             | 0563 1915    |
| <b>testo 915i – with surface probe</b><br>Wireless Smart Probe testo 915i with surface probe (TC Type K), incl. batteries and calibration protocol  |   | -50 to +350 °C   | ±(1.0 °C + 1 % of m.v.)  | 0.1 °C             | 0563 2915    |
| <b>testo 915i kit</b><br>Universal temperature kit consisting of Smart Probe testo 915i with plug-in immersion/penetration probe, air probe and surface probe in Smart Case, incl. batteries and calibration protocol |  | see above, testo 915i<br>- Air probe<br>- Immersion/penetration probe<br>- Surface probe |  | 0.1 °C             | 0563 5915    |
| <b>testo 805i</b><br>Infrared thermometer with smartphone operation, including batteries and calibration protocol   |  | -30 to +250 °C   | ±1.5 °C or ±1.5% of m.v. (0 to +250 °C)<br>±2.0 °C (-20 to -0.1 °C)<br>±2.5 °C (-30 to -20.1 °C)   | 0.1 °C             | 0560 1805    |
| <b>Humidity</b>   |   |  |  |                    |              |
| <b>testo 605i</b><br>Thermohygrometer with smartphone operation, including batteries and calibration protocol   |  | 0 to 100 %RH<br>-20 to +60 °C  | ±3.0 %RH (10 to 35 %RH) <sup>3)</sup><br>±2.0 %RH (35 to 65 %RH) <sup>3)</sup><br>±3.0 %RH (65 to 90 %RH) <sup>3)</sup><br>±5 %RH (< 10 %RH or > 90 %RH) <sup>3)</sup><br>±0.8 °C (-20 to 0 °C)<br>±0.5 °C (0 to +60 °C) | 0.1 %RH<br>0.1 °C  | 0560 2605 02 |
| <b>Flow</b>   |   |  |  |                    |              |
| <b>testo 405i</b><br>Thermal anemometer with smartphone operation, telescopic tube extendable to up to 400 mm, including batteries and calibration protocol   |  | 0 to 30 m/s<br>-20 to +60 °C   | ±(0.1 m/s + 5% of m.v.) (0 to 2 m/s)<br>±(0.3 m/s + 5% of m.v.) (2 to 15 m/s)<br>±0.5 °C   | 0.01 m/s<br>0.1 °C | 0560 1405    |
| <b>testo 410i</b><br>Vane anemometer with smartphone operation, including batteries and calibration protocol  |  | 0.4 to 30 m/s<br>-20 to +60 °C   | ±(0.2 m/s + 2% of m.v.) (0.4 to 20 m/s)<br>±0.5 °C   | 0.1 m/s<br>0.1 °C  | 0560 1410    |
| <b>Pressure</b>   |   |  |  |                    |              |
| <b>testo 510i</b><br>Differential pressure measuring instrument with smartphone operation, including hose kit (Ø 4 mm and 5 mm) with adapter, batteries and calibration protocol                                      |  | -150 to 150 hPa  | ±0.05 hPa (0 to 1 hPa)<br>±(0.2 hPa + 1.5% of m.v.) (1 to 150 hPa)   | 0.01 hPa           | 0560 1510    |
| <b>testo 549i</b><br>High-pressure measuring instrument with smartphone operation, including batteries and calibration protocol   |  | -1 to 60 bar   | 0.5% of final value  | 0.01 bar           | 0560 2549 02 |

<sup>3)</sup> Please note the additional accuracy specifications on the hysteresis and long-term stability of humidity in the instruction manual.

