

testo

Committing to the future

NEW

testo 330 LL visualizes measurement data graphically:

Understand flue gas analysis at a glance!



**Now for a special price:
Promotional sets –
assembled especially for you.**

Only valid in the promotional period
from 1. Sept. 2010 to 31. Dec. 2010

More information:
www.testo.XX/fluegas

The new flue gas analyzer testo 330 LL visualizes measurement data for you 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.

Thanks to the new instrument functions, the Testo flue gas analyzers of the new testo 330-LL series now offer you even more professional and reliable support.

The advantages of the new testo 330 LL:

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

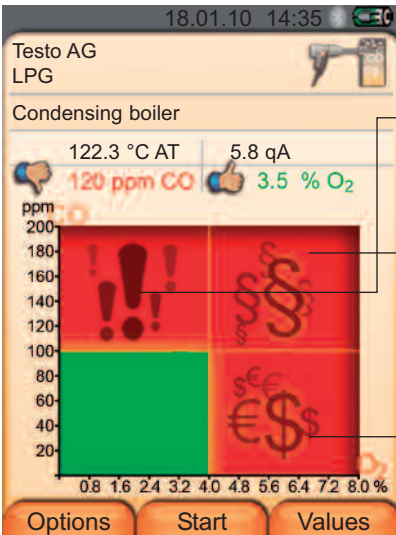


Understand flue gas analysis at a glance...

The new flue gas analyzer testo 330 LL visualizes measurement data for you graphically: Self-explanatory graphic curves as well as easy symbols and clear colour design ease the analysis of the measurement data for you considerably.

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 you whether the CO and O₂ values, as well as other measurement parameters, are in the green, permitted range, and your heating system is thus optimally adjusted. Thumb symbols instantly show you the status of the system. If the CO and O₂ concentrations measured are in the green range, the thumbs point up.

If the recorded measurement values are not within the optimum range, the flue gas matrix shows you 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 O₂ concentrations are considerably too high, the measurement values do not correspond to the prescribed norms and limit values

High loss – the O₂ concentration is over the defined limit value, the heating system is not working efficiently

Flue gas matrix

The measurement menus – the right menu for every measurement task

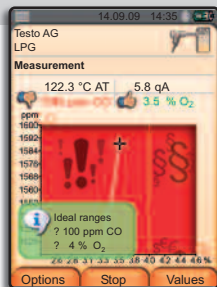
Extended measurement menus offer you an comprehensive analysis of your heating system. These 4 typical measurement tasks illustrate how clearly and unmistakably the measurement data are presented in the display:

Flue gas measurement...

is the central measurement in flue gas analysis. By determining the main values, CO and O₂, 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 you the right presentation of the measurement values, depending on requirements: 4- to 8-line as numerical values, 4 measurement values simultaneously as a line diagram, presentation as a flue gas matrix.

Your advantages thanks to the new flue gas matrix:

- The flue gas matrix acts as an adjustment assistant for the main values O₂ and CO
- The optimization of the adjustment is much easier for you – the interpretation of the numerical values is no longer necessary
- Thanks to the trend display, you can follow the measurement curve exactly, and can determine the measurement point precisely
- The automatic zoom function provides you with a large and clear display of the current detail of the flue gas matrix



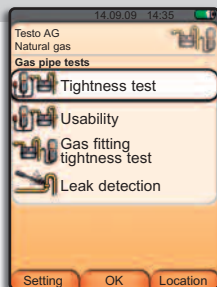
CO concentration is in the range of bad combustion. testo 330 provides info on the ideal range

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.

Your advantages with the new testo 330 LL:

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



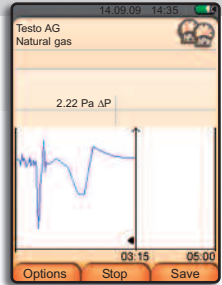
The four measurement for testing the gas pipe

Differential pressure measurement ΔP ...

is conducted after setting up the pressure difference required for the measurement. You can follow the measurement curve directly in the display over a defined period.

