We measure it. testo

The new testo 330 LL visualizes measurement data graphically

Understand flue gas analysis at a glance

°C

hPa

O_2

CO/H_2

NO

ΔP

Bluetooth®

4 years' warranty on instrument and probes

The new flue gas analyzer testo 330 LL visualizes measurement data graphically

Independently of the technology used, every combustion system must function optimally. More than ever, requirement-based heat provision, low energy consumption and reduced pollutant emission are of central significance. In order to be able to exploit existing optimization potential as well as possible, regular testing and adjustment of the heating system is necessary. The new Testo flue gas analyzers testo 330-1 LL and testo 330-2 LL offer even more professional support in this thanks to new instrument functions.

The new colour graphic display of the flue gas analyzer testo 330 LL visualizes the measurement data graphically:

Self-explanatory graphic curves as well as easy symbols and clear colour design ease the analysis of the measurement data considerably.

The flue gas matrix

The central element of the new graphic processing of the measurement data is the flue gas matrix.

In the course of the flue gas measurement, this shows whether the CO and O_2 values, as well as other measurement parameters, are in the green, permitted range, and the heating system is thus optimally adjusted.

Thumb symbols instantly show the status of the system. If the CO and O_2 concentrations measured are in the green range, the thumbs point up.

If the recorded measurement values are not within the optimum range, the symbols of the flue gas matrix provide important information for the required adjustment of the heating system.

Bad combustion – the CO concentration is over the defined limit value, the recorded CO content is not within the ideal range

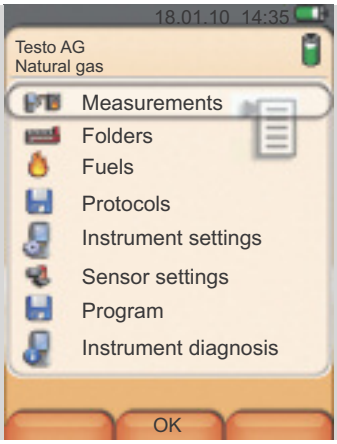
Measurement value is not acceptable – the CO and O_2 concentrations are considerably too high, the measurement values do not correspond to the prescribed norms and limit values

High loss – the O_2 concentration is over the defined limit value, the heating system is not working efficiently

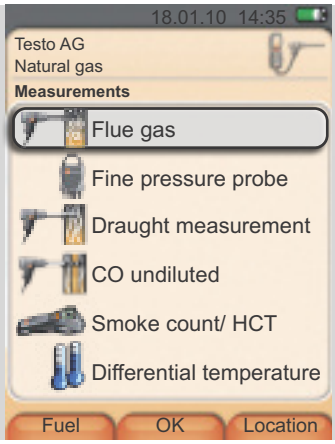
Understand flue gas analysis at a glance

The advantages of the new flue gas analyzer testo 330 LL:

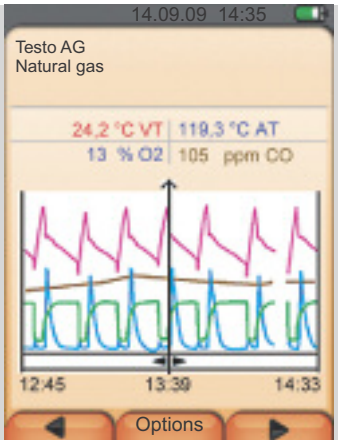
- High-resolution colour display for the graphic representation of the measurement data
- Extended measurement menus such as tightness testing and solid fuel measurement for comprehensive analysis of the heating system
- Logger function for easy long-term recording of the measurement curve



Main menu – select adjustment function



Select one of the pre-set measurements



Measurement data can be graphically visualized and quickly analyzed

The measurement menus – the right menu for every measurement task:

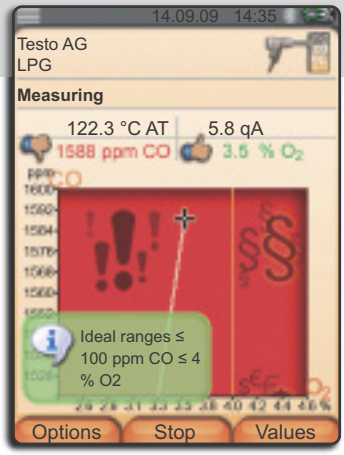
- Flue gas
- Draught measurement
- Fine pressure probe
- BImSchV
- CO undiluted
- Smoke number/HCT
- Differential pressure
- Differential temperature
- O_2 input air
- Gas flow rate
- Oil flow rate
- CO ambient
- CO_2 ambient
- Automatic burner
- Gas pipe tests
- Solid fuel measurement

Further advantages of the flue gas analyzer testo 330 LL: Ergonomic instrument design

Thanks to the new colour design and the materials used, the instrument is also suitable for use in rough and dirty surroundings, and lies ergonomically in your hand.

