

We measure it.



# VAC analysis measuring instrument

**testo 480 - Cutting-edge  
technology for professionals**

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Measurement of all VAC-relevant parameters: flow velocity, temperature, humidity, pressure, light intensity, radiant heat, degree of turbulence, and CO<sub>2</sub> with one instrument.

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High-quality, digital probes

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Intelligent calibration concept

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Fast and professional report creation via PC software „EasyClimate“ (included in delivery)

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User-friendly trackpad and clear graphic display

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Integrated, guided measurement programs e.g. VAC grid measurements according to EN 12599

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testo 480 supports assessors, consultants, technical service providers or service technicians in the ventilation and air conditioning field. Measurement tasks such as the standardized adjustment of VAC systems in office, residential and industrial buildings can be carried out quickly and efficiently.

The VAC measuring instrument is equipped with intelligent digital probes with integrated memories. The probes inform the instrument as soon as the next calibration is due.

The calibration data are entered via the software and are then permanently stored in the probe. This compensates deviations automatically, producing a zero-error display. The possibility of having the probes calibrated without the hand instrument ensures the uninterrupted use of the instrument. With the testo 480, professionals can detect negative environmental influences such as draughts, ensuring a climate of well-being, for example in open-plan offices, and sustainably reducing costs.

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# Technical data

## testo 480

High-end VAC measuring instrument testo 480, including "EasyClimate" PC software, power supply, USB cable and calibration protocol

Part no. 0563 4800



### HVAC measurement

- High-end VAC measuring instrument testo 480, including "EasyClimate" PC software, power supply, USB cable and calibration protocol (Part no. 0563 4800)
- Vane measurement probe Ø 16 mm with telescope; Plug-in head cable necessary (Order no. 0430 0100) (Part no. 0635 9542)
- Thermal flow probe with telescope; Plug-in head cable necessary (Order no. 0430 0100) (Part no. 0635 1543)
- Vane measurement probe Ø 100 mm; Plug-in head cable necessary (Order no. 0430 0100) (Part no. 0635 9343)
- Humidity and temperature probe Ø 12 mm; Plug-in head cable necessary (Order no. 0430 0100) (Part no. 0636 9743)
- Pitot tube, 350 mm long, stainless steel, for measuring flow velocity (Part no. 0635 2145)
- System case for HVAC measurements (Part no. 0516 4800)
- Plug-in head cable (Part no. 0430 0100)
- Connection hose; silicone; 5 m long; max. load 700hPa (mbar) (Part no. 0554 0440)

### Comfort measurement

- High-end VAC measuring instrument testo 480, including "EasyClimate" PC software, power supply, USB cable and calibration protocol (Part no. 0563 4800)
- Tripod for workplace evaluation (Part no. 0554 0743)
- Degree of turbulence probe; Plug-in head cable necessary (Order no. 0430 0100) (Part no. 0628 0143)
- Globe probe Ø 150mm (Part no. 0602 0743)
- Humidity and temperature probe Ø 12 mm; Plug-in head cable necessary (Order no. 0430 0100) (Part no. 0636 9743)
- IAQ probe including desk-top stand; Plug-in head cable necessary (Order no. 0430 0100) (Part no. 0632 1543)
- Lux probe (Part no. 0635 0543)
- System case for comfort level measurement (Part no. 0516 4801)
- Plug-in head cable (Part no. 0430 0100)










### General technical data

Probe connection	2 x TC Type K, 1 x differential pressure, 3 x digital
Interfaces	USB connection, SD card, mains unit, infrared for fast printer
Oper. temp.	0 to +40 °C
Power supply	Rechargeable battery, plug-in mains unit for long-term measurements and charging battery
Battery life	approx. 17 hours (hand instrument without probes, with 50 % display brightness)
Display	Colour graphic display
Memory	1.8 GB (approx. 60,000,000 measurement values)