## Digital temperature probes



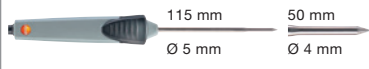



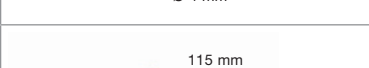





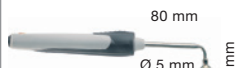
| Probe type   |  | Measuring range                                 | Accuracy   | Resolution        | Order no. |
|--|--|---|--|-------------------|-----------|
| <b>Digital temperature probes</b>  |  |   |  |                   |           |
| <b>High-precision digital Pt100 penetration probe</b> for measurements in liquids and pastes with an accuracy of up to $\pm 0.05$ °C |  295 mm $\varnothing$ 4 mm              | -80 to +300 °C                                  | $\pm 0.3$ °C (-80 to -40.001 °C)<br>$\pm (0.1$ °C + 0.05% of m.v.) (-40 to -0.001 °C)<br>$\pm 0.05$ °C (0 to +100 °C)<br>$\pm (0.05$ °C + 0.05% of m.v.) (+100.001 to +300 °C)                                   | 0.001 °C          | 0618 0275 |
| <b>Digital Pt100 penetration probe</b> for measurements in liquids and pastes  |  200 mm $\varnothing$ 3 mm              | -100 to +400 °C                                 | $\pm (0.15$ °C + 0.2% of m.v.) (-100 to -0.01 °C)<br>$\pm (0.15$ °C + 0.05% of m.v.) (0 to +100 °C)<br>$\pm (0.15$ °C + 0.2% of m.v.) (+100.01 to +350 °C)<br>$\pm (0.5$ °C + 0.5% of m.v.) (+350.01 to +400 °C) | 0.01 °C           | 0618 0073 |
| <b>Glass-coated digital Pt100 laboratory probe</b> for measurements in corrosive media   |  200 mm $\varnothing$ 6 mm              | -50 to +400 °C                                  | $\pm (0.3$ °C + 0.3% of m.v.) (-50 to +300 °C)<br>$\pm (0.4$ °C + 0.6% of m.v.) (+300.01 to +400 °C)   | 0.01 °C           | 0618 7072 |
| <b>Robust, fast-reaction, digital Pt100 air probe</b>  |  200 mm $\varnothing$ 4 mm              | -100 to +400 °C                                 | $\pm (0.15$ °C + 0.2% of m.v.) (-100 to -0.01 °C)<br>$\pm (0.15$ °C + 0.05% of m.v.) (0 to +100 °C)<br>$\pm (0.15$ °C + 0.2% of m.v.) (+100.01 to +350 °C)<br>$\pm (0.5$ °C + 0.5% of m.v.) (+350.01 to +400 °C) | 0.01 °C           | 0618 0072 |
| <b>Flexible digital Pt100 temperature probe</b> for measurements in locations that are difficult to access and in liquids            |  $\varnothing$ 4 mm<br>Length 1000 mm | -100 to +260 °C                                 | $\pm (0.3$ °C + 0.3% of m.v.)  | 0.01 °C           | 0618 0071 |
| <b>Digital NTC stump temperature probe</b>   |  140 mm $\varnothing$ 15 mm           | -30 to +50 °C                                   | $\pm 0.4$ °C   | 0.1 °C            | 0572 2162 |
| <b>Digital Pt100 cable temperature probe</b><br>Cable length 1.3 m   |  Length 90 mm<br>$\varnothing$ 4 mm   | -85 to +150 °C (only probes and cable)          | $\pm (0.25$ °C + 0.3 % of m.v.) at -49.9 to +99.9 °C<br>$\pm 0.55$ °C remaining measuring range  | 0.01 °C           | 0572 2163 |
| <b>Digital humidity probe</b>  |  |   |  |                   |           |
| <b>Digital stump humidity/temperature probe</b>  |  140 mm $\varnothing$ 15 mm           | -30 to +50 °C/<br>0 to 100 %RH (non-condensing) | $\pm 0.4$ °C at +25 °C<br>$\pm 2.0$ %RH at 0 to 90 %RH at +25 °C<br>$\pm 0.03$ %RH/K (k=1)   | 0.1 °C<br>0.1 %RH | 0572 2164 |
| <b>Digital cable humidity/temperature probe</b><br>Cable length 1.3 m  |  Length 140 mm<br>$\varnothing$ 15 mm | -30 to +50 °C/<br>0 to 100 %RH (non-condensing) | $\pm 0.4$ °C at +25 °C<br>$\pm 2.0$ %RH at 0 to 90 %RH at +25 °C<br>$\pm 0.03$ %RH/K (k=1)   | 0.1 °C<br>0.1 %RH | 0572 2165 |