Typical measurement menus

Extended measurement menus allow a comprehensive analysis of the heating system. These five typical measurement tasks illustrate how clearly the measurement data are presented in the display:



The CO concentration is in the range of bad combustion. The instrument provides information on the ideal range.

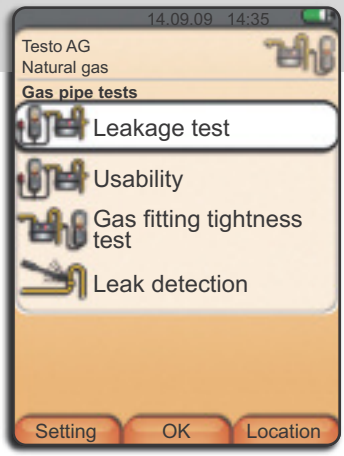
Flue gas measurement…

is the central measurement in flue gas analysis. By determining the main values, CO and O_2, as well as other measurement parameters, a judgement can be made as to whether your heating system is properly adjusted or whether there is a need for optimization.
Different display options offer the right presentation of the measurement values, depending on requirements:

- 4- to 8-line as numerical values
- 4 measurement values simultaneously presented in a line graph
- Main values O_2 and CO, as well as further measurement values, graphically displayed as a flue gas matrix

Advantages of the new flue gas matrix:

- The flue gas matrix acts as an adjustment assistent for the main values O_2 and CO
- The optimization of the adjustment is much easier – the interpretation of the numerical values is no longer necessary
- Thanks to the trend display, the measurement curve can be followed exactly, and the measurement point precisely determined.
- The automatic zoom function provides an enlarged and clear display of the current detail of the flue gas matrix



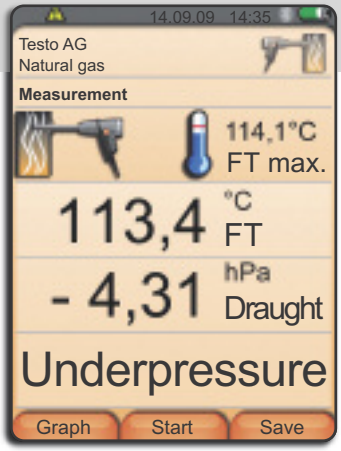
The four measurements for testing the gas pipe

The gas pipe test…

is divided into 4 measurements which guarantee a comprehensive test of the gas pipe: Gas tightness test, usability test, gas fitting tightness test and leakage detection. After selecting the desired measurement, the testo 330 LL begins directly with the corresponding gas pipe check. A separate gas leak detection probe is required for leakage detection. The gas tightness test can be conducted over a period of 10 minutes. The gas fitting tightness test is conducted over a period of one minute directly under operating conditions.

Advantages of the new testo 330 LL:

- Thanks to prescribed measurement procedures, the desired test can be conducted quickly and easily
- The testo 330 LL leads the user through the measurement step by step, presenting the the corresponding information in the display
- The measurement data are displayed in easy and clear diagrams



The result of the measurement: a negative pressure exists (-4.31 hPa)

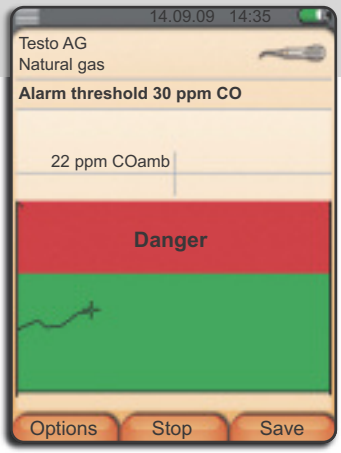
The draught measurement…

begins directly after the selection of the corresponding measurement menu. After the zeroing of the pressure sensor, the determination of the differential pressure between the surroundings and the flue takes place.

