

# Universal IAQ instrument

testo 400 –  
For TAB / Commissioning  
and IAQ professionals

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Measures all parameters: Air velocity, 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

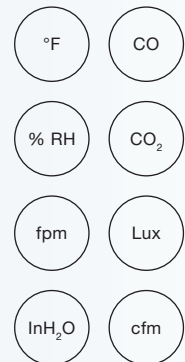
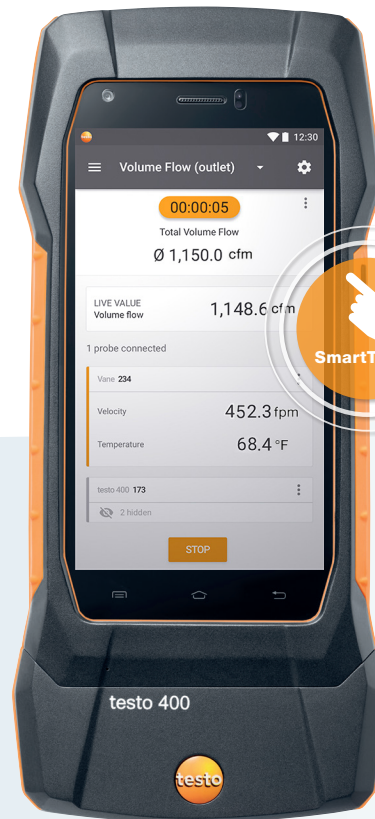
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Document measuring values directly on the customer's site and send them by e-mail, or further analyze them using the testo DataControl PC software

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Smart and intuitive measurement programs:

- HVAC grid measurement in accordance with ASHRAE 111
  - PMV/PPD in accordance with ASHRAE 55
  - Draft and degree of turbulence in accordance ASHRAE 55
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Compatible with a comprehensive selection of Bluetooth® and cable probes.



testo 400 is the universal measuring instrument for all TAB / Commissioning and 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

- 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                                | -40 to +80 InH <sub>2</sub> O   |
| Accuracy (±1 digit)                            | ±(0.12 InH <sub>2</sub> O ± 1% of m.v.) (0 to 10 InH <sub>2</sub> O)<br>±(0.04 InH <sub>2</sub> O + 1.5% of m.v.) (10.01 InH <sub>2</sub> O to 80 InH <sub>2</sub> O) |
| Resolution                                     | 0.00001 InH <sub>2</sub> O  |
| Absolute pressure (integrated)                 |   |
| Measuring range                                | -10 to +16 psi  |
| Accuracy (±1 digit)                            | ± 0.044 psi   |
| Resolution                                     | 0.001 psi   |
| Temperature NTC (with appropriate probe)       |   |
| Measuring range                                | -40 to 302 °F   |
| Accuracy (±1 digit)                            | ±0.36 °F (-13 to 166.8 °F)<br>±0.72 °F (-40 to -13.1 °F)<br>±0.72 °F (166.9 to 212 °F)<br>±0.5% of m.v. (remaining meas. range)                                       |
| Resolution                                     | 0.1 °F  |
| Temperature TC type K (with appropriate probe) |   |
| Measuring range                                | -328 to 2,498 °F  |
| Accuracy (±1 digit)                            | ±(0.54 °F + 0.1% of m.v.)   |
| Resolution                                     | 0.1 °F  |

| General technical data |   |
|------------------------|---|
| Probe connections      | 4x Bluetooth®, 2x TUC*, 2x TC type K                  |
| Interfaces             | Bluetooth®, WiFi, USB                                 |
| Operating temperature  | +23 to 113 °F   |
| Storage temperature    | -4 to 140 °F  |
| Power supply           | Rechargeable li-ion battery (5550 mAh)                |
| Battery life           | approx. 12 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             | 8.3" x 3.7" x 1.5" / 210 x 95 x 39 mm                 |
| Weight                 | 17.6 oz / 500 g                                       |

\*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, testo DataControl software, connection hose, Power supply 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

for TAB / Commissioning professionals

- testo 400 universal instrument, including transport case for air flow measurement, testo DataControl software, power supply with USB cable and calibration protocol
- Hot wire probe with Bluetooth®, including temperature and humidity sensor (comprised of: hot wire probe head, telescope (extendable to 3.3 ft.) handle adapter and Bluetooth® handle), 4 x AA batteries and calibration protocol
- Vane anemometer probe head (Ø 4 in.), including temperature sensor and calibration protocol
- 2 x silicone pressure hoses and pitot tube (13.8 in.)
- 90° angle for connecting air flow probes