### Customised probes on request.

Further information at [www.testo-sensor.de](http://www.testo-sensor.de)

# Analog temperature probe

| Probe type  | Probe shaft/probe shaft tip dimensions   | Measuring range | Accuracy   | Response time | Order no. |
|---|--|-----------------|--|---------------|-----------|
| Pipe wrap probe (NTC) for pipe diameters of 5 to 65 mm, fixed cable 1.2 m   |                                     | -50 to +120 °C  | ±0.2 °C (-25 to +80 °C)  |               | 0615 5605 |
| Temperature probe with Velcro (NTC), fixed cable 1.4 m  | <br>300 mm 30 mm                    | -50 to +70 °C   | ±0.2 °C (-25 to +70 °C)<br>±0.4 °C (-50 to -25.1 °C)   | 60 s          | 0615 4611 |
| Watertight immersion/penetration probe NTC, fixed cable 1.2 m   | <br>115 mm 50 mm<br>Ø 5 mm Ø 4 mm   | -50 to +150 °C  | ±0.5% of m.v.<br>(+100 to +150 °C)<br>±0.2 °C (-25 to +74.9 °C)<br>±0.4 °C (remaining meas. range) | 10 s          | 0615 1212 |
| Robust air probe NTC, fixed cable 1.2 m   | <br>115 mm 50 mm<br>Ø 5 mm Ø 4 mm   | -50 to +125 °C  | ±0.2 °C (-25 to +80 °C)<br>±0.4 °C (remaining meas. range)   | 60 s          | 0615 1712 |
| Clamp probe for measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 1.5 m  |                                     | -40 to +125 °C  | ±1 °C (-20 to +85 °C)  | 60 s          | 0615 5505 |
| Robust air probe, TC type K, fixed cable  | <br>115 mm<br>Ø 4 mm                | -60 to +400 °C  | Class 2 <sup>1)</sup>  | 200 sec       | 0602 1793 |
| Very fast-reaction surface probe with sprung thermocouple strip, also suitable for uneven surfaces, measuring range briefly up to +500 °C, TC type K, fixed cable                                   | <br>115 mm<br>Ø 5 mm Ø 12 mm      | -60 to +300 °C  | Class 2 <sup>1)</sup>  | 3 sec         | 0602 0393 |
| Fast-reaction paddle surface probe, for measurements in places that are difficult to access, e.g. narrow openings and cracks, TC type K, fixed cable  | <br>145 mm 40 mm<br>Ø 8 mm Ø 7 mm | 0 to +300 °C    | Class 2 <sup>1)</sup>  | 5 sec         | 0602 0193 |
| Precise, watertight surface probe with small measuring head for even surfaces, TC type K, fixed cable   | <br>150 mm<br>Ø 2.5 mm Ø 4 mm     | -60 to +1000 °C | Class 1 <sup>1)</sup>  | 20 sec        | 0602 0693 |
| Very fast-reaction surface probe with sprung thermocouple strip, angled for uneven surfaces as well, measuring range briefly up to +500 °C, TC type K, fixed cable                                  | <br>80 mm 50 mm<br>Ø 5 mm Ø 12 mm | -60 to +300 °C  | Class 2 <sup>1)</sup>  | 3 sec         | 0602 0993 |
| Surface temperature probe TC type K, with telescope max. 985 mm, for measurements in locations that are difficult to access, fixed cable 1.6 m (correspondingly shorter when telescope is extended) | <br>985 ±5 mm 12 mm<br>Ø 25 mm    | -50 to +250 °C  | Class 2 <sup>1)</sup>  | 3 sec         | 0602 2394 |
| Magnetic probe, adhesive power approx. 20 N, with adhesive magnets, for measurements on metal surfaces, TC type K, fixed cable  | <br>35 mm<br>Ø 20 mm              | -50 to +170 °C  | Class 2 <sup>1)</sup>  | 150 sec       | 0602 4792 |
| Magnetic probe, adhesive power approx. 10 N, with adhesive magnets, for measurements on metal surfaces, TC type K, fixed cable  | <br>75 mm<br>Ø 21 mm              | -50 to +400 °C  | Class 2 <sup>1)</sup>  |               | 0602 4892 |