Display view in the course of the measurement during sensor zeroing

Advantages of the new testo 330 LL:

- Graphically supported measurement menu for the determination of the flue draught with parallel core flow search
- Thanks to the integrated switchover valve technology, the testo 330-2 LL can remain in the flue during zeroing. In the testo 330-1 LL, the probe must be removed from the flue for zeroing
- The set alarm threshold will be shown directly on the display



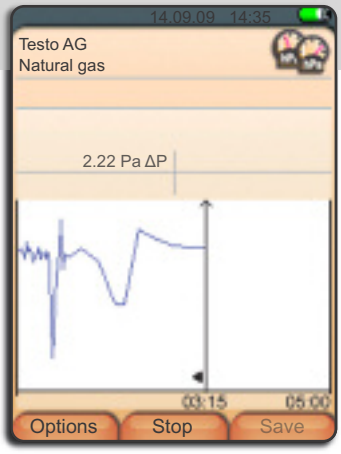
The CO concentration is in the permitted range. The alarm threshold is not exceeded

The CO environment measurement...

determines the CO concentration in the ambient air. The measurement is presented in a simple graph. If the CO concentration is in the green range, the recorded concentration is permitted and the alarm threshold is not exceeded. The red danger range indicates a too high, not permitted CO concentration.

Advantages of the new testo 330 LL:

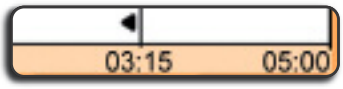
- Easy, graphic presentaion of the adjustable alarm thresholds
- With the help of the trend display, the measurement curve can be followed
- The cursor marks the current CO concentration
- The instrument not only indicates the violation of the alarm threshold optically, it also provides an audible alarm



Line diagram of the differential pressure ΔP in a period of 3:15 mins

The differential pressure measurement ΔP…

takes place after selection of the measurement menu "Differential pressure". After setting up the pressure difference required for the measurement, the measurement curve can be followed directly in the display over a defined period.



Continuous measurement of the differential pressure ΔP over e. g. 5 mins

Advantages of the new testo 330 LL:

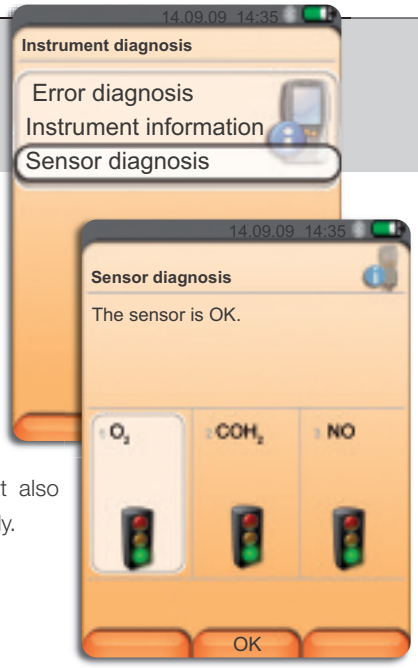
- The measurement curve of the differential pressure measurement can be followed directly in the line diagram
- Using the logger function, the measurement curve can be recorded over a defined period of up to 120 minutes

The sensor diagnosis – long life with even more security

Thanks to the extended sensor life of up to 6 years for O_2 and CO in the testo 330 LL, the follow-on costs for the user are drastically reduced. At least one O_2 and CO sensor replacement is saved during the course of the typical phase of use of the instrument. In addition to this, Testo gives 4 years' warranty on the complete instrument incl. O_2 and CO sensors and probe.

Exception: Wearing parts such as filter, thermocouple (12 months) NO/CO_{low} sensor (24 months)

The O_2 long-life sensor stands out against the standard sensor through a more stable design, an improved diffusion barrier to protect the anode material and a lead-free metal alloy. It is therefore not only more durable but also more environmentally friendly.



The graphic-capable display allows sensor diagnosis with traffic light presentation

The fine pressure probes can easily be attached at any measurement site – by loop or magnet

The fine pressure probe – highest accuracy in the Pascal range

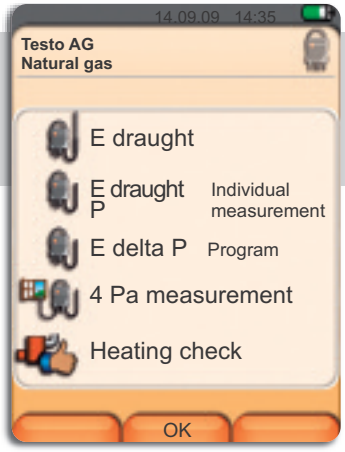
The fine pressure probe is directly connected to the flue gas analyzer testo 330 LL. The different measurement menus and the measurement results are shown in the display of the testo 330 LL.