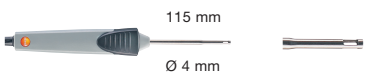
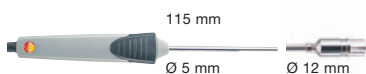
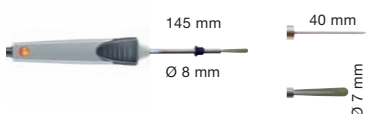
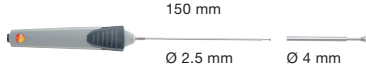


### Technical data

Sensor type	Differential pressure, integrated	Absolute pressure, integrated and external	Type K (NiCr-Ni)
Meas. range	-25 to +25 hPa	700 to 1100 hPa	-200 to +1370 °C
Resolution	0.001 hPa	0.1 hPa	0.1 °C
Sensor type	Radiation temperature, globe	Pt100	Vane, 16 mm
Meas. range	0 to +120 °C	-100 to +400 °C	+0.6 to +50 m/s
Resolution	0.1 °C	0.01 °C	0.1 m/s
Sensor type	Vane, 100 mm	Thermal flow velocity probe	Comfort probe
Meas. range	+0.1 to +15 m/s	0 to +20 m/s	0 to +5 m/s
Resolution	0.01 m/s	0.01 m/s	0.01 m/s
Sensor type	Testo humid. sensor, cap.	CO <sub>2</sub>	Lux
Meas. range	0 to 100 %RH	0 to 10.000 ppm CO <sub>2</sub>	0 to 100.000 Lux
Resolution	0.1 %RH	1 ppm CO <sub>2</sub>	1 Lux

# Probes



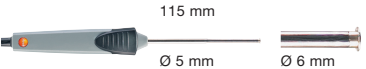




Probe type		Measuring range	Accuracy $\pm 1$ digit	Part no.
<b>Flow velocity probes</b>				
Vane measurement probe $\varnothing$ 16 mm with telescope; Plug-in head cable necessary (Order no. 0430 0100)		+0.6 to +50 m/s -10 to +70 °C	$\pm(0.2 \text{ m/s} + 1\% \text{ of mv})$ 0.6 - 40 m/s $\pm(0.2 \text{ m/s} + 2\% \text{ of mv})$ 40 - 50 m/s $\pm 1.8 \text{ }^\circ\text{C}$	0635 9542
Thermal flow probe with telescope; Plug-in head cable necessary (Order no. 0430 0100)		0 to +20 m/s -20 to +70 °C 0 to 100 %RH +700 to +1100 hPa	$\pm(0.03 \text{ m/s} + 4\% \text{ of mv})$ $\pm 0.5 \text{ }^\circ\text{C}$ $\pm(1.8 \text{ \%RH} + 0.7\% \text{ of mv})$ $\pm 3 \text{ hPa}$	0635 1543
Vane measurement probe $\varnothing$ 100 mm; Plug-in head cable necessary (Order no. 0430 0100)		+0.10 to +15.00 m/s 0 to +60 °C	$\pm(0.1 \text{ m/s} + 1.5\% \text{ of mv})$ $\pm 0.5 \text{ }^\circ\text{C}$	0635 9343
<b>Comfort probes</b>				
Humidity and temperature probe $\varnothing$ 12 mm; Plug-in head cable necessary (Order no. 0430 0100)		0 to 100 %RH -20 to +70 °C	$\pm(1.0 \text{ \%RH} + 0.7\% \text{ of mv})$ 0 to 90 %RH $\pm(1.4 \text{ \%RH} + 0.7\% \text{ of mv})$ 90 to 100 %RH $\pm 0.5 \text{ }^\circ\text{C}$	0636 9743
IAQ probe including desk-top stand; Plug-in head cable necessary (Order no. 0430 0100)		0 to +50 °C 0 to 100 %RH 0 to +10000 ppm CO <sub>2</sub> +700 to +1100 hPa	$\pm 0.5 \text{ }^\circ\text{C}$ $\pm(1.8 \text{ \%RH} + 0.7\% \text{ of mv})$ $\pm(50 \text{ ppm CO}_2 + 2\% \text{ of mv})$ 0 to +5000 ppm CO <sub>2</sub> $\pm(100 \text{ ppm CO}_2 + 3\% \text{ of mv})$ 5001 to +10000 ppm CO <sub>2</sub> $\pm 3 \text{ hPa}$	0632 1543
Degree of turbulence probe; Plug-in head cable necessary (Order no. 0430 0100)		0 to +50 °C 0 to +5 m/s +700 to +1100 hPa	$\pm 0.5 \text{ }^\circ\text{C}$ $\pm(0.03 \text{ m/s} + 4\% \text{ of mv})$ $\pm 3 \text{ hPa}$	0628 0143
Globe probe $\varnothing$ 150mm		0 to +120 °C	Class 1	0602 0743
Lux probe		0 to +100000 Lux	Class C according to DIN 5032-7; f1 = 6% V-Lambda; f2 = 5% cos	0635 0543
<b>Further probes</b>				
High-precision Pt100 immersion and penetration probe, Plug-in head cable 0430 0100 required	 200 mm $\varnothing$ 3 mm	-100 to +400 °C	$\pm 0.15 \text{ }^\circ\text{C} + 0.2\% \text{ of mv}(-100 \text{ to } -0.01 \text{ }^\circ\text{C})$ $\pm 0.15 \text{ }^\circ\text{C} + 0.05\% \text{ of mv}(0 \text{ to } 100 \text{ }^\circ\text{C})$ $\pm 0.15 \text{ }^\circ\text{C} + 0.2\% \text{ of mv}(100.01 \text{ to } 350 \text{ }^\circ\text{C})$ $\pm 0.5 \text{ }^\circ\text{C} + 0.5\% \text{ of mv}(350.01 \text{ to } 400 \text{ }^\circ\text{C})$	0614 0073

