

## Data sheet

testo 330-1/-2 LX

testo 330i LX



# Commercial / light industrial Combustion Analyzers

testo 330-1 LX, testo 330-2 LX  
and testo 330i LX

Measures O<sub>2</sub>, CO (330-1 LX up to 4,000 ppm; 330-2 LX / 330i LX up to 8,000 ppm), Nitric Oxide (optional sensor), diff. pressure, draft, ambient, and flue temperatures

Dilution to 30,000 ppm CO (testo 330-2 LX / testo 330i LX)

Calculates CO<sub>2</sub>, efficiency, excess air, CO air free

Longlife sensors with 4 year warranty

In-stack zeroing (330-2 / 330i only) feature eliminates climbing the stack to remove the probe and zero the instrument before restarting measurement.

testo Bluetooth / App for operation and documentation via smart device



60 Years  
Testo



CO

O<sub>2</sub>

°F

NO

inH<sub>2</sub>O

ΔP

The testo 330-1 LX, testo 330-2 LX and testo 330i LX flue gas analyzers set the standard in flue gas testing. All 330 analyzers feature long life O<sub>2</sub> and CO sensors that come standard with a 4 year warranty. These three measuring instruments meet the highest requirements regarding quality, precision and reliability. Numerous measurement menus and intuitive operation make your daily work easier than ever before.

The comprehensive flue gas probe selection and other accessories from Testo eliminate the need to purchase an additional instrument.

In addition, all 3 combustion analyzers include Bluetooth and a free testo App, enabling wireless connection to your smart device for remote operation and paperless documentation.

## Ordering data

### Commercial / Light Industrial Combustion Analyzer kit testo 330-1 LX



Kit with Printer and Paper shown above

includes testo 330-1 LX with O<sub>2</sub> and CO sensors; Li-Ion battery; AC power adapter; 12" flue gas probe, 1/4" dia., w 7 ft. hose; particle filters (10); certificate of conformity; and case

**Order no. 0563 3371 70**

**Order no. 0563 3371 75** includes printer and 6 rolls paper

**Order no. 400563 3304** includes NO sensor, printer and 6 rolls paper

### Commercial / Light Industrial Combustion Analyzer kit testo 330-2 LX



includes testo 330-2 LX with O<sub>2</sub> and H<sub>2</sub>-compensated CO sensor; Li-Ion battery; AC power adapter; 12" flue gas probe, 5/16" dia., w 7 ft. hose; particle filters (10); certificate of conformity; and case

**Order no. 0563 3372 71**

**Order no. 400563 3372** includes NO sensor

### Bluetooth Combustion Analyzer kit testo 330i LX



includes testo 330i LX with O<sub>2</sub>, CO (H<sub>2</sub> compensated, 30,000 ppm) sensors, flue gas probe (5/16" dia., 12" long, 2 ft hose), Li-Ion rechargeable battery, universal AC adapter, particle filters (pack of 10), TestoFix probe mount, certificate of conformity, case