The following menus with buffer stores are available:
· parallel draught measurement
· parallel ΔP measurement
· 4Pa measurement
· heating check

Simultaneous gas pressure measurement and flue gas analysis is possible with the fine pressure probe. The gas pressure measurement can be carried out in logger operation, thus conducting a long-term measurement.

Thanks to the zero point calibration at 1 second intervals, external temperature influences have no effect on the measurement value.

For the measurement of the ambient temperature or the surface temperature, an additional temperature probe can be connected.



The instrument firmware and the "easyheat" software are retrofittable free of charge: www.testo.com/easyheat/Update.

Easy, mobile data management for flue gas analysis

The software package testo easyheat and easyheat.mobile
The new top technology in flue gas measurement: the instrument series testo 330 LL with extended sensor life communicates not only with a PC, but also with a Pocket PC. Different software packages give the customer the possibility of adapting the testo 330 LL exactly to his communication needs.

With the help of the PC software easyheat, the management of customer data, as well as the measurement sites and the already completed measurements, can be carried out easily on a PC at home.

The Pocket-PC-Software easyheat.mobile supports wireless communication to Windows Mobile appliances. This allows wireless transfer of measurement data to a mobile appliance on site.

Printout of the data from a Pocket PC or directly from the measuring instrument takes place via the IrDA/Bluetooth printer.

Bluetooth®
Wireless transfer*

Smoke tester **testo 308**
Information at
www.testo.com

***Country permits BLUETOOTH® wireless transfer for the smoke tester testo 308 and the flue gas analyzer testo 330 LL**
The BLUETOOTH® wireless module used by Testo has permits for the following listed countries, and can only be used in those countries, i. e. BLUETOOTH® wireless transfer may not be used in any other country!

Europe including all EU member states
Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and Turkey

European countries (EFTA)
Iceland, Liechtenstein, Norway and Switzerland

Non-European countries
Ukraine, Colombia and El Salvador

The probes – the right accessories for every application

The robust and easy-to-hold probe handle makes positioning easier. The probe has a quick-release fastener. This ensures that all gas paths are connected and confusion is impossible. The dirt filter housed in the handle reliably filters out dirt. In addition, the probes are extremely easy to look after and easy to clean. A range of lengths and diameters ensure a high degree of flexibility for all applications. On replacement, the probe shaft is simply placed on the probe handle and it engages. Multi-hole and annular gaps probes complete the line of flue gas probes. Both the ambient CO probe and the CO_2 probe are automatically detected by the instrument and the measuring results appear immediately in their own respective graphically supported menu. Moreover, the adjustable alarm threshold is linked to an acoustic signal.

The entire scope of measurements during checks can be carried out alongside the flue gas measurement.

The gas leak detection probe that can be connected to the instrument also has an adjustable alarm threshold; a warning tone is emitted if it is exceeded. The probe is also detected automatically and the results are shown as a graphic trend display in a dedicated menu.

Thanks to the integration of the gas tightness test into the measurement menu, all relevant tests on gas pipes can be conducted without a separate measuring instrument– the new testo 330 LL integrates the gas tightness test. All that is required for this is the connection of the pressure set for gas pipe tests to the testo 330 LL. The testo 330 LL guides the user through the entire measurement, and facilitates it by the graphic processing of the measurement data.

The flue gas analyzer testo 330-1 LL at a glance

The testo 330 LL is the reliable companion –- whether in cases of malfunction or emergency, when monitoring legally set limit values, or in day-to-day maintenance work.