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Air probes</b>					
Robust air probe, T/C Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	25 s	0602 1793
<b>Surface probes</b>					
Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0393
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 s	0602 0193
Efficient, waterproof surface probe with small measurement head for flat surfaces, TC Type K, Fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	20 s	0602 0693
Fast-action surface probe with sprung thermocouple strip, bent, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0993
Flat head surface probe with telescopic handle max. 680 mm for measurements at hard-to-access points, TC Type K, Fixed cable 1.6 m (correspondingly shorter when telescope extended)		-50 to +250 °C	Class 2 <sup>1)</sup>	3 s	0602 2394

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only **one** accuracy class.

# Probes

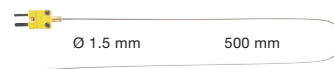

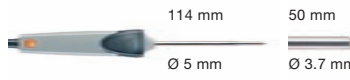



Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Surface probes</b>					
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +170 °C	Class 2 <sup>1)</sup>	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	30 s	0602 1993
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable		-50 to +120 °C	Class 1 <sup>1)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term to +280°C, TC Type K, Fixed cable		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 4592
Spare meas. head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C, TC Type K, Fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 s	0602 4692

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only **one** accuracy class.

**Information on surface measurement:**

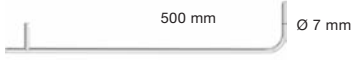



- The response times t<sub>99</sub> stated are measured on ground steel or aluminium plates at +60 °C.
- The stated accuracies are sensor accuracies.
- The accuracy in your application is dependent on the surface structure (roughness), material of the measurement object (heat capacity and heat transfer), as well as sensor accuracy. Testo creates a corresponding calibration certificate for the deviations of your measurement system in your application. For this purpose, Testo uses a surface test bench developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt).