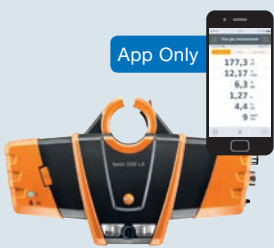
**Order no. 0563 3000 71**

**Order no. 400563 3002** includes NO/NO<sub>x</sub> sensor

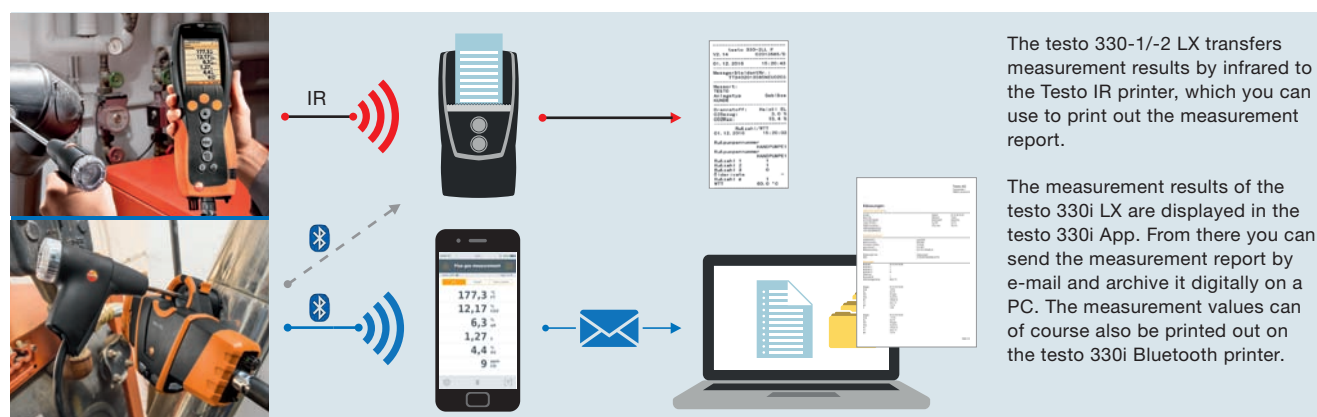
**Order no. 0563 3000 72** does NOT include Flue Gas Probe, TestoFix probe mount, or NO/NO<sub>x</sub> sensor.

REQUIRED - Free testo 330i Combustion App for iOS or Android

## testo 330 flue gas analyzers in comparison

|                                                                         | testo 330-1 LX                                                                    | testo 330-2 LX                                                                            | testo 330i LX                                                                                                                   |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
|                                                                         |  |          |                                              |
| Fuels                                                                   | Oil, gas, solid fuels                                                             | Oil, gas, solid fuels                                                                     | Oil, gas, solid fuels                                                                                                           |
| The most important measurement parameters                               | O <sub>2</sub> , CO, NO                                                           | O <sub>2</sub> , CO H <sub>2</sub> -compensated, NO                                       | O <sub>2</sub> , CO or CO H <sub>2</sub> -compensated, NO                                                                       |
| Measuring ranges CO measurement                                         | 0 to 4,000 ppm                                                                    | H <sub>2</sub> -compensated: 0 to 8,000<br>0 to 30,000 ppm<br>(due to fresh air dilution) | H <sub>2</sub> -compensated: 0 to 30,000 ppm<br>not H <sub>2</sub> -compensated: 0 to 15,000 ppm<br>(due to fresh air dilution) |
| CO measurement H <sub>2</sub> -compensated                              | —                                                                                 | ✓                                                                                         | ✓                                                                                                                               |
| Longlife CO sensor with up to 6 years' lifetime                         | ✓                                                                                 | ✓                                                                                         | ✓                                                                                                                               |
| Flue gas loss measurement                                               | ✓                                                                                 | ✓                                                                                         | ✓                                                                                                                               |
| Draft measurement                                                       | ✓                                                                                 | Simultaneous with flue gas measurement                                                    | Simultaneous with flue gas measurement                                                                                          |
| Differential/gas flow pressure measurement                              | ✓                                                                                 | ✓                                                                                         | ✓                                                                                                                               |
| Error and sensor diagnosis                                              | ✓                                                                                 | ✓                                                                                         | ✓                                                                                                                               |
| Zeroing of the measurement cells and the sensor without probe removal   | —                                                                                 | ✓                                                                                         | ✓                                                                                                                               |
| CO measurement with 15 min mean value calculation on solid fuel systems | —                                                                                 | ✓                                                                                         | —                                                                                                                               |
| Warranty O <sub>2</sub> -/CO sensors                                    | 4 years                                                                           | 4 years                                                                                   | 4 years                                                                                                                         |
| Display                                                                 | High-resolution color graphic display                                             | High-resolution color graphic display                                                     | Smartphone, tablet                                                                                                              |
| Memory                                                                  | 500,000 measurements                                                              | 500,000 measurement protocols                                                             | 500,000 measurement protocols                                                                                                   |
| Bluetooth                                                               | ✓                                                                                 | ✓                                                                                         | ✓                                                                                                                               |
| Software/App                                                            | testo Combustion App /<br>testo EasyHeat                                          | testo Combustion App /<br>testo EasyHeat                                                  | testo 330i App                                                                                                                  |