New features of the testo 330 LL:

- Colour graphic display with 240 x 320 Pixel
- Graphic processing of measurement data
- New instrument design
- Instrument diagnosis function uses easy „traffic light" presentation to enable comprehensive error diagnosis, diagnosis of sensors and the call-up of instrument information such as the filling level of the condensate trap and the battery status
- Logger function for long-term measurements
- New measurement menus, e. g. Gas pipe test and solid fuel measurement
- Pressure measurement up to 300 mbar
- User-defined fuels

Other features:

- Reduced follow-on costs thanks to LL sensors with 4 years' guarantee
- Life expectancy up to 6 years (O_2 / CO)
- At least 1 sensor replacement is saved in the course of a normal working life
- Powerful Li-ion rechargeable battery - life: >6 h with pump running, no memory effect, no deep discharge
- Rechargeable battery can be charged separately and in instrument
- TÜV-tested according to 1. BImSchV / EN 50379 Part 2 for O_2, °C, hPa and CO with H_2-compensation

WARRANTY: 4 YEARS*

TÜV EN 50379-2 and 1. BImSchV

A measuring instrument with great ease of communication:

- Powerful memory management: 500,000 readings
- IrDa/ Bluetooth interface for data transfer to Pocket-PC / laptop / printer
- USB interface for data readout to a PC software
- ZIV (Central Guild Association) driver for all standard industry software packages

optionally with Bluetooth®

Only for testo 330-2 LL

- In CO measurement, from 8.000 ppm, automatic dilution is carried out up to min. 30,000 ppm CO
- Integrated gas and draught zeroing without probe removal: The probe can remain in the flue during zeroing

* Exceptions: Typical wearing parts: Rechargeable battery and thermocouple (1 year) NO/CO_{low} sensor (2 years), filter

The longlife sets with the new flue gas analyzer testo 330 LL

In order to simplifiy selection, Testo has assembled special sets. These can of course be extended at any time from the wide selection of accessories.

Illustratuion may differ from original

New testo 330-1 LL flue gas analyzer

The Longlife set for heating constructors and fitters

testo 330-1 LL flue gas set H2 for heating constructors and fitters, incl. BLUETOOTH rech. battery and calibration protocol; mains unit 100-240 V for mains operation or charging the rechargeable battery in instrument; combustion air temperature probe, length 190 mm; hose connection set for separate gas pressure measurement; testo BLUETOOTH-printer with mains unit; basic system case flat; flue gas analyzer, length 300 mm, Ø 8 mm, Tmax. 500 °C; with graphic display; version 2010

Part no. 0563 3371 70

testo 330-1 LL

testo 330-1 LL flue gas analyzer with long-life gas sensors; BLUETOOTH® and H2-compensated CO-sensor, incl. rech. battery and calibration protocol; graphic display

Part no. 0632 3306 70

EN 50379-2 and 1. BImSchV

Bluetooth®

New testo 330-2 LL flue gas analyzer

The Longlife set for customer service and maintenance technicians

testo 330-2 LL flue gas set H2 for customer service and maintenance technicans, incl. BLUETOOTH, rech. battery and calibration protocol; mains unit 100-240 V for mains operation or charging the rechargeable battery in the instrument; combustion air temperature probe, length 190 mm; hose connection set for separate gas pressure measurement; Testo BLUETOOTH printer with mains unit; basic system case flat; flue gas probe; lenght 300 mm, Ø8 mm, Tmax. 500 °C

Part no. 0563 3372 70

testo 330-2 LL

testo 330-2 LL flue gas analyzer with long-life gas sensors; BLUETOOTH® and H2-compensated CO-sensor as well as integrated draught and gas zeroing, incl. rech. battery and calibration protocol; graphic display

Part no. 0632 3307 70

EN 50379-2 and 1. BImSchV

Bluetooth®

The Longlife set for inpectors

testo 330-2 LL flue gas set; testo 330-2 LL (O2 and COH2), incl. BLUETOOTH, rech. battery and calibration protocol; mains unit 100-240 V for mains operation or charging the rechargeable battery in the instrument; combustion air temperature probe, length 190 mm; testo 308 smoke tester; soot pump holder; flue gas probe, length 300 mm, Ø 8 mm, Tmax. 500 °C; basic system case with double floor for instrument, probes and further accessories; with graphic display; verison 2010

Part no. 0563 3372 72

The gas pipe test

The Longlife set for service technicians and and inspectors with fine pressure probe

testo 330-2 LL (O2 and COH2) flue gas set for service technicians and inspectors, incl.BLUETOOTH, rech. battery and calibration protocol; mains unit 100-240 V for mains operation or charging the rechargeable battery in the instrument; combustion air temperature probe, length 190 mm; Testo BLUETOOTH printer with mains unit; easyheat software testo 330 for PC; USB connection cable, instrument-PC; flue gas probe, length 300 mm, Ø 8 mm, Tmax. 500 °C; fine pressure probe; capillary hoses; surface probe angled 90 °C; connection cable surface probe; straight Pitot tube; heating check retrofit CD; basic system case with double floor for instrument, probes and further accessories

Part no. 0563 3372 71

The gas pipe test is integrated in the testo 330 LL (see ill.). Order accessory 0554 1213, and if not included in the set, accessory 0554 1203.

