

# Highly efficient flue gas analyzer

testo 320 LX – just a few clicks from a heating diagnosis

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3-year warranty without maintenance contract on O<sub>2</sub> and CO sensors

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High-resolution graphic display

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Fast and easy menu structure

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Storage space for 500 measurement values

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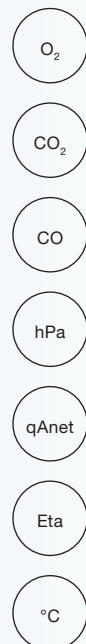
Measurement of flue gas, draught, pressure, ambient CO, differential temperature and gas leak detection

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With App operation and documentation  
(for Android end devices)

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TÜV-tested according to EN 50379, Parts 1-3



The new testo 320 LX is a high-quality measuring instrument for efficient flue gas analysis. Its wide measuring range makes it a reliable partner for eliminating malfunctions and emergencies, monitoring legal limit values or for daily routine work servicing heating systems. The numerous measurement menus of the testo 320 LX are

clearly structured. Standardised menu structures, which are stored in the instrument specific to the country concerned, simplify operation – depending on which standard applies to measurement. The high-resolution colour display enables a detailed presentation of the measurement procedures and can be clearly read even in the worst of conditions.

## Ordering data / accessories

### testo 320 LX anniversary set



Set consists of

- Flue gas analyzer testo 320 LX with O<sub>2</sub> sensor, CO sensor and Bluetooth®
- International mains unit
- Basic flue gas probe, length 180 mm, Ø 6 mm
- Spare dirt filter (10 off)
- System case for instrument, probe and accessories

Order no. 0563 6032 74

### testo 320 LX anniversary set with printer



Set consists of

- Flue gas analyzer testo 320 LX with O<sub>2</sub> sensor, CO sensor and Bluetooth®
- International mains unit
- Basic flue gas probe, length 180 mm, Ø 6 mm
- Spare dirt filter (10 off)
- System case for instrument, probe and accessories
- testo fast printer IRDA
- Spare thermal paper

Order no. 0563 6032 75

### testo 320 LX anniversary set (CO H<sub>2</sub>-compensated)



Set consists of

- Flue gas analyzer testo 320 LX with O<sub>2</sub> sensor, H<sub>2</sub>-compensated CO sensor and Bluetooth®
- International mains unit
- Basic flue gas probe, length 180 mm, Ø 6 mm
- Spare dirt filter (10 off)
- System case for instrument, probe and accessories

Order no. 0563 6032 72

### testo 320 LX anniversary set (CO H<sub>2</sub>-compensated) with printer



Set consists of

- Flue gas analyzer testo 320 LX with O<sub>2</sub> sensor, H<sub>2</sub>-compensated CO sensor and Bluetooth®
- International mains unit
- Basic flue gas probe, length 180 mm, Ø 6 mm
- Spare dirt filter (10 off)
- System case for instrument, probe and accessories
- testo fast printer IRDA
- Spare thermal paper

Order no. 0563 6032 73

Measuring instruments testo 320 LX	Order no.
Flue gas analyzer testo 320 LX incl. O <sub>2</sub> sensor, CO sensor and Bluetooth®, calibration protocol and graphic colour display	0632 6032 70
Flue gas analyzer testo 320 LX incl. O <sub>2</sub> sensor, CO sensor H <sub>2</sub> -compensated, Bluetooth®, calibration protocol and graphic colour display	0632 6032 71

Measuring instrument accessories	Order no.
Smoke tester incl. oil and soot papers for measuring soot in flue gas, excl. cone (order no. 0554 9010)	0554 0307
testo Bluetooth®-/IRDA printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0620
Testo fast printer IRDA with wireless infrared interface, 1 roll of thermal paper and 4 AA batteries	0554 0549
Spare thermal paper for printer, permanent ink	0554 0568
PC analysis software easyheat, for presenting measurement procedures as diagrams, tables and for customer data management	0554 3332
USB mains unit incl. cable	0554 1105
Spare rechargeable battery	0515 5046
System case (height: 130 mm) for instrument, probes and accessories	0516 3300
System case with double base (height: 180 mm) for instrument, probes and accessories	0516 3301
Case (height: 110 mm) for instrument, probe and accessories	0516 0021
ISO calibration certificate for flue gas	0520 0003