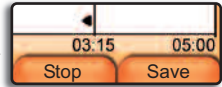
Your advantages with the new testo 330 LL:

- You can follow the measurement curve of the differential pressure measurement directly in the line diagram
- Using the logger function, you can record the measurement curve over a defined period of up to 120 minutes



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

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

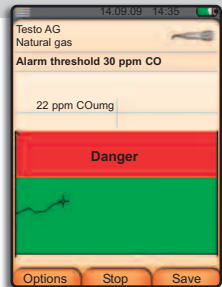


CO environment measurement...

determines the CO concentration in the ambient air. The measurement is presented in a simple graphic – 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.

Your advantages with the new testo 330 LL:

- Easy, graphic presentation of the adjustable alarm thresholds
- You can follow the measurement curve exactly with the help of the trend display
- The cursor marks the current CO concentration for you exactly
- The instrument not only indicates the violation of the alarm threshold optically, it also provides you with an audible alarm



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



testo 330 LL: Longlife measurement for flue gas analysis

Professional flue gas analyzer testo 330 LL

The testo 330 LL is a reliable companion — whether in cases of malfunction or emergency, when monitoring legally set limit values, or in day-to-day maintenance work. It assists in switching quickly between measurement and maintenance. The new, high-resolution colour graphic display enables the graphic processing of the measurement data. The brightly lit display guarantees excellent legibility, even in poor lighting conditions.



New features of the testo 330 LL:

- High-resolution 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 continuous measurement up to 120 minutes
- New measurement menus: Gas pipe test and solid fuel measurement for CO/ O₂
- 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 (O₂/CO)
- At least 1 sensor replacement is saved in the course of a normal working life
- Powerful Li-ion rechargeable battery - life: >10 h with pump running, no memory effect, no deep discharge
- Rechargeable battery can be charged separately and in instrument



Official permit

- TÜV-test according to 1. BImSchV / EN 50379 Part 2 for O₂, °C, hPa and CO with H₂ compensation

* Exceptions: Typical wearing parts:
Battery and thermocouple (1 year), NO-/NO_{low} sensor (2 years), filter



A measuring instrument with great ease of communication:

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

Only for testo 330-2 LL

- Integrated gas and draught zeroing without probe removal: The probe can remain in the chimney during zeroing
- In CO measurement, from 8,000 ppm, automatic dilution is carried out up to min. 30,000 ppm CO

Technical data	testo 330-1 LL	testo 330-2 LL
Temperature	-40 to +1200 °C	
Draught measurement	-9.99 to +40 hPa	
Pressure measurement	0 to 300 hPa	
O ₂ measurement	0 to 21 vol. %	
CO measurement without H ₂ compensation	0 to 4000 ppm	
CO measurement with H ₂ compensation		0 to 8000 ppm from 8000 ppm display range 8,000-30,000 ppm (automatic dilution)
Efficiency testing (Eta)	0 to 120 %	
Exhaust gas loss	0 to 99.9 %	
Option NO ₂ measurement	0 to 300 ppm	
CO ₂ determination display range	0 to CO ₂ max.	
Option NO measurement:	0 to 3000 ppm	
CO environment measurement (with CO probe)	0 to 500 ppm	
General technical data		
Memory	500,000 readings	
Power supply	<ul style="list-style-type: none"> · Li-Ion battery (10 h life with pump running) · Mains unit 100-240 V for mains operation or battery charging in instrument 	

**** Country permits for BLUETOOTH® wireless transfer for the flue gas analyzer testo 330 LL and testo 327-2**

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, Columbia and El Salvador



testo 327: Robust and fast flue gas analyzer

Service flue gas analyzer testo 327

The testo 327 is the service instrument for flue gas analysis. It measures combustive efficiency, °C, O₂, CO₂, CO and flue draught. The measuring instrument stands out thanks to its easy-to-follow menu structure, ergonomic housing and durability.



testo 327

- 4-line segment display and powerful LED backlighting
- Single probe line: one line for three gas paths (temperature, draught, flue gas)
- Fast probe connection: Connect once, no risk of incorrect connection
- User-friendly menu
- Easy IR print-out
- Li-ion rechargeable battery technology: no memory effect, no deep discharge

A measuring instrument like a tool – extremely robust!