Technical data

Temperature	Meas. range	-40 to +1200 °C
	Accuracy	±0,5 °C (0.0 to +100.0 °C) ±0,5 % of mv (remaining range)
	Resolution	0.1 °C (-40 to 999,9 °C) 1 °C (remaining range)
Draught measurement	Meas. range	-9.99 to +40 hPa
	Accuracy (the greater value applies)	±0.02 hPa or ±5% of mv (-0.50 to +0.60 hPa) ±0.03 hPa (+0.61 to +3.00 hPa) ±1.5% of mv (+3.01 to +40.00 hPa)
	Resolution	0.01 hPa
Pressure measurement	Meas. range	0 to 300 hPa
	Accuracy	±0.5 hPa (0.0 to 50.0 hPa) ±1% of mv (50.1 to 100.0 hPa) ±1.5 % of mv (remaining range)
	Resolution	0.1 hPa
O_2 measurement	Meas. range	0 to 21 Vol. %
	Resolution	0.1 Vol. %
	Accuracy	±0.2 Vol. %
	Adjustment time t_{90}	⟨ 20 s
CO measurement (without H_2 compensation)	Meas. range	0 to 4000 ppm
	Resolution	1 ppm
	Accuracy	±20 ppm (0 to 400 ppm) ±5% of mv (401 to 1000 ppm) ±10% of mv (1001 to 4000 ppm)
	Adjustment time t_{90}	⟨ 60 s
CO measurement (H2-compensated)	Meas. range	0 to 8000 ppm
	Resolution	1 ppm
	Accuracy	±10 ppm or ±10% of mv (0 to 200 ppm) ±20 ppm or ±5% of mv (201 to 2000 ppm) ±10% of mv (2001 to 8000 ppm)
	Adjustment time t_{90}	⟨ 60 s
	Display range	8000 to 30000 ppm (automatic dilution)
testo 330-2 LL only CO measurement (H_2-compensated) solid fuel measurement	Meas. range	0 to 30000 ppm
	Resolution	1 ppm
	Accuracy	±100 ppm (0 to 1000 ppm) ±10% of mv (1001 to 30000 ppm)
Efficiency (ETA)	Meas. range	0 to 120%
	Resolution	0.1%
Flue gas loss	Meas. range	0 to 99.9%
	Resolution	0.1%
CO2 measurement	Display range	0 to CO_2 max
	Resolution	0.1 Vol. %
	Accuracy	±0.2 Vol. %
	Measurement	Digital calculation from O_2
	Adjustment time t_{90}	⟨ 40 s
Option: CO_{low} measurement	Meas. range	0 to 500 ppm
	Resolution	0.1 ppm
	Accuracy	±2 ppm (0.0 to 40.0 ppm) ±5% of mv (remaining range)
	Adjustment time t_{90}	⟨ 30 s
Option: NO measurement	Meas. range	0 to 3000 ppm
	Resolution	1 ppm
	Accuracy	±5 ppm (0 to 100 ppm) ±5% of mv (101 to 2000 ppm) ±10% of mv (2001 to 3000 ppm)
	Adjustment time t_{90}	⟨ 30 s
Ambient CO measurement (with CO probe)	Meas. range	0 to 500 ppm
	Resolution	1 ppm
	Accuracy	±5 ppm (0 to 100 ppm) ±5% of mv (>100 ppm)
	Adjustment time t_{90}	Approx. 35 s
Gas leak measurement for combustible gases (with gas leak detection probe)	Range of indication	0 ... 10,000 ppm CH_4 / C_3H_8
	Signal	Optical display (LED) audible display via buzzer
	Adjustment time t90	⟨ 2 s
Ambient CO_2 measurement (with ambient CO_2 probe)	Meas. range	0 to 1 Vol. % 0 to 10.000 ppm
	Accuracy	±(50 ppm ±2% of mv) (0 to 5000 ppm)
	Adjustment time t_{90}	Approx. 35 s
General Technical Data	Memory	500.000 readings
	Weight	600 g (without rechargeable battery)
	Dimensions	270 x 90 x 65 mm
	Storage temp.	-20 to +50 °C
	Oper. temp.	-5 to +45 °C
	Display	Colour graphic display with 240 x 320 pixels
	Power supply	Rechargeable battery pack 3.7 V / 2.6 Ah Mains unit 6 V / 1.2 A
Warranty		Instrument/probe/gas sensors (O_2, CO) 48 months NO, CO_{low} sensor 24 months Thermocouple and rech. battery 12 months

