testo 330-1

New Measurement Engineering for Heating Fitters and Technicians

Increased safety and more convenience

NEW!

°C

hPa

O_2

CO

NO

ΔP

Increased safety and convenience in flue gas analysis

The new flue gas analyser generation offers the heating fitter and technician everything that he needs to carry his measurement tasks competently.

Increased safety

The new testo 330-1 opens up new opportunities for planning applications. The times in which an analyser suddenly lets the user down belong to the past. testo 330's instrument diagnosis provides you with information about the qualitative status of functions and wearing parts. Using testo 330, it is therefore easier to plan your daily work.

More convenience

With testo 330 you have the practical benefit of Testo's rechargeable batteries which can be recharged outside and inside the analyser. The lithium ion rechargeable battery is very compact and has a lifetime of more than six hours. The rechargeable battery can be changed quickly and easily by the user. The cell can be changed with the same speed and ease as the rechargeable battery.

User-friendly

The new, highly robust fast probe connection for all gas paths eliminates any confusion. The single cable cannot be bent, is indestructible and saves space. The menu-driven operational procedures - in compliance with standards - help you to avoid errors and save you time. The very large display is a perfect additional aid.

4

Long life of wearing parts

The typical service life of the wearing parts for Testo's own measurement cells is now three years. The lithium ion rechargeable batteries - free from the memory effect and total discharge - are currently unbeatable in terms of service life.

5

Faster and more effective

testo 330 is calibrated in 30 seconds. Fuel, for example, can be selected at the same time and the analyser is then ready for use. When measuring differential pressure, differential temperature or gas flow rate just by quickly and simply attaching the probe, the analyser can automatically recognise the job and the corresponding measurement menu appears immediately.

6

Totally robust analyser concept

The new testo 330 not only stands out on account of its distinctive and ergonomic design but also because of its unique robust housing.
The material used functions as a built-in protection from impact and shock. The large backlit display is slightly recessed in the housing for better protection.

The right accessories for every application.

The probes

The robust probe handle which fits nicely in your hand facilitates easy positioning. The probe has a quick connection function ensuring that all gas paths are connected correctly. The particle filter accommodated in the handle blocks out particles efficiently. Additionally, the probes require little or no maintenance and are easy to clean. Different lengths and diameters ensure a high flexibility level for all applications. When changing the probe, the probe shaft is simply attached to the probe handle and clicks into place. The multi-hole and dual wall clearance probe round off our wide range of flue gas probes. The ambient CO probe as well as the CO_2 probe are recognised automatically by the analyser and the measurement results immediately appear in their own graphically supported menu. Furthermore, the user-defined alarm limit is coupled with an audible signal. Measurements can be carried out in their entirety simultaneously with flue gas measurement. The gas leak detection probe which can be attached to the analyser also has a user-defined alarm limit. A warning signal is triggered if the limit is exceeded. The probe is also recognised automatically and the results are shown in a trend graph in their own menu.

The new versatile infrared printer

The new testo printer – cordless with infared interface – saves data for printing. This saves time since the analyser transmits the data in two seconds and is ready for operation immediately after the data is transmitted. The printer can be used anywhere.

New upload and configuration software

When developing the software, user-friendly operation and handling had top priority. A modern USB interface is available for this purpose.
Data cannot only be uploaded, it can also be conveniently filed and managed. It is also possible to control the analyser via software when measuring online.

At a glance

The set for the heating fitter and technician

Testo has put together a special set for heating fitters and technicians. Of course, it is always possible to add to and supplement the set by selecting from the wide range of accessories available.