Order no. 0563 0407



## testo 400 IAQ kit

for Commissioning and IAQ investigation professionals

- testo 400 universal instrument, including transport case, testo DataControl software, power supply with USB cable and calibration protocol
- CO<sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor (comprised of: CO<sub>2</sub> probe head and Bluetooth® handle), 4 x AA batteries and calibration protocol
- CO probe with Bluetooth® (comprised of: CO probe head and Bluetooth® handle), 4 x AA batteries and calibration protocol

Order no. 0563 0408



## testo 400 comfort kit


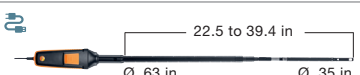

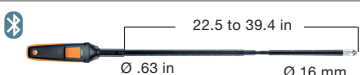
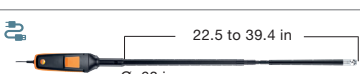
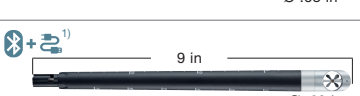


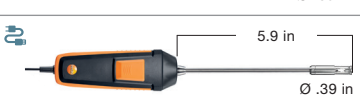






for comfort professionals in high performance buildings

- testo 400 universal instrument, including transport case for comfort level measurement, testo DataControl software, power supply with USB cable and calibration protocol
- Humidity / temperature probe with Bluetooth®, (comprised of: humidity probe head and Bluetooth® handle), 4 x AA batteries, and calibration protocol
- Turbulence probe with fixed cable, including calibration protocol
- Lux probe with fixed cable including calibration protocol

Order no. 0563 0409








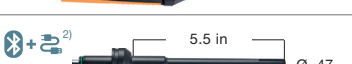

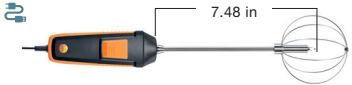









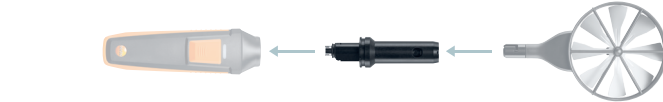
# Digital flow probes

| 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 9,842.5 fpm<br>-4 to 158 °F<br>5 to 95% RH | ±(5.91 fpm + 4% of m.v.)<br>(0 to 3937 fpm)<br>±(98.4 fpm + 5% of m.v.)<br>(3,939 to 5,905.5 fpm)<br>±0.5 °F (32 to 158 °F)<br>±0.8°F (-4 to 32 °F)<br>±3.0% RH (10 to 35% RH)<br>±2.0% RH (35 to 65% RH)<br>±3.0% RH (65 to 90% RH)<br>±5% RH (remaining meas. range) | 1.97 fpm<br>0.1 °F<br>0.1% RH | 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 .63 in / 16 mm) with Bluetooth®, including temperature sensor   |    | 118 to 9,842.5 fpm<br>14 to 158 °F              | ±(39.37 fpm + 1% of m.v.)<br>(118 to 787 fpm)<br>±(39.37 fpm + 2% of m.v.)<br>(7,874 to 9,842.5 fpm)<br>±3.2 °F  | 1.97 fpm<br>0.1 °F            | 0635 9571 |
| Vane probe (Ø .63 in / 16 mm), fixed cable, including temperature sensor  |    |   |  |                               | 0635 9572 |
| Vane probe head (Ø .63 in / 16 mm), including temperature sensor  |    |   |  |                               | 0635 9570 |
| Hot wire probe, fixed cable, including temperature sensor   |   | 0 to 5,905.5 fpm<br>-4 to 158 °F                | ±(1.97 fpm + 4% of m.v.)<br>(0 to 3,937 fpm)<br>±(98.42 fpm + 5% of m.v.)<br>±0.9 °F   | 1.97 fpm<br>0.1 °F            | 0635 1032 |
| Vane probe (Ø .63 in / 16 mm), fixed cable  |  | 118 to 9,842.5 fpm                              | ±(39.37 fpm + 1% of m.v.)<br>(118 to 7,874 fpm)<br>±(39.37 fpm + 2% of m.v.)<br>(7,874 to 9,842.5)   | 19.7 fpm                      | 0635 9532 |
| Fume hood probe, fixed cable  |  | 0 to 984.25 fpm<br>32 to 122 °F                 | ±(39.37 fpm + 5% of m.v.)<br>(0 to 984.25 fpm)<br>±0.9 °F  | 1.97 fpm<br>0.1 °F            | 0635 1052 |
| <b>To measure flows in ducts with a large cross-section, we recommend an extension set (0554 0990). This enables the telescope to be extended to up to 6.5 ft for all air velocity probes with an interchangeable handle.</b> |   |   |  |                               |           |
| High-precision vane probe (Ø 4 in / 100 mm) with Bluetooth®, including temperature sensor   |  | 19.7 to 2952.8 fpm<br>-4 to 158 °F              | ±(1.97 fpm + 1.5% of m.v.)<br>(19.7 to 2,952.8 fpm)<br>±0.9 °F   | 1.97 fpm<br>0.1 °F            | 0635 9371 |
| High-precision vane probe (Ø 4 in / 100 mm), fixed cable, including temperature sensor  |  |   |  |                               | 0635 9372 |
| High-precision vane probe head (Ø 4 in / 100 mm), including temperature sensor  |  |   |  |                               | 0635 9370 |
| Vane probe (Ø 4 in / 100 mm) with Bluetooth®, including temperature sensor  |  | 59 to 6889.8 fpm<br>-4 to 158°F                 | ±(0.1 m/s + 1.5% of m.v.)<br>59 to 3,937 fpm)<br>±(39.37 fpm + 1.5% of m.v.)<br>(3,939 to 6,889.76 fpm)<br>±0.9 °F   | 1.97 fpm<br>0.1 °F            | 0635 9431 |
| Vane probe (Ø 4 in / 100 mm), fixed cable, including temperature sensor   |  |   |  |                               | 0635 9432 |
| Vane probe head (Ø 4 in / 100 mm), including temperature sensor   |  |   |  |                               | 0635 9430 |