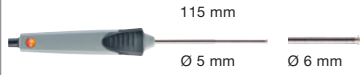





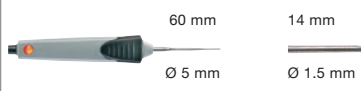
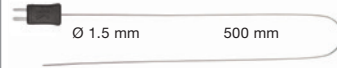


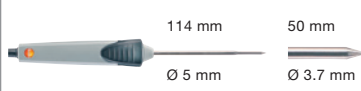
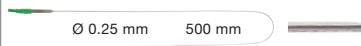

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), of Class 2 to -40 to +1200 °C (type K) and of Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

### Information about surface measurement:

- The specified response times  $t_{90}$  are measured on polished steel or aluminium plates at +60 °C.
- The specified accuracies are sensor accuracies.
- The accuracy in your application depends on the surface properties (roughness), the material of the measurement object (thermal capacity and heat transfer) and the sensor accuracy. Testo will produce a corresponding calibration certificate for the deviations of your measurement system in your application. For this, Testo uses a surface test bed developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt - National Metrology Institute of Germany).


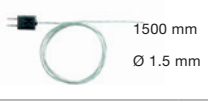

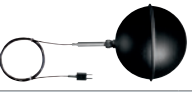



# Analog temperature probe

| Probe type   | Probe shaft/probe shaft tip dimensions   | Measuring range | Accuracy              | t <sub>99</sub> | Order no. |
|--|--|-----------------|-----------------------|-----------------|-----------|
| Watertight surface probe with wider measuring tip for even surfaces, TC type K, fixed cable  |   | -60 to +400 °C  | Class 2 <sup>1)</sup> | 30 sec          | 0602 1993 |
| Pipe wrap probe with Velcro strip, for measuring temperatures on pipes with diameters up to max. 120 mm, Tmax +120 °C, TC type K, fixed cable                          |   | -50 to +120 °C  | Class 1 <sup>1)</sup> | 90 sec          | 0628 0020 |
| Pipe wrap probe for pipe diameters 5 to 65 mm, with interchangeable measuring head, measuring range briefly up to +280 °C, TC type K, fixed cable                      |   | -60 to +130 °C  | Class 2 <sup>1)</sup> | 5 sec           | 0602 4592 |
| Replacement measuring head for pipe wrap probe, TC type K  |   | -60 to +130 °C  | Class 2 <sup>1)</sup> | 5 sec           | 0602 0092 |
| Clamp probe for measurements on pipes, pipe diameters 15 to 25 mm (max. 1"), measuring range briefly up to +130 °C, TC type K, fixed cable                             |    | -50 to +100 °C  | Class 2 <sup>1)</sup> | 5 sec           | 0602 4692 |
| Precise and fast immersion probe, flexible, watertight, TC type K, fixed cable   |   | -60 to +1000 °C | Class 1 <sup>1)</sup> | 2 sec           | 0602 0593 |
| Ultra-fast, watertight immersion/penetration probe, TC type K, fixed cable   |   | -60 to +800 °C  | Class 1 <sup>1)</sup> | 3 sec           | 0602 2693 |
| Immersion measuring tip, flexible, TC type K   |   | -40 to +1000 °C | Class 1 <sup>1)</sup> | 5 sec           | 0602 5792 |
| Immersion measuring tip, flexible, TC type K   |   | -200 to +40 °C  | Class 3 <sup>1)</sup> | 5 sec           | 0602 5793 |
| Immersion measuring tip, flexible, for measurements in air/flue gases (not suitable for measurements in smelters), TC type K   |   | -40 to +1000 °C | Class 1 <sup>1)</sup> | 4 sec           | 0602 5693 |
| Watertight immersion/penetration probe, TC type K, fixed cable   |   | -60 to +400 °C  | Class 2 <sup>1)</sup> | 7 sec           | 0602 1293 |
| Flexible, low-mass immersion measuring tip, ideal for measurements in small volumes, such as Petri dishes, or for surface measurements (e.g. fixed with adhesive tape) | <br>TC type K, 2 m, FEP-insulated thermal wire, temperature-resistant up to 200 °C, oval cable with dimensions: 2.2 mm x 1.4 mm | -40 to +1000 °C | Class 1 <sup>1)</sup> | 1 sec           | 0602 0493 |
| Watertight food probe made of stainless steel (IP65), TC type K, fixed cable   |   | -60 to +400 °C  | Class 2 <sup>1)</sup> | 7 sec           | 0602 2292 |