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Immers./penetr. probes</b>					
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	2 s	0602 0593
Fast-action, waterproof immersion/penetration probe, TC Type K, Fixed cable		-60 to +800 °C	Class 1 <sup>1)</sup>	3 s	0602 2693
Immersion tip, flexible, TC Type K		-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Immersion tip, flexible, TC Type K		-200 to +40 °C	Class 3 <sup>1)</sup>	5 s	0602 5793
Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K		-200 to +1300 °C	Class 1 <sup>1)</sup>	4 s	0602 5693
Waterproof immersion/penetration probe, TC Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 1293
Flexible, low-mass immersion measurement tip, ideal for measurements in small volumes such as petri dishes, or for surface measurements (e.g. attached with adhesive tape), TC Type K, 2 m, FEP insulated thermal wire, temperature proof up to 200 °C, oval wire with dimensions: 2.2 mm x 1.4 mm		-200 to +1000 °C	Class 1 <sup>1)</sup>	1 s	0602 0493
Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 2292
Robust food probe with special handle, IP 65, reinforced cable (PUR), T/C Type K, Fixed cable		-60 to +400 °C	Class 1 <sup>1)</sup>	6 s	0602 2492
<b>Thermocouples</b>					
Thermocouple with TC adapter, flexible, 800mm long, fibre glass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0644
Thermocouple with TC adapter, flexible, 1500mm long, fibre glass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0645
Thermocouple with TC adapter, flexible, 1500mm long, PTFE, TC Type K		-50 to +250 °C	Class 2 <sup>1)</sup>	5 s	0602 0646

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only **one** accuracy class.

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip			Part no.
<b>Pitot tubes</b>				
Pitot tube, 500 mm long, stainless steel, for measuring flow velocity	 <p>500 mm      Ø 7 mm</p>	Oper. temp. 0 to +600 °C		0635 2045
Pitot tube, 350 mm long, stainless steel, for measuring flow velocity	 <p>350 mm      Ø 7 mm</p>	Oper. temp. 0 to +600 °C		0635 2145
Pitot tube, 300 mm long, stainless steel, for measuring flow velocity	 <p>300 mm      Ø 4 mm</p>	Oper. temp. 0 to +600 °C		0635 2245
Pitot tube, 1000 mm long, stainless steel, measures flow speed	 <p>1000 mm      Ø 7 mm</p>	Oper. temp. 0 to +600 °C		0635 2345

# Accessories

<b>Accessories for measuring instrument</b>	<b>Part no.</b>	
Tripod for workplace evaluation With holders for hand-held instrument and probe. Can also be used as telescope extension	0554 0743	
Plug-in head cable	0430 0100	
testovent 410, volume flow funnel, Ø 340 mm/330x330 mm, incl. case	0554 0410	
testovent 415, volume flow funnel, Ø 210 mm/210x210 mm, incl. case	0554 0415	
testovent 417 funnel set for disc valve (200x200 mm) and ventilator (330x330 mm) for ingoing and outgoing air	0563 4170	
Control and adjustment set for Testo humidity probes, salt solution with 11.3% RH and 75.3% RH, incl. adapter for Testo humidity probes	0554 0660	
Connection hose; silicone; 5 m long; max. load 700hPa (mbar)	0554 0440	
Connection hose silicone-free for differential pressure measurement	0554 0453	
<b>Transport and Protection</b>		
System case for comfort level measurement For instrument, probes and other accessories	0516 4801	
System case for HVAC measurements, For instrument, probes and other accessories	0516 4800	
<b>Printer and Accessories</b>		
Testo fast printer IRDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries for printing out measurements on site	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink, measurement data documentation legible for up to 10 years	0554 0568	
<b>Calibration Certificates</b>		
ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
DAkkS calibration certificate/temperature; meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211	
ISO calibration certificate humidity; Calibration points 11.3 %RH and 75.3 %RH at +25°C	0520 0006	
DAkkS calibration certificate/humidity; electronic hygrometers; calibration points 11.3%RH and 75.3%RH at +25°C	0520 0206	
ISO calibration certificate pressure; differential pressure, accuracy 0.1 to 0.6 (% of fsv)	0520 0025	
ISO calibration certificate velocity; hot wire, vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004	
ISO calibration certificate velocity; hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034	
ISO calibration certificate/light; Calibration points 0;500;1000;2000;4000 Lux	0520 0010	
ISO calibration certificate/CO2; CO2 probes; calibration points 0; 1000; 5000 ppm	0520 0033	
<b>Accessories Probes</b>		
Plug-in head cable	0430 0100	

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