**For convenient ceiling measurements, the telescope with 90° angle (0550 0960) has been developed. It can be easily attached to the 4 inch (100 mm) vane probes.**

<sup>1)</sup> For use with cable handle (order no. 0554 2222) or Bluetooth® handle (order no. 0554 1111) in conjunction with an adapter (order no. 0554 2160).

# Other digital probes and probe accessories

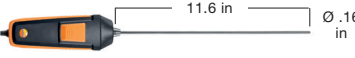
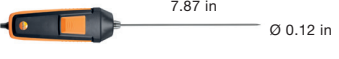
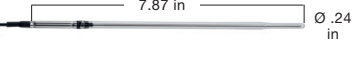
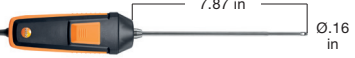

| Probe type   |  | Measuring range   | Accuracy  | Resolution                                     | Order no. |
|--|--|---|---|--|-----------|
| <b>Digital humidity probes</b>   |  |   |   |  |           |
| Humidity/temperature probe with Bluetooth®                                       |     | 0 to 100% RH<br>-4 to 158°F                                     | ±2% RH (5 to 90% RH)<br>±0.9 °F   | 0.1% RH<br>0.1 °F                              | 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>-4 to 158°F                                     | ±(0.6% RH + 0.7% of m.v.) (0 to 90% RH)<br>±(1.0% RH + 0.7% of m.v.) (90 to 100% RH)<br>±0.5 °F (59 to 86 °F)<br>±0.9 °F (remaining meas. range)  | 0.01% RH<br>0.1 °F                             | 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 356 °F, fixed cable     |     | 0 to 100% RH<br>-4 to 356°F                                     | ±3% RH (0 to 2% RH)<br>±2% RH (2.1 to 98% RH)<br>±3% RH (98.1 to 100% RH)<br>±0.9 °F (-4 to 32 °F)<br>±0.7 °F (32 to 122°F)<br>±0.9 °F (122 to 356 °F)  | 0.1% RH<br>0.1 °F                              | 0636 9775 |
| <b>Digital comfort probes</b>  |  |   |   |  |           |
| Turbulence probe, fixed cable  |   | 0 to 984.25 fpm<br>32 to 122 °F                                 | ±(5.9 fpm + 4% of m.v.) (0 to 984.25 fpm)<br>±0.9 °F  | 1.97 fpm<br>0.1 °F                             | 0628 0152 |
| Lux probe, fixed cable   |   | 0 to 100,000 lux  | Class C<br>According to DIN 5032-7<br>f1 = 6% = V-Lambda<br>f2 = 6% cos   | 0.1 lux (< 10,000 lux)<br>1 lux (≥ 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>32 to 122 °F | ±(50 ppm + 3% of m.v.) (0 to 5,000 ppm)<br>±(100 ppm + 5% of m.v.) (5001 to 10,000 ppm)<br>±3% RH (10 to 35% RH)<br>±2% RH (35 to 65% RH)<br>±3% RH (65 to 90% RH)<br>±5% RH (remaining meas. range)<br>±0.9 °F | 1 ppm<br>0.1% RH<br>0.1 °F                     | 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 500 ppm  | ±3 ppm (0 to 30 ppm)<br>±10% of m.v. (30.1 to 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).