Quick order fax

Qty.	Measuring instruments without options	Part no.
	testo 330-1 LL flue gas analyzer with long-life gas sensors; BLUE TOOTHfi and H2-compensated CO-sensor, incl. rech. battery and calibration protocol; graphic display	0632 1506 70
	testo 330-2 LL flue gas analyzer with long-life gas sensors; BLUE TOOTHfi and H2-compensated CO-sensor as well as integrated draught and gas zeroing, incl. rech. battery and calibration proto	0632 3347 70

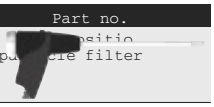
Qty.	Measuring instruments with options	Part no.
	testo 330-1 LL flue gas analyzer with long life gas sensors, inkl. O2-/CO-sensor; without H2-compensation, incl. rech. battery and calibration protocol; with graphic display	0632 1506
	testo 330-2 LL flue gas analyzer with long-life gas sensors and built-in draught and gas zeroing; incl. O2-/CO-sensor; without H2-com pensation, rech. battery and calibration protocol; with graphic dis play	0632 1507
	Option: Fine draught measurement Resolution 0.1 Pa, measure ment range to 100 Pa (instead of the standard draught measure ment)	
	Option fine differential pressure measurement	
	Option: NO sensor, meas. range 0 to 3000 ppm, 1 ppm resolution	
	Option H_2 compensated CO cell	
	Option CO_{low} sensor	
	Option Bluetooth	

Qty.	Sets	Part no.
	testo 330-1 LL The Longlife set for heating constructors and fitters	0563 3371 70
	testo 330-2 LL The Longlife set for customer service and maintenance technicians	0563 3372 70
	testo 330-2 LL The Longlife set for inpectors	0563 3372 72
	testo 330-2 LL The Longlife set for service technicians and and inspectors with fine pressure probe	0563 3372 71

Qty.	Spare gas sensors	Part no.
	O_2 sensor for testo 330-1 LL/-2 LL	0393 0002
	CO sensor (H_2 compensated) for testo 330-1 LL/-2 LL	0393 0051
	CO sensor, H2-compensated, 0 to 8000 ppm for testo 330-1 LL/-2 LL	0393 0101
	Spare COlow sensor, 0 to 500 ppm for testo 330-1 LL/-2 LL	0393 0103
	Spare NO sensor, 0 to 3000 ppm for testo 330-1 LL/-2 LL	0393 0151
	Upgrade NO-sensor; 0 to 3000 ppm; resolution 1 ppm for testo 330-1 LL/-2LL	0554 2151
	Upgrade COlow-sensor; resolution, measuring range 0 -to 500 ppm, resolution 0.1 ppm for testo 330-1 LL/-2 LL	0554 2103
	Retrofit BLUETOOTH interface	0450 3338

Qty.	Accessories	Part no.
	Mains unit international 100-240 V AC / 6,3V DC for mains operation or battery charging in instrument	0554 1096
	Spare battery 2600 mA	0515 0107
	Charger for spare battery	0554 1103
	Testo fast printer IRDA with wireless infrared interface; 1 roll ther mal paper; 4 AA batteries; for printing out measurements on site	0554 0549
	BLUETOOTH printer set with wireless BLUETOOTH interface; incl. 1 roll thermal paper, rechargeable battery and mains unit	0554 0553
	Spare thermal paper for printer; 6 rolls, permanent ink	0554 0568
	Readout adapter for automatic furnaces testo 330-1/-2 LL	0554 1206
	Adhesive pockets testo 330-1/-2 LL for printout, paper barcode la bels; 50 off	0554 0116
	Instrument cleaner, 100 ml	0554 1207
	Smoke tester with oil; soot sheet; for measuring soot in flue gas	0554 1201
	Hose connection set for separate gas pressure measu ment testo 327 / testo 330-LL	0554 1203
	Pressure set for testing gas line testo 330-1/-2 LL version 2010	0554 1213
	Differential temperature set consisting of 2 pipe clamp probes and adapter testo 330-1/-2 LL	0554 1204
	Spare particle filter, 10 off	0554 3385
	easyheat PC analysis software, shows measurement in form of diagrams, tables and manages customer data. Please order USB cable 0449 0047 separately.	0554 3322
	Full version easyheat and easyheat.mobile . Software package for PC and Pocket PC.	0554 1210
	USB connection cable testo 330-1/-2 LL / testo 335 instrument to PC	0449 0047
	ISO calibration certificate/flue gas	0520 0003