- Elastomer protective skin protects from knocks and jars
- Condensate trap integrated in instrument protects from external influences
- Stable probe concept



Official permit

- Tests according to EN 50379 Part 2 for °C, hPa, O₂
- Part 2 additionally also for CO with H₂ compensation

Technical data	testo 327-1	testo 327-2
Temperature	-40 to +600 °C	
Draught measurement	-9.99 to +40 hPa	
Pressure measurement		0 to +200 hPa
O ₂ measurement	0 to 21 vol. %	
CO measurement without H ₂ compensation	0 to 4000 ppm	
CO measurement with H ₂ compensation		0 to 8000 ppm
Efficiency testing (Eta)	0 to 120 %	
Exhaust gas loss	0 to 99.9 %	
Option NO ₂ measurement	0 to 300 ppm	
CO ₂ determination display range	0 to CO ₂ max.	
General technical data		
Memory	20 measurement protocols	
Power supply	Li-ion rechargeable battery	

testo 316-2, gas leak detector

Thanks to its integrated pump, its optical presentation of the detected gas concentrations and the integrated rechargeable battery, the testo 316-2 is extremely user-friendly and ideally suited to fast check measurements.

testo 316-2

- Optical and audible alarm thanks to bar display of increasing and dangerous gas concentrations
- Trend display indicates maximum leakages
- Integrated pump
- Flexible probe for inaccessible areas
- Earphone connection for safe leakage detection in loud surroundings



Technical data testo 316-2

Measuring range

0 to 10,000 ppm CH ₄	
10 ppm to 4.0 Vol. % CH ₄	
10 ppm to 1.9 Vol. % C ₃ H ₈	
10 ppm to 4.0 Vol. % H ₂	
1. Alarm threshold	from 200 ppm CH ₄ 100 ppm C ₃ H ₈ 200 ppm H ₂

2. Alarm threshold	10,000 ppm CH ₄ 5,000 ppm C ₃ H ₈ 10,000 ppm H ₂
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Life	6 h
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Dimensions	190 x 57 x 42 mm
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Promotion period
01.09. - 31.12.10

Promo sets for heating constructors

Set testo 330-2 LL

testo 330-2 LL flue gas analyzer

100-240 V mains unit for mains operation or charging the rechargeable battery in the instrument

Modular flue gas probe, immersion depth 300 mm, \varnothing 8 mm

Combustion air temperature probe, immersion depth 190 mm

Hose connection set for separate gas pressure measurement

Report printer with wireless infrared interface

Flexible probe shaft length 330 mm, \varnothing 10 mm, Tmax 180 °C

Basic system case for instrument, probes and accessories

Order no. xxxxx
0.000.00 EUR

Set testo 327-2

Flue gas analyzer testo 327-2 incl. battery and calibration protocol
Option: CO-H₂ measurement

100-240 V mains unit for mains operation or charging the rechargeable battery in the instrument

Modular flue gas probe, length 300 mm, \varnothing 8 mm, TÜV-tested

Combustion air temperature probe, immersion depth 190 mm

Hose connection set for separate gas pressure measurement

Report printer with wireless infrared interface

Flexible probe shaft length 330 mm, \varnothing 10 mm, Tmax. 180°C

Instrument cleaner 100 ml

Basic system case for instrument, probes and accessories

Order no. xxxxx
0.000.00 EUR

Promo sets 2010
for a special price

Promo sets for fitters

Set testo 327-2

Flue gas analyzer testo 327-2 incl. battery and calibration protocol

Option: CO-H₂ measurement

100-240 V mains unit for mains operation or charging the rechargeable battery in the instrument

Modular flue gas probe, length 300 mm, Ø 8 mm, TÜV-tested

Combustion air temperature probe, immersion depth 190 mm

Dual wall clearance probe for O₂ draught measurement

CO multi-hole probe shaft, length 300 mm, Ø 8 mm

Flexible probe shaft length 330 mm, Ø 10 mm, T_{max.} 180°C

Instrument cleaner 100 ml

Basic system case for instrument, probes and accessories

Order no. xxxxx
0.000.00 EUR

Set testo 330-2 LL

testo 330-2 LL flue gas analyzer incl. rechargeable battery and calibration protocol

100-240 V mains unit for mains operation or charging the rechargeable battery in the instrument

Modular flue gas probe, immersion depth 300 mm, ø 8 mm

CO multi-hole probe shaft suitable for modular flue gas probe

Combustion air temperature probe, immersion depth 190 mm

Hose connection set for separate gas pressure measurement

Flexible probe shaft length 330 mm Dual wall clearance probe

Basic system case for instrument, probes and accessories

Order no. xxxxx
0.000.00 EUR