## Probes / probe accessories

<b>Compact flue gas probes</b>	<b>Order no.</b>
Compact basic flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 1.5m; dirt filter; length 180 mm; Ø 6 mm; Tmax. 500°C	0600 9740
Compact basic flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 1.5 m; dirt filter; length 300 mm; Ø 6 mm; Tmax. 500°C	0600 9741

<b>Modular flue gas probes</b>	<b>Order no.</b>
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 180 mm; Ø 8 mm; Tmax. +500 °C; TÜV-tested	0600 9760
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 300 mm; Ø 8 mm; Tmax. +500 °C; TÜV-tested	0600 9761
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 180 mm; Ø 6 mm; Tmax. +500 °C	0600 9762
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 300 mm; Ø 6 mm; Tmax. +500 °C	0600 9763
Flexible flue gas probe; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 330 mm; Ø 9 mm; Tmax. +180 °C; short-term +200 °C; ideal for measurements at difficult-to-access locations	0600 9770

<b>Probe accessories</b>	<b>Order no.</b>
Modular probe shaft; 180 mm; Ø 8 mm; Tmax. +500 °C	0554 9760
Modular probe shaft; 300 mm; Ø 8 mm; Tmax. +500 °C	0554 9761
Flexible probe shaft; 330 mm; Ø 9 mm; Tmax. +180 °C	0554 9770
Multi-hole probe shaft; length 300 mm; Ø 8 mm; for CO mean value calculation	0554 5762
Multi-hole probe shaft; length 180 mm; Ø 8 mm; for CO mean value calculation	0554 5763
Hose extension; 2.8 m; extension line probe-instrument	0554 1202
Hose connection set with adapter for separate gas pressure measurement	0554 1203
Spare dirt filter for probe handle, modular probe; 10 pcs.	0554 3385
Spare dirt filter for probe handle, compact probe; 10 pcs.	0554 0040

<b>Other probes</b>	<b>Order no.</b>
Dual wall clearance probe for O <sub>2</sub> air input measurement	0632 1260
Gas leak detection probe; 0 to 10 000 ppm CH <sub>4</sub> / C <sub>3</sub> H <sub>8</sub>	0632 3330
Ambient CO probe; for detection of CO in buildings and rooms; 0 to 500 ppm	0632 3331
Ambient CO probe, plug-in head, connection lead 0430 0143 or 0430 0145 required	0632 1240
Differential temperature set; consisting of 2 Velcro probes and temperature adapter	0554 1208
Fine pressure probe: Highly accurate probe for measuring differential pressure and temperature as well as Pitot tube measurement of flow velocities (see technical data)	0638 0330
Capillary hose set for 4 Pa measurement	0554 1215

<b>Combustion air temperature probe</b>	<b>Order no.</b>
Combustion air temperature probe, immersion depth 190 mm	0600 9787
Combustion air temperature probe, immersion depth 60 mm	0600 9797

<b>Other temperature probes</b>	<b>Order no.</b>
Mini ambient air probe; for separate ambient air measurement; 0 to +80 °C	0600 3692
Very fast reaction surface probe	0604 0194
Connection cable	0430 0143