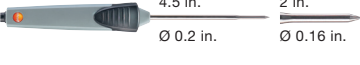
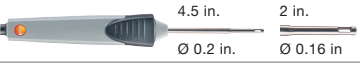

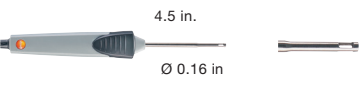
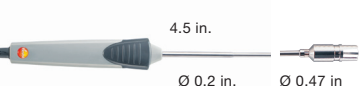

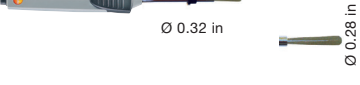
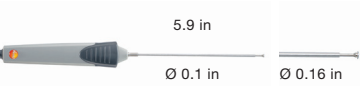



# Testo Smart Probes

| Testo Smart Probes  |   | Measuring range                   | Accuracy $\pm 1$ digit   | Resolution               | Order no.    |
|---|---|-----------------------------------|--|--------------------------|--------------|
| <b>Temperature</b>  |   |                                   |  |                          |              |
| <b>testo 115i</b><br>Clamp thermometer with smartphone operation, for measurements on pipelines with diameters of 0.24 in. to max. 1.38 in., including batteries and calibration protocol           |    | -40 to 302 °F                     | $\pm 2.3$ °F (-4 to 185 °F)  | 0.1 °F                   | 0560 2115 03 |
| <b>testo 905i</b><br>Thermometer with smartphone operation, including batteries and calibration protocol  |    | -58 to 302 °F                     | $\pm 2$ °F   | 0.1 °F                   | 0560 1905    |
| <b>testo 805i</b><br>Infrared thermometer with smartphone operation, including batteries and calibration protocol   |    | -22 to 482 °F                     | 2.7 °F or $\pm 1.5$ % of mv (32 to 482 °F)<br>$\pm 4$ °F (-4 to 32 °F)<br>$\pm 4.5$ °F (-22 to -4.2 °F)  | 0.1 °F                   | 0560 1805    |
| <b>Humidity</b>   |   |                                   |  |                          |              |
| <b>testo 605i</b><br>Thermohygrometer with smartphone operation, including batteries and calibration protocol   |    | 0 to 100% RH<br>-4 to 140 °F      | $\pm (1.8\% \text{ RH} + 3\% \text{ of m.v.})$<br>at 77 °F (5 to 80% RH)<br>$\pm 1.4$ °F (-4 to 32 °F)<br>$\pm 0.9$ °F (32 to 140 °F)                | 0.1% RH<br>0.1 °F        | 0560 2605 03 |
| <b>Flow</b>   |   |                                   |  |                          |              |
| <b>testo 405i</b><br>Thermal anemometer with smartphone operation, telescopic tube extendable to up to 15.75 in., including batteries and calibration protocol                                      |  | 0 to 5,906 fpm<br>-4 to 140 °F    | $\pm (19.7 \text{ fpm} + 5\% \text{ of mv})$<br>(0 to 394 fpm)<br>$\pm (59.1 \text{ fpm} + 5\% \text{ of mv})$<br>(394 to 2,953 fpm)<br>$\pm 0.9$ °F | 1.97 fpm<br>0.1 °F       | 0560 1405    |
| <b>testo 410i</b><br>Vane anemometer with smartphone operation, including batteries and calibration protocol  |  | 78.7 to 5,906 fpm<br>-4 to 140 °F | $\pm (39.4 \text{ fpm} + 2\% \text{ of mv})$<br>(78.7 to 3,937 fpm)<br>$\pm 0.9$ °F  | 19.7 fpm<br>0.1 °F       | 0560 1410    |
| <b>Pressure</b>   |   |                                   |  |                          |              |
| <b>testo 510i</b><br>Differential pressure measuring instrument with smartphone operation, including hose kit ( $\varnothing$ 0.16 in and 0.2 in.) with adapter, batteries and calibration protocol |  | -60 to +60 InH <sub>2</sub> O     | $\pm 0.02$ InH <sub>2</sub> O<br>$\pm (0.1 \text{ InH}_2\text{O} + 1.5\% \text{ of mv})$<br>(+0 to +60 InH <sub>2</sub> O)                           | 0.004 InH <sub>2</sub> O | 0560 1510    |
| <b>testo 549i</b><br>High-pressure measuring instrument with smartphone operation, including batteries and calibration protocol   |  | -14 to 870 psi                    | 0.5 % of final value   | 0.14 psi                 | 0560 2549 03 |