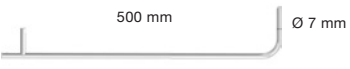
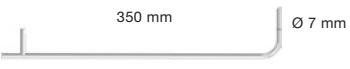
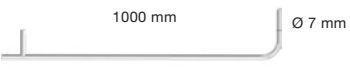

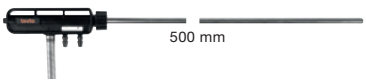

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), of Class 2 to -40 to +1200 °C (type K) and of Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

# Analog probes

| Probe type   | Probe shaft/probe shaft tip dimensions  | Measuring range                        | Accuracy              | t <sub>99</sub>           | Order no. |
|--|---|--|-----------------------|---------------------------|-----------|
| <b>Thermoelectric couples</b>  |   |  |                       |                           |           |
| Thermoelectric couple with TC plug, flexible, length 800 mm, glass fibre, TC type K  |  800 mm<br>Ø 1.5 mm  | -50 to +400 °C                         | Class 2 <sup>1)</sup> | 5 sec                     | 0602 0644 |
| Thermoelectric couple with TC plug, flexible, length 1500 mm, glass fibre, TC type K   |  1500 mm<br>Ø 1.5 mm | -50 to +400 °C                         | Class 2 <sup>1)</sup> | 5 sec                     | 0602 0645 |
| Thermoelectric couple with TC plug, flexible, length 1500 mm, PTFE, TC type K  |  1500 mm<br>Ø 1.5 mm | -50 to +250 °C                         | Class 2 <sup>1)</sup> | 5 sec                     | 0602 0646 |
| <b>Comfort probe</b>   |   |  |                       |                           |           |
| Globe thermometer Ø 150 mm, TC type K, for measuring radiant heat  |                      | 0 to +120 °C                           | Class 1 <sup>1)</sup> |                           | 0602 0743 |
| <b>WBGT kit for testo 400</b>  |   |  |                       |                           |           |
| WBGT kit (Wet Bulb Globe Temperature) for evaluating workplaces with heat immission based on ISO 7243 and DIN 33403-3, incl. transport case and tripod |                     | Globe thermometer Ø 150 mm (TC Type K) | 0 to +120 °C          | Class 1 <sup>1)</sup>     | 0618 7220 |
|  |   | Ambient temperature probe (Pt100)      | +10 to +60 °C         | ±(0.3 °C + 0.3 % of m.v.) |           |
|  |   | Wet bulb temperature probe (Pt100)     | +5 to +40 °C          | ±(0.3 °C + 0.3 % of m.v.) |           |