Qty.	Cases	Part no.
	Basic system case testo 330-1/-2 LL for analyzer, probes and acces sories	0516 3330
	Basic system case testo 330-1/-2 LL with two levels for analyzer, probes and additional accessories	0516 3331
	Tools system case with tools section without contents, can be in terlocked to basic system case	0516 0329
	Universal system case w/o pockets, can be interlocked to basic system case	0516 0331

Qty.	Probes	Part no.
	Modular flue gas probes, available in 2 lengths, positio ning cone, NiCr-Ni thermocouple, 2.2 m hose and particle filter	
	Flue gas probe; length 180 mm; 8 mm; Tmax. 500 C; TÜV approval; probe stop; NiCr-Ni thermocouple; 2.2 m hose and par ticle filter included	0600 9760
	Flue gas probe; length 300 mm; 8 mm; Tmax. 500 C; TÜV approval; probe stop; NiCr-Ni thermocouple; 2.2 m hose and par ticle filter included	0600 9761
	Flue gas probe; length 180 mm; 6 mm; Tmax. 500 C; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included	0600 9762
	Flue gas probe; length 300 mm; 6 mm; Tmax. 500 C; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included	0600 9763
	Flue gas probe flexible; length 330 mm; Tmax. 180 C; short-term 200 C; bending radius max. 90 C for measuring at inaccessible points; probe stop; NiCr-Ni-thermocouple; 2,2 m hose and particle filter included	0600 9764

Probe accessories		
	Probe shaft; length 180 mm; 8 mm; Tmax. 500 C	0554 9760
	Probe shaft; length 180 mm; 6 mm; Tmax. 500 C	0554 9762
	Probe shaft; length 300 mm; 8 mm; Tmax. 500 C	0554 9761
	Probe shaft with probe stop, length probe shaft 335 mm, Tmax. probe shaft 1000 C, probe shaft 8 mm	0554 8764
	Probe shaft modular, length 700 mm; incl conus; 8 mm; Tmax. 1000 C	0554 8765
	Probe shaft flexible; length 330 mm; 10 mm; Tmax. 180 C	0554 9764
	Probe shaft multi-hole; length 300 mm; 8 mm; for mean CO calculation	0554 3762
	Probe shaft multi-hole; length 180 mm; 8 mm; for mean CO calculation	0554 3763
	Hose extension; 2.8 m; extension cable for probe and analyzer	0554 1212
	Probe stop 8 mm; steel; with spring clamp and handle; Tmax. 500 C	0554 3536
	Probe stop 6 mm; steel; with spring clamp and handle; Tmax. 500 C	0554 3523

Additional probes		
	Dual wall clearance probe for O2 supply air measurement 	0632 1260
	testo 330-1/-2 LL / testo 350-S/-XL gas leak probe; 0 to +10000 ppm CH4 / C3H8 	0632 3330
	testo 330-1/-2 LL / testo 350-S/-XL / testo 400 ambient CO probe, for detecting CO in buildings and rooms; 0 to +500 ppm 	0632 3331
	Ambient CO2 probe 	0632 1240
	Connection cable	0430 0143
	testo 330-1/-2 LL fine pres sure probe 	0638 0330
	Solid fuel set (probe shaft, adapter, upgrade CD) 	0600 9765

Combustion air temperature probe		
	Combustion air temperature probe, immersion depth 500 mm	0600 9791
	Combustion air temperature probe, immersion depth 590 mm	0600 9787
	Combustion air temperature probe, immersion depth 600 mm	0600 9797

Additional temperature probes		
	Mini ambient air probe	0600 3692
	Quick-action surface probe 	0604 0194
	Connection cable	0430 0143

Sender

First name and surname

Street, No.

Company

Postal code, city

Department

Date, signature

0981 7964/msp/AC/A/01.2012