# 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 $\pm 0.09$ °F |   | -112 to 572 °F  | $\pm 0.54$ °F (-112 to -40.001 °F)<br>$\pm (0.18$ °F + 0.05% of m.v.) (-40 to 31.9 °F)<br>$\pm 0.09$ °F (32 to 212 °F)<br>$\pm (0.09$ °F + 0.05% of m.v.) (212.01 to 572 °F)                                | 0.001 °F   | 0618 0275 |
| <b>Digital Pt100 penetration probe</b> for measurements in liquids and pastes  |   | -148 to 752 °F  | $\pm (0.27$ °F + 0.2% of m.v.) (-148 to 31.9 °F)<br>$\pm (0.27$ °F + 0.05% of m.v.) (32 to 212 °F)<br>$\pm (0.27$ °F + 0.2% of m.v.) (212.01 to 662 °F)<br>$\pm (0.9$ °F + 0.5% of m.v.) (662.01 to 752 °F) | 0.01 °F    | 0618 0073 |
| <b>Glass-coated digital Pt100 laboratory probe</b> for measurements in corrosive media   |   | -58 to 752 °F   | $\pm (0.54$ °F + 0.3% of m.v.) (-58 to 572 °F)<br>$\pm (0.72$ °F + 0.6% of m.v.) (572.01 to 752 °F)   | 0.01 °F    | 0618 7072 |
| <b>Robust, fast-reaction, digital Pt100 air probe</b>  |   | -148 to 752 °F  | $\pm (0.27$ °F + 0.2% of m.v.) (-148 to 31.9 °F)<br>$\pm (0.27$ °F + 0.05% of m.v.) (32 to 212 °F)<br>$\pm (0.27$ °F + 0.2% of m.v.) (212.01 to 662 °F)<br>$\pm (0.9$ °F + 0.5% of m.v.) (662.01 to 752 °F) | 0.01 °F    | 0618 0072 |
| <b>Flexible digital Pt100 temperature probe</b> for measurements in locations that are difficult to access and in liquids            |  | -148 to 509 °F  | $\pm (0.54$ °F + 0.3% of m.v.)  | 0.01 °F    | 0618 0071 |

# Analog temperature probe

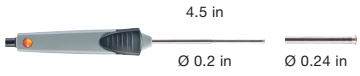
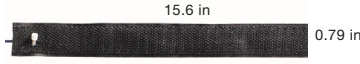
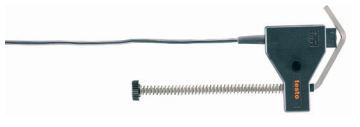