· testo 330-1 flue gas analyser incl. rech. battery and calibration protocol
· 100-240 V mains unit for mains operation or battery recharging in analyser
· Modular flue gas probe, immersion depth: 300 mm, ø 8 mm
· Combustion air temperature probe, immersion depth: 190 mm
· Hose connection set for separate gas pressure measurement
· IRDA printer
· Basic system case for instrument, probes and accessories

Part no. 0563 3314 70

Always a step ahead

testo 330-1 at a glance

Instrument diagnosis

- Rechargeable battery status display
- Sensor status display
- Monitoring of condensate trap level with „FULL“ message
- Display of pump capacity (l/min.)
- Display of error status incl. description and diagnosis
- Display of last maintenance
- Display of instrument temperature
- Operating hour counter

Additional measurement tasks

- ΔT measurement, flow/return
- Ambient CO measurement
- Ambient CO_2 measurement
- Detection of gas leaks with gas leak detection probe
- ΔP measurement for gas pressure
- Gas/oil flow rate determination

Automatic menu selection

- Recognition of connected probe

Memory management

- 200 measurement data records incl. systems number
- Several measurement data records per system number are possible
- Read in using barcode reader
- IRDA interface for data transfer to PDA/Notebook
- USB interface for data transfer to PC
- ZIV driver for all standard branch software

Additional features

- Interface to Testo Software with analysis and graphics functions and online measurement
- Calculated parameter: Flue gas dewpoint
- Graphics display
- Integrated impact protection with magnet, recessed display
- Protection class: IP40
- Rechargeable battery lifetime > 6 h with pump operating
- Rechargeable battery separate and rechargeable in instrument
- Adjustable alarm thresholds for ambient CO/CO_2 measurement

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	-40 to 40 hPa	
	Accuracy	±0.02 hPa or ±0.5 % of mv (-0.50 to +0,60 hPa)	*
		±0.03 hPa or ±0.5 % of mv (+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 200 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	
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 CO2 max	
	Resolution	0.1 Vol. %	
	Accuracy	±0.2 Vol. %	
	Measurement	Digital calculation from O2	
	Adjustment time t_{90}	< 40 s	
Option: NO_{low} measurement	Meas. range	0 to 300 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 10000 ppm	
	Accuracy	±(50 ppm ±2 % of mv) (0 to 5000 ppm)	
	Adjustment time t_{90}	Approx. 35 s	
General Technical Data	Memory	200 Sites	
	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	Graphics display: 160 x 240 pixel	
	Power supply	Rechargeable block: 3.7 V / 2.2 Ah	
		Mains unit: 6 V / 1.2 A	
	Warranty	Analyser/cells/probe 2 years, rechargeable battery 1 year	

IRDA printer	Printer type	Infrared-controlled thermal printer, adjustable contrast, graphics can be printed
	Reception radius	Max. 2 m
	Dimensions	186 x 91 x 61 mm
	Weight	430 g incl. batteries
	Oper. temp.	0 to +50 °C
	Storage temp.	-40 to +60 °C
	Power supply	4 round cell batteries, 1.5 V or NC rechargeable batteries

*the larger value applies

Fax Order Form

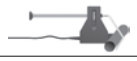
Qty.	testo 330-1 Set: Pro analysis for heating technicians and fitters	Part no.
	· testo 330-1 flue gas analyser incl. rech. battery and calibration protocol · 100-240 V mains unit for mains operation or battery recharging in analyser · Modular flue gas probe, immersion depth: 300 mm, ø 8 mm · Combustion air temperature probe, immersion depth: 190 mm · Hose connection set for separate gas pressure measurement · IRDA printer · Basic system case for instrument, probes and accessories	0563 3314 70

Qty.	Instrument / Options / Upgrades	Part no.
	testo 330-1 flue gas analyser incl. rechargeable battery and calibration protocol	0632 3301
	Option: Fine draught measurement, Resolution 0.1 Pa, measurement range to 100 Pa (instead of the standard draught measurement)	0440 3921
	Option: NO meas. cell, meas. range 0 to 3000 ppm, 1 ppm resolution	On request
	Upgrade: NO meas. cell, meas. range 0 to 3000 ppm, 1 ppm resolution	On request
	Option: NOlow meas. cell, meas. range 0 to 300 ppm, 0.1 ppm resolution	0440 3931
	Upgrade: NOlow meas. cell, meas. range 0 to 300 ppm, 0.1 ppm resolution	0554 3931