## Measure more flexibly. Document more easily.



Download **testo Combustion App** and **testo 330i App**  
for free

# Technical data

| Measurement parameter                                                                                            | Measuring range                                                              | Accuracy ( $\pm 1$ digit)                                                                                                                                                                                        | Resolution                                                          | t <sub>90</sub>   |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------|
| <b>Temperature</b>                                                                                               | -40° to 2,192 °F                                                             | $\pm 0.9$ °C (0.0 to 212.0 °F)<br>$\pm 0.5$ % of m.v. (remaining meas. range)                                                                                                                                    | $\pm 0.1$ °F (-40 - 1,832 °F)<br>$\pm 1$ °F (remaining meas. range) |                   |
| <b>Draft measurement</b>                                                                                         | -4.01 to 16 inH <sub>2</sub> O                                               | $\pm 0.008$ inH <sub>2</sub> O or $\pm 5$ % of m.v. (-0.2 to 0.24 inH <sub>2</sub> O)<br>$\pm 0.01$ inH <sub>2</sub> O (0.24 to 1.2 inH <sub>2</sub> O)<br>$\pm 1.5$ % of m.v. (1.2 to 16.00 inH <sub>2</sub> O) | 0.004 inH <sub>2</sub> O                                            |                   |
| <b>Pressure measurement</b>                                                                                      | 0 to 120 inH <sub>2</sub> O                                                  | $\pm 0.2$ inH <sub>2</sub> O (0.0 to 20.0 inH <sub>2</sub> O)<br>$\pm 1$ % of m.v. (20.0 to 40 inH <sub>2</sub> O)<br>$\pm 1.5$ % of m.v. (remaining meas. range)                                                | 0.04 inH <sub>2</sub> O                                             |                   |
| <b>O<sub>2</sub> measurement</b>                                                                                 | 0 to 21 vol. %                                                               | $\pm 0.2$ vol. %                                                                                                                                                                                                 | 0.1 vol. %                                                          | < 20 sec          |
| <b>CO measurement</b><br>(without H <sub>2</sub> compensation)                                                   | 0 to 4,000 ppm                                                               | $\pm 20$ ppm (0 to 400 ppm)<br>$\pm 5$ % of m.v. (401 to 2,000 ppm)<br>$\pm 10$ % of m.v. (2,001 to 4,000 ppm)                                                                                                   | 1 ppm                                                               | < 60 sec          |
| <b>CO measurement</b><br>(H <sub>2</sub> -compensated)                                                           | 0 to 8,000 ppm                                                               | $\pm 10$ ppm or $\pm 10$ % of m.v. (0 to 200 ppm)<br>$\pm 20$ ppm or $\pm 5$ % of m.v. (201 to 2,000 ppm)<br>$\pm 10$ % of m.v. (2,001 to 8,000 ppm)                                                             | 1 ppm                                                               | < 60 sec          |
| <b>CO measurement</b> (H <sub>2</sub> -compensated) (testo 330-2 LX with automatic dilution)                     | 0 to 30,000 ppm                                                              | $\pm 100$ ppm (0 to 1000 ppm)<br>$\pm 10$ % of m.v. (1001 to 30,000 ppm)                                                                                                                                         | 1 ppm                                                               |                   |
| <b>CO measurement</b> (H <sub>2</sub> -compensated) with activated measuring range extension (testo 330i LX)     | 0 to 30,000 ppm                                                              | $\pm 200$ ppm or $\pm 20$ % of m.v. (0 to 30,000 ppm)                                                                                                                                                            | 1 ppm                                                               |                   |
| <b>CO measurement</b> (not H <sub>2</sub> -compensated) with activated measuring range extension (testo 330i LX) | 0 to 15,000 ppm                                                              | $\pm 200$ ppm or $\pm 20$ % of m.v. (0 to 15,000 ppm)                                                                                                                                                            | 1 ppm                                                               |                   |
| <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><br>(digital calculation from O <sub>2</sub> )                                | Display area<br>0 to CO <sub>2</sub> max                                     | $\pm 0.2$ vol. %                                                                                                                                                                                                 | 0.1 vol. %                                                          | < 40 sec          |
| <b>Option NO measurement</b>                                                                                     | 0 to 3,000 ppm                                                               | $\pm 5$ ppm (0 to 100 ppm)<br>$\pm 5$ % of m.v. (101 to 2,000 ppm)<br>$\pm 10$ % of m.v. (2,001 to 3,000 ppm)                                                                                                    | 1 ppm                                                               | < 30 sec          |
| <b>Ambient CO<sub>2</sub> measurement</b><br>(with CO probe)                                                     | 0 to 500 ppm                                                                 | $\pm 5$ ppm (0 to 100 ppm)<br>$\pm 5$ % of m.v. (>100 ppm)                                                                                                                                                       | 1 ppm                                                               | approx.<br>35 sec |
| <b>Gas leak measurement for combustible gases</b><br>(with gas leak detector probe)                              | Display range 0 to 10,000 ppm CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub> | Signal visual indication (LED)<br>audible indication by buzzer                                                                                                                                                   |                                                                     | < 2 sec           |
| <b>Ambient CO<sub>2</sub> measurement</b><br>(with ambient CO <sub>2</sub> probe)                                | 0 to 1 vol. %<br>0 to 10,000 ppm                                             | $\pm 50$ ppm or $\pm 2$ % of m.v. (0 to 5,000 ppm)<br>$\pm 100$ ppm or $\pm 3$ % of m.v. (5,001 to 10,000 ppm)                                                                                                   |                                                                     | approx.<br>35 sec |
| <b>Differential pressure, flow velocity and temperature</b><br>(via fine pressure probe)                         | $\pm 10,000$ inH <sub>2</sub> O                                              | $\pm 0.001$ inH <sub>2</sub> O (0 to 0.04 inH <sub>2</sub> O) plus $\pm 1$ digit<br>$\pm 3$ % of m.v. (0.04 to 40 inH <sub>2</sub> O) plus $\pm 1$ digit                                                         |                                                                     |                   |
|                                                                                                                  | 0.15 to 3 m/s<br>max. -40 to 2,192 °F<br>(dependent on probe)                | $\pm 0.9$ °F (-40 to 212 °F)<br>$\pm 0.5$ % of m.v. (remaining meas. range) plus probe accuracy                                                                                                                  | 0.1 m/s<br>0.1 °F                                                   |                   |