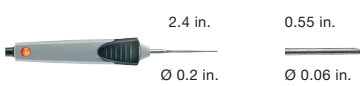


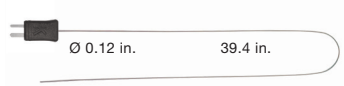
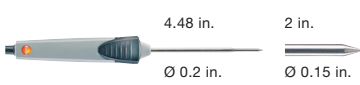
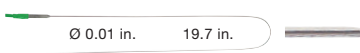
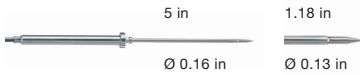
| Probe type  | Probe shaft/probe shaft tip dimensions   | Measuring range | Accuracy   | Response time | Order no. |
|---|--|-----------------|--|---------------|-----------|
| Pipe wrap probe (NTC) for pipe diameters of 0.2 to 2.56 in, fixed cable 47.24 in  |   | -58 to 248 °F   | ±0.36 °F (-13 to 176 °F)   |               | 0615 5605 |
| Temperature probe with Velcro (NTC), fixed cable 55.12 in   | <br>11.8 in 1.18 in                       | -58 to 158 °F   | ±0.36 °F (-13 to 158 °F)<br>±0.72 °F (-58 to -13.1 °F)                                 | 60 s          | 0615 4611 |
| Watertight immersion/penetration probe NTC, fixed cable 3.9 ft  | <br>4.5 in. 2 in.<br>Ø 0.2 in. Ø 0.16 in. | -58 to 302 °F   | ±0.5 % of mv (212 to 302 °F)<br>±0.4 °F (-13 to 166.8 °F)<br>±0.7 °F (Remaining Range) | 10 s          | 0615 1212 |
| Robust air probe NTC, fixed cable 3.9 ft  | <br>4.5 in. 2 in.<br>Ø 0.2 in. Ø 0.16 in. | -58 to 257 °F   | ±0.4 °F (-13° to 176 °F)<br>±0.7 °F (Remaining Range)                                  | 60 s          | 0615 1712 |
| Clamp probe for measurements on pipes from 0.25 to 1.5 in. diameter, NTC, fixed cable 5 feet  |   | -40 to 257 °F   | ±1.8 °F (-4 to 185 °F)   | 60 s          | 0615 5505 |
| Robust air probe, TC type K, fixed cable  | <br>4.5 in.<br>Ø 0.16 in                  | -76 to 752 °F   | Class 2 <sup>1)</sup>  | 200 sec       | 0602 1793 |
| Fast-reaction surface probe with sprung thermocouple strip, also suitable for non-plane surfaces, measuring range briefly up to 932 °F, TC type K, fixed cable                                      | <br>4.5 in.<br>Ø 0.2 in. Ø 0.47 in        | -76 to 572 °F   | 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>5.7 in 1.6 in<br>Ø 0.32 in Ø 0.28 in | 32 to 572 °F    | 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>5.9 in<br>Ø 0.1 in Ø 0.16 in        | -76 to 1,832 °F | Class 1 <sup>1)</sup>  | 20 sec        | 0602 0693 |
| Fast-reaction surface probe with sprung thermocouple strip, angled for non-plane surfaces as well, measuring range briefly up to 932 °F, TC type K, fixed cable                                     | <br>3.15 in.<br>Ø 0.2 in. Ø 0.47 in.    | -76 to 572 °F   | Class 2 <sup>1)</sup>  | 3 sec         | 0602 0993 |
| Surface temperature probe TC type K, with telescope max. 39 in., for measurements in places that are difficult to access, fixed cable 5.25 ft. (correspondingly shorter when telescope is extended) | <br>39 in. 0.47 in.<br>Ø 1 in.          | -58 to 482 °F   | 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>1.4 in. Ø 0.79 in.                  | -58 to 338 °F   | Class 2 <sup>1)</sup>  | 150 sec       | 0602 4792 |
| Magnetic probe, adhesive power approx. 10 N, with adhesive magnets, for higher temperatures, for measurements on metal surfaces, TC type K, fixed cable   | <br>3.5 in. Ø 0.83 in.                  | -58 to 752 °F   | 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 1,832 °F (type K), of Class 2 to -40 to 2,192 °F (type K) and of Class 3 to -328 to 104 °F (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 140 °F.
- 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

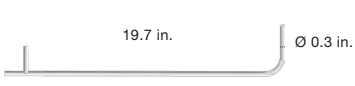
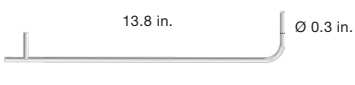
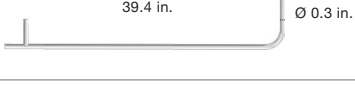