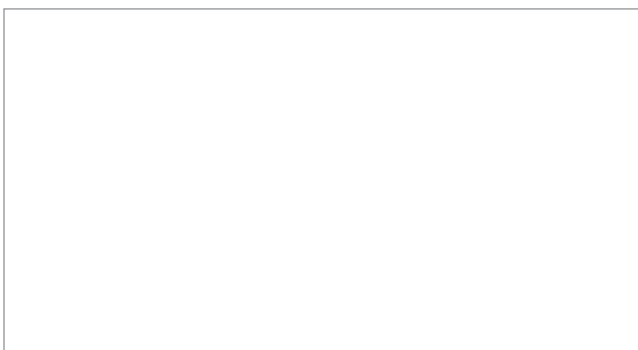
# Technical data

	Measuring range	Accuracy ( $\pm 1$ digit)	Resolution	Adjustment time $t_{90}$
<b>Temperature</b>	-40 to +1200 °C	$\pm 0.5$ °C (0 to +100.0 °C) $\pm 0.5$ % of m.v. (remaining meas. range)	$\pm 0.1$ °C (-40 - +999.9 °C) 1 °C (> +1 000 °C)	
<b>Draught measurement</b>	-9.99 to +40 hPa	$\pm 0.02$ hPa or $\pm 5$ % of m.v. (-0.50 to +0.60 hPa) $\pm 0.03$ hPa (+0.61 to +3.00 hPa) $\pm 1.5$ % of m.v. (+3.01 to +40.0 hPa)	0.01 hPa with fine draught option 0.001 hPa	
<b>Pressure measurement</b>	0 to +300 hPa	$\pm 0.5$ hPa (0.0 to +50.0 hPa) $\pm 1$ % of m.v. (+50.1 to +100.0 hPa) $\pm 1.5$ % of m.v. (remaining meas. range)	0.1 hPa with fine draught option 0.01 hPa	
<b>O<sub>2</sub> measurement</b>	0 to 21 vol. %	$\pm 0.2$ vol. %	0.1 vol. %	< 20 sec
<b>CO measurement (without H<sub>2</sub>-compensation)</b>	0 to 4000 ppm	$\pm 20$ ppm (0 to 400 ppm) $\pm 5$ % of m.v. (401 to 2000 ppm) $\pm 10$ % of m.v. (2001 to 4000 ppm)	1 ppm	< 60 sec
<b>CO measurement (H<sub>2</sub>-compensated)</b>	0 to 8000 ppm	$\pm 10$ ppm or $\pm 10$ % of m.v. (0 to 200 ppm) $\pm 20$ ppm or $\pm 5$ % of m.v. (201 to 2000 ppm) $\pm 10$ % of m.v. (2001 to 8000 ppm)	1 ppm	< 40 sec
<b>Efficiency testing (Eta)</b>	0 to 120%		0.1 %	
<b>Flue gas loss</b>	0 to 99.9%		0.1 %	
<b>CO<sub>2</sub> determination</b> digital calculation from O <sub>2</sub>	Display area 0 to CO <sub>2</sub> max	$\pm 0.2$ vol. %	0.1 vol. %	< 40 sec
<b>Option CO<sub>low</sub> measurement (H<sub>2</sub>-compensated)</b>	0 to 500 ppm	$\pm 2$ ppm (0 to 39.9 ppm) $\pm 5$ % of m.v. (remaining meas. range)	0.1 ppm	< 40 sec
<b>Ambient CO measurement (with CO probe)</b>	0 to 500 ppm	$\pm 5$ ppm (0 to 100 ppm) $\pm 5$ % of m.v. (> 100 ppm)	1 ppm	
<b>Gas leak measurement for combustible gases (with gas leak detector probe)</b>	Display area 0 to 10 000 ppm CH <sub>4</sub> / C <sub>3</sub> H <sub>8</sub>	Signal visual indication (LED) audible indication by buzzer		< 2 sec
<b>Ambient CO<sub>2</sub> measurement (with ambient CO<sub>2</sub> probe)</b>	0 to 1 vol. % 0 to 10 000 ppm	$\pm 50$ ppm or $\pm 2$ % of meas. val. (0 to 5000 ppm) $\pm 100$ ppm or $\pm 3$ % of meas. val. (5001 to 10000 ppm)		
<b>Differential pressure, flow velocity and temperature via fine pressure probe</b>	$\pm 10000$ Pa  0.15 to 3 m/s max. -40 to +1200 °C (probe-dependent)	$\pm 0.3$ Pa (0 to 9.99 Pa) plus $\pm 1$ digit $\pm 3$ % of m.v. (10 to 10000 Pa) plus $\pm 1$ digit  $\pm 0.5$ °C (-40 to +100 °C) $\pm 0.5$ % of m.v. (remaining meas. range) plus probe inaccuracy	0.1 m/s 0.1 °C	

**General technical data**

Storage temperature	-20 to +50 °C
Operating temperature	-5 to +45 °C
Power supply	Rechargeable battery: 3.7 V / 2400 mAh Mains unit: 6 V to 1.2 A
Memory	500 readings

Display	Colour graphic display 240 x 320 pixels
Weight	573 g
Dimensions	240 x 85 x 65 mm
Warranty	Instrument/probe: 24 months Thermocouple/rech. bat. 12 months Gas sensors: 36 months



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Subject to change without notice.