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Subject to change without notice.

## General technical data

|                               |                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------|
| Compatibility (testo 330i LX) | requires iOS 7.1 or newer / Android 4.3 or newer<br>requires mobile end device with Bluetooth 4.0 |
| Weight (without battery)      | testo 330i LX: 1.58 lbs.<br>testo 330-1/-2 LX: 1.32 lbs                                           |
| Dimensions                    | testo 330i LX: 10.6 x 6.3 x 2.2 in. /<br>testo 330-1/-2 LX: 10.6 x 3.5 x 2.5 in.                  |
| Storage temperature           | -4 to 122 °F                                                                                      |
| Operating temp.               | 23 to 113 °F                                                                                      |

|                              |                                                                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Power supply                 | Rechargeable battery pack 3.7 V / 2.6 Ah;<br>AC Power Supply 6 V / 1.2 A                                                               |
| Memory                       | 500,000 readings                                                                                                                       |
| Display<br>testo 330-1/-2 LX | Color graphic display 240 x 320 Pixel                                                                                                  |
| Warranty                     | Gas sensors (O <sub>2</sub> , CO) 48 months<br>Instrument/probe 24 months<br>NO sensor 24 months<br>Thermocouple and battery 12 months |



To pair the combustion analyzer to your smart device, turn on the Bluetooth feature and run the testo Combustion app. Once the app is running, select the correct serial number of your instrument in the App, and the device will pair automatically.



testo Combustion and testo 330i App  
free download