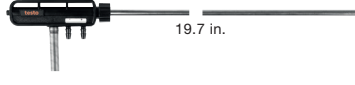
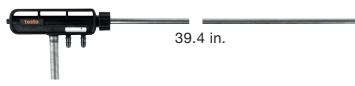
| Probe type   | Probe shaft/probe shaft tip dimensions  | Measuring range  | Accuracy              | t <sub>99</sub> | Order no. |
|--|---|------------------|-----------------------|-----------------|-----------|
| Watertight surface probe with wider measuring tip for even surfaces, TC type K, fixed cable  |    | -76 to 752 °F    | 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. 4.7 in., Tmax 248 °F, TC type K, fixed cable                          |    | -58 to 248 °F    | Class 1 <sup>1)</sup> | 90 sec          | 0628 0020 |
| Pipe wrap probe for pipe diameters 0.2 in. to 2.5 in., with interchangeable measuring head, measuring range briefly up to 536 °F, TC type K, fixed cable               |    | -76 to 266 °F    | Class 2 <sup>1)</sup> | 5 sec           | 0602 4592 |
| Replacement measuring head for pipe wrap probe, TC type K  |    | -76 to 266 °F    | Class 2 <sup>1)</sup> | 5 sec           | 0602 0092 |
| Clamp probe for measurements on pipes, pipe diameters 0.5 to 1 in., measuring range briefly up to 266 °F, TC type K, fixed cable                                       |    | -58 to 212 °F    | Class 2 <sup>1)</sup> | 5 sec           | 0602 4692 |
| Precise and fast immersion probe, flexible, watertight, TC type K, fixed cable   |   | -76 to 1,832 °F  | Class 1 <sup>1)</sup> | 2 sec           | 0602 0593 |
| Ultra-fast, watertight immersion/penetration probe, TC type K, fixed cable   |    | -76 to 1,472 °F  | Class 1 <sup>1)</sup> | 3 sec           | 0602 2693 |
| Immersion measuring tip, flexible, TC type K   |    | -328 to 1,832 °F | Class 1 <sup>1)</sup> | 5 sec           | 0602 5792 |
| Immersion measuring tip, flexible, TC type K   |    | -328 to 104 °F   | 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   |    | -328 to 2,372 °F | Class 1 <sup>1)</sup> | 4 sec           | 0602 5693 |
| Watertight immersion/penetration probe, TC type K, fixed cable   |    | -76 to 752 °F    | 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><small>TC type K, 2 m, FEP-insulated thermal wire, temperature-resistant up to 392 °F, oval cable with dimensions: 0.09 x 0.06 in.</small> | -328 to 1,832 °F | Class 1 <sup>1)</sup> | 1 sec           | 0602 0493 |
| Watertight food probe made of stainless steel (IP65), TC type K, fixed cable   |    | -76 to 752 °F    | 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 1,832 °F (type K), of Class 2 to -40 to 2,192 °F (type K) and of Class 3 to -328 to 104 °F (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 31.5 in, fibreglass, TC type K  |  31.5 in.<br>Ø 0.6 in. | -58 to 752 °F                                | Class 2 <sup>1)</sup>   | 5 sec           | 0602 0644                          |
| Thermoelectric couple with TC plug, flexible, length 59 in., fibreglass, TC type K   |  59 in.<br>Ø 0.6 in.   | -58 to 752 °F                                | Class 2 <sup>1)</sup>   | 5 sec           | 0602 0645                          |
| Thermoelectric couple with TC plug, flexible, length 59 in., PTFE, TC type K   |  59 in.<br>Ø 0.6 in.   | -58 to 482 °F                                | Class 2 <sup>1)</sup>   | 5 sec           | 0602 0646                          |
| <b>Comfort probe</b>   |   |  |   |                 |                                    |
| Globe thermometer Ø 5.9 in., TC type K, for measuring radiant heat   |                        | 32 to 248 °F                                 | Class 1 <sup>1)</sup>   |                 | 0602 0743                          |
| <sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to 1,832 °F (type K), Class 2 to -40 to 2,192 °F (type K), Class 3 to -328 to 104 °F (type K). A probe only ever complies with one accuracy class. |   |  |   |                 |                                    |
| <b>WBGT kit</b>  |   |  |   |                 |                                    |
| WBGT (wet bulb globe temperature) kit for assessing workplaces affected by heat in line with ISO 7243, comprising globe, ambient temperature / wet bulb temperature probe, plug-in head cables, tripod and case                          |   | 32 to 248 °F<br>50 to 140 °F<br>41 to 104 °F | ±3% RH (0 to 2% RH)<br>±2% RH (2.1 to 98% RH)<br>±3% RH (98.1 to 100% RH)<br>±(0.45 °F +0.3% of m.v.)<br>±(0.45 °F +0.3% of m.v.) |                 | 0635 8888<br>ID no. 0699<br>7220/1 |