Qty.	Accessories	Part no.
	100-240 V mains unit for mains operation or batt. recharging in analyser	0554 1086
	Spare rechargeable battery with recharging station	0554 1087
	IRDA printer	0554 0547
	Spare thermal paper for printer (6 rolls), permanent ink	0554 0568
	Barcode reader to read in customer number on site	0554 0461
	Barcode labels, self-adhesive (1200 off)	0554 0411
	Adhesive pockets (50 off) for printout, paper barcode labels...	0554 0116
	Smoke tester with oil, soot sheet, for measuring soot in flue gas	0554 0307
	Hose connection set for separate gas pressure measurement	0554 1203
	Differential temperature set consisting of 2 pipe clamp probes and adapter	0554 1204
	Spare particle filter (10 off)	0554 3385
	testo 330 software with analysis and graphics functions, online measurement	0554 3332
	USB connection cable, instrument to PC	0449 0047
	ISO calibration certificate/Flue gas	0520 0003

Qty.	Cases	Part no.
	Basic system case for analyser, probes and accessories	0516 3330
	Basic system case with reinforced base for analyser, probes and additional accessories	0516 3331
	Product system case with small plastic boxes without contents, can be interlocked to basic system case	0516 0328
	Tools system case with tools section without content, can be interlocked to basic system case	0516 0329
	Universal system case w/o pockets, can be interlocked to basic system case	0516 0331
	Measurement case (leather) with drawers for instruments and accessories	0516 0303

Qty.	Spare measurement cells	Part no.
	Spare O2 measurement cell	0390 0092
	Spare CO measurement cell (without H2 compensation)	0390 0095
	Spare NOlow measurement cell 0 to 300 ppm	0390 0094
	Spare NO measurement cell 0 to 3000 ppm	On request

Qty.	Probes	Part no.
	Modular flue gas probes, available in 2 lengths, incl. positioning cone, NiCr-Ni thermocouple, 2.2 m hose and particle filter 	
	Flue gas probe 180 mm long, Ø 8 mm, Tmax 500 °C	0600 9760
	Flue gas probe 300 mm long, Ø 8 mm, Tmax 500 °C	0600 9761
	Flue gas probe 180 mm long, Ø 6 mm, Tmax 500 °C	0600 9762
	Flue gas probe 300 mm long, Ø 6 mm, Tmax 500 °C	0600 9763
	Probe accessories	
	Probe shaft 180 mm long, Ø 8 mm, Tmax 500 °C	0554 9760
	Probe shaft 180 mm long, Ø 6 mm, Tmax 500 °C	0554 9762
	Probe shaft 300 mm long, Ø 8 mm, Tmax 500 °C	0554 9761
	Probe shaft 300 mm long, Ø 6 mm, Tmax 500 °C	0554 9763
	Probe shaft 300 mm, Ø 8 mm, Tmax 1000 °C	0554 8764
	Probe shaft 700 mm long, Ø 8 mm, Tmax 1000 °C	0554 8765
	Flexible probe shaft 330 mm long, Ø 10 mm, Tmax 500 °C	0554 9764
	Multi-hole probe shaft, 300 mm long, Ø 8 mm, for mean CO calculation	0554 5762
	Hose extension, 2.80 m, extension cable for probe and analyser	0554 1202
	Cone 8 mm, steel, with grip clamp and grip, Tmax 500 °C	0554 3330
	Cone 6 mm, steel, with spring clamp and grip, Tmax 500 °C	0554 3329
	Additional probes	
	Dual wall clearance probe 	0632 1260
	Gas leak probe, available from December 2004	0632 3330
	Ambient CO probe 	0632 1247
	Ambient CO2 probe 	0632 1240
	Connection cable	0440 0143
	Combustion air temperature probe 	
	Combustion air temperature probe, immersion depth 300 mm	0600 9791
	Combustion air temperature probe, immersion depth 190 mm	0600 9787
	Combustion air temperature probe, immersion depth 60 mm	0600 9797
	Additional temperature probes	
	Mini ambient air probe	0600 3692
	Pipe clamp probe 	0600 4593
	Quick-action surface probe 	0604 0194
	Connection cable	0440 0143

Sender

Name

Company

Department

Address

City

Signature

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