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), of Class 2 to -40 to +1200 °C (type K) and of Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

# Pitot tubes

| Probe type   | Probe shaft/probe shaft tip dimensions  | Measuring range   | Order no. |
|--|---|---|-----------|
| Pitot tube, length 500 mm, Ø 7 mm, stainless steel, for measuring flow velocity*                       |  500 mm<br>Ø 7 mm  | Measuring range 1 to 100 m/s<br>Operating temperature 0 to +600 °C<br>Pitot tube factor 1.0                                       | 0635 2045 |
| Pitot tube, length 350 mm, Ø 7 mm, stainless steel, for measuring flow velocity*                       |  350 mm<br>Ø 7 mm  | Measuring range: 1 to 100 m/s<br>Operating temperature: 0 to +600 °C<br>Pitot tube factor: 1.0                                    | 0635 2145 |
| Pitot tube, length 1000 mm, stainless steel, for measuring flow velocity*                              |  1000 mm<br>Ø 7 mm | Measuring range: 1 to 100 m/s<br>Operating temperature: 0 to +600 °C<br>Pitot tube factor: 1.0                                    | 0635 2345 |
| Straight Pitot tube with integrated temperature measurement, including connection hose, length 360 mm  |  360 mm            | Measuring range: 1 to 30 m/s<br>Operating temperature: 0 to +600 °C<br>Pitot tube factor: 0.67<br>Minimum immersion depth: 150 mm | 0635 2043 |
| Straight Pitot tube with integrated temperature measurement, including connection hose, length 500 mm  |  500 mm            | Measuring range: 1 to 30 m/s<br>Operating temperature: 0 to +600 °C<br>Pitot tube factor: 0.67<br>Minimum immersion depth: 150 mm | 0635 2143 |
| Straight Pitot tube with integrated temperature measurement, including connection hose, length 1000 mm |  1000 mm           | Measuring range: 1 to 30 m/s<br>Operating temperature: 0 to +600 °C<br>Pitot tube factor: 0.67<br>Minimum immersion depth: 150 mm | 0635 2243 |

\*Connection hose required (order no. 0554 0440) or (order no. 0554 0453)

# testo 420 volume flow hood


**testo 420 set**

testo 420 volume flow hood, with measuring instrument, body, 610 x 610 mm flow hood, 5 x tension rods, USB cable, batteries and trolley, incl. calibration protocol







Part no. 0563 4200

| Compatibility     | Connection to testo 400 via Bluetooth® interface                            |
|-------------------|---|
| Weight            | 2.9 kg  |
| Standard hood     | 610 x 610 mm  |
| Battery life      | 40 h (Zeroing interval 10 seconds, display illumination off, Bluetooth off) |
| Display           | Dot matrix with illumination 3.5 inch                                       |
| Memory            | 2 GB internal (approx. 18,000 measurements)                                 |
| Data transmission | Bluetooth®, e.g. for connection to testo 400                                |

|   |  | Order no. |
|---|--|-----------|
| Air flow velocity matrix, telescope with ball head, length 1.8 m, with 2 x 2 m connection hose, silicon-free, with Velcro attachment on the telescope, for connection to differential pressure measuring instrument |  | 8721 0025 |

## Accessories

| Accessories for comfort level measurement   | Order no. |
|---|-----------|
|  IAQ data logger for long-term measurements with the testo 400   | 0577 0400 |
|  Measuring tripod for comfort level measurements with standard-compliant positioning of probes (including bag)           | 0554 1591 |
| Accessories for digital flow probes   | Order no. |
| Extendable telescope for testo 400 / 440 flow probes (37.5 to 100 cm including 90° angle)   | 0554 0960 |
| Telescope extension (0.9 m) for testo 400 / 440 flow probes   | 0554 0990 |
| 90° angle for connecting vane probes (Ø 100 mm)   | 0554 0991 |
| Handle adapter for connection to flow probes  | 0554 2160 |
| Telescopic rod with universal joint for testo 400 / testo 440 / testo 480 flow velocity probes (0.6 to 1.8 m)   | 0430 0946 |
|    |           |
|  Measuring tripod for flow measurements for standard-compliant positioning of probes, incl. tripod base and probe holder | 0554 1592 |