# Pitot tubes

| Probe type   | Probe shaft/probe shaft tip dimensions   | Measuring range   | Order no. |
|--|--|---|-----------|
| Pitot tube, length 19.7 in., Ø 0.3 in., stainless steel, for measuring flow velocity*                |  19.7 in. Ø 0.3 in. | Measuring range 197 to 19,685 fpm<br>Operating temperature 32 to 1,112 °F<br>Pitot tube factor 1.0  | 0635 2045 |
| Pitot tube, length 13.8 in., Ø 0.3 in., stainless steel, for measuring flow velocity*                |  13.8 in. Ø 0.3 in. | Measuring range 197 to 19,685 fpm<br>Operating temperature 32 to 1,112 °F<br>Pitot tube factor: 1.0                                       | 0635 2145 |
| Pitot tube, length 39.4 in., Ø 0.3 in., stainless steel, for measuring flow velocity*                |  39.4 in. Ø 0.3 in. | Measuring range 197 to 19,685 fpm<br>Operating temperature 32 to 1,112 °F<br>Pitot tube factor: 1.0                                       | 0635 2345 |
| Straight Pitot tube with integrated temperature measurement, incl. connection hose, length 14.17 in. |  14.17 in.          | Measuring range: 197 to 5,906 fpm<br>Operating temperature: 32 to 1,112 °F<br>Pitot tube factor: 0.67<br>Minimum immersion depth: 5.9 in. | 0635 2043 |
| Straight Pitot tube with integrated temperature measurement, incl. connection hose, length 19.7 in.  |  19.7 in.           | Measuring range: 197 to 5,906 fpm<br>Operating temperature: 32 to 1,112 °F<br>Pitot tube factor: 0.67<br>Minimum immersion depth: 5.9 in. | 0635 2143 |
| Straight Pitot tube with integrated temperature measurement, incl. connection hose, length 39.4 in.  |  39.4 in.           | Measuring range: 197 to 5,906 fpm<br>Operating temperature: 32 to 1,112 °F<br>Pitot tube factor: 0.67<br>Minimum immersion depth: 5.9 in. | 0635 2243 |

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

# 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 (14.8 to 39.4 in including 90° angle)   | 0554 0960 |
|   | Telescope extension (39.4 in) for testo 400 / 440 flow probes  | 0554 0990 |
|   | 90° angle for connecting vane probes (Ø 4 in)  | 0554 0991 |
|  | Handle adapter for connection to flow probes   | 0554 2160 |
| Other accessories   |  | Order no. |
|  | Transport case for air flow measurement (20.47 x 16.14 x 6.30 in / 520 x 410 x 160 mm)   | 0516 1400 |
|  | Transport case for IAQ and comfort level measurement (20.47 x 16.14 x 8.27 inches / 520 x 410 x 210 mm)  | 0516 2400 |
|  | testovent 417 funnel kit comprising funnel for plate outlets (Ø 7.87 in) and funnel for fans (13 x 13 in) for incoming / outgoing air          | 0563 4170 |
|  | testovent 417 volume flow straightener   | 0554 4172 |
|  | USB Power Supply, including cable  | 0554 1106 |
|  | Connection hose, silicone, length 16.4 ft, maximum load capacity 280 InH <sub>2</sub> O  | 0554 0440 |
|  | Connection hose, silicone-free for differential pressure measurement, length 16.4 ft, maximum load capacity 280 InH <sub>2</sub> O             | 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.   |
|---|-------------|
| NIST Air velocity certificate at 3 standard points \$215                                  | 400520 4401 |
| NIST Air velocity certificate at 3 custom points  | 400520 4402 |
| NIST Flow Hood Certificate at 4 standard points   | 400520 4403 |
| NIST pressure certificate   | 400520 7501 |
| NIST RH certificate at 2 standard points 11.3% and 75.3% RH                               | 400520 2601 |
| NIST RH certificate at 2 standard points 11.3% and 75.3% RH and Temp certificate at 25 °C | 400520 2602 |
| NIST Temp certificate at 2 custom points  | 400520 2603 |
| NIST Temp certificate at 3 standard points: 10°C, 25°C, 40°C, or -20°C, 25°C, 40°C        | 400520 1901 |
| NIST Temperature certificate at 3 custom points   | 400520 1902 |
| NIST Light certificate  | 400520 8501 |
| NIST CO <sup>2</sup> certificate  | 400520 0033 |
| NIST Tachometer certificate   | 400520 6401 |