| Other accessories  | Order no. |
|--|-----------|
|  Transport case for air flow measurement (520 x 410 x 160 mm)   | 0516 1400 |
|  Transport case for IAQ and comfort level measurement (520 x 410 x 210 mm)  | 0516 2400 |
|  testovent 417 funnel kit comprising funnel for plate outlets (Ø 200 mm) and funnel for fans (330 x 330 mm) for incoming / outgoing air | 0563 4170 |
|  testovent 417 volume flow straightener   | 0554 4172 |
| USB power supply incl. cable   | 0554 1106 |
| Connection hose, silicone, length 5 m, maximum load capacity 700 hPa (mbar)  | 0554 0440 |
| Connection hose, silicone-free for differential pressure measurement, length 5 m, maximum load capacity 700 hPa (mbar)   | 0554 0453 |
| Control and calibration kit for Testo humidity probes, saline solution with 11.3 %RH and 75.3 %RH, including adapter for Testo humidity probes   | 0554 0660 |

## Accessories

| Calibration certificates   | Order no. |
|--|-----------|
| ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s                         | 0520 0004 |
| ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 0.3; 0.5; 0.8; 1.5 m/s                  | 0520 0024 |
| ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s                       | 0520 0034 |
| ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; selective calibration points in the 0.5 to 27 m/s range    | 0520 0104 |
| DAkKS flow calibration certificate; hot wire/vane anemometer, Pitot tube; selective calibration points in the 0.1 to 27 m/s range  | 0520 0214 |
| DAkKS flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 0.5; 1; 2; 5; 10 m/s                  | 0520 0244 |
| ISO pressure calibration certificate; 5 calibration points; accuracy > 0.6% of f.v.  | 0520 0005 |
| ISO pressure calibration certificate; 5 calibration points; accuracy 0.1 to 0.6% of f.v.   | 0520 0025 |
| DAkKS pressure calibration certificate; 5 calibration points; accuracy > 0.6% of f.v.  | 0520 0225 |
| ISO humidity calibration certificate, electronic hygrometer; calibration points 11.3 %RH and 75.3 %RH at +25 °C                    | 0520 0006 |
| ISO humidity calibration certificate; electronic hygrometer; calibration points 11.3; 50; 75.3 %RH at +25 °C                       | 0520 0166 |
| DAkKS humidity calibration certificate; electronic hygrometer; calibration points 11.3 %RH and 75.3 %RH at +25 °C                  | 0520 0206 |
| DAkKS humidity calibration certificate; electronic hygrometer; selective calibration points 5 to 95 %RH at -18 to +70 °C           | 0520 0216 |
| ISO temperature calibration certificate, for air/immersion probe, calibration points -18°C; 0 °C; +60 °C                           | 0520 0001 |
| ISO temperature calibration certificate for air/immersion probe, selective calibration points in the -196 to +1200 °C range        | 0520 0101 |
| DAkKS temperature calibration certificate for air/immersion probe, selective calibration points in the -196 to +1000 °C range      | 0520 0201 |
| DAkKS temperature calibration certificate; measuring instruments with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C | 0520 0211 |
| ISO luminous intensity calibration certificate; calibration points 0; 500; 1000; 2000; 4000 lux                                    | 0520 0010 |
| ISO luminous intensity calibration certificate; selective calibration points in the 0; 50 to 10,000 lux range                      | 0520 0123 |
| ISO CO <sub>2</sub> calibration certificate; CO <sub>2</sub> probes; calibration points 0; 1000; 5000 ppm                          | 0520 0033 |