

# Advanced Test Equipment Corp. www.atecorp.com 800-404-ATEC (2832)

#### **Data sheet**

# Combustion analyzer

### testo 300 truly smart combustion measurement.

Large scratch-resistant 5" HD display with smart-touch operation and replaceable protective film

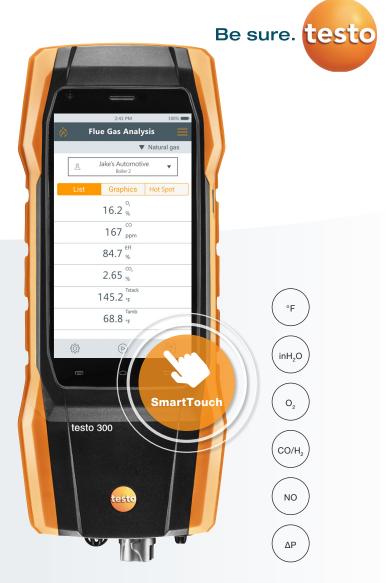
Stored, intuitive menus for all relevant measurements

4 strong magnets with rubber coating for material friendly mounting

Ready to measure at the touch of a button in standby mode

Optional: extremely durable O<sub>2</sub> sensor and automatic dilution up to 30,000 ppm CO

E-mailing of reports directly on site



Truly smart combustion analysis: that is what the testo 300 stands for. The compact combustion analyzer is fully operated via the large touch display - you can see all the measuring values without scrolling. The scratch-resistant screen in embedded in a robust housing which remains reliable even in tough day-to-day working conditions. Menus for the most important measurements are already stored in the testo 300 and reliably guide you through the relevant application. The combustion analyzer is not familiar with waiting times or start-up phases, it is immediately ready to go at the touch of a button in standby mode. Documentation is dealt with just as quickly – with the testo 300, reports can be created and sent directly on site, with WiFi connection The testo 300 is available with a 2-year or 4-year warranty. There is also an optional NOx sensor available (with 2 year sensor warranty).

The  $O_2$  sensor, is extremely durable and in Longlife models, an optional automatic dilution up to a maximum of 30,000 ppm CO protects the CO sensor.



## Truly smart: The new testo 300 combustion analyzer.

Providing reliably accurate results is not enough.

A contemporary combustion analyzer also makes all work steps as easy as possible for you, both before and after the measurement, as well as in terms of the measurement itself. The user-friendly testo 300 was developed with precisely this objective in mind. It is not just decades of experience in measuring technology. With smart-touch operation, robust construction and e-mailing of reports, the testo 300 will quickly become your indispensable companion for all measuring tasks involving heating.



#### **Operation via smart-touch**

The smart-touch display responds immediately without any delay. That allows intuitive operation – just as easy as on your smartphone.

#### E-mailing of reports

The testo 300 enables the convenient creation of documentation directly on site. And the dictation function even saves you typing in the process. You can send reports to the office or customers immediately via WiFi.

#### Keep an eye on all the measuring values

You can see all the system's parameters right away on the large 5" HD display.

#### Get the result faster

Clearly structured menus for all relevant measurements are already stored in the measuring instrument and guide you efficiently through the application.

#### Ready to use right away

No more waiting time. In standby mode, the testo 300 is ready to measure at the touch of a button.

#### Completely worry-free

The testo 300 has quality sensor technology, measures high CO values up to 30,000 ppm and comes standard with the longest warranty in the industry.



#### **Customers / Measuring site**

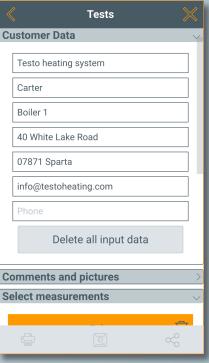
Integrated address book with details of the relevant heating system (e.g. manufacturer, system type, system name, serial no., fuel, etc.).



#### **Professional documentation**

Create measurement reports with all the information about readings, customers and heating systems directly on site, add comments to them, have the reports confirmed by the customer's signature and send the tests. You can also store your company logo. All PDF reports with all the important information are also saved in the instrument, so that they are always readily available.

Customer / Measuring sites	Measurement Types	<	Te
Q	Flue Gas Analysis	Customer I	Data
+ New customer / measuring site	Draft-Measurement		ating syste
	CO Air free Hot Spot	Carter Boiler 1	
Jake's Automotive Johnson Heating	Smoke Number		Lake Road
Sparta	Differential pressure	07871 Sp	oarta
Testo Inc.	Differential temperature	info@test	toheating.
Testo heating system	Cancel	Phone	
	Tstack °F	L L	Delete all
	<sup>Int.</sup> 73.6 <sup>Tamb</sup> ∘ <sub>F</sub>	Comments	and pict





#### Intuitive measurement menus

Clearly structured and explicit menus for all applications involving heating systems are already stored in the testo 300. This allows you to do your jobs even more efficiently.

ExAir %

[1]



# Be sure. testo

## **Combustion Analyzer kits**

		testo 300 kits		
	testo 300 Residential / Commercial Kit	testo 300 Residential / Commercial Kit with printer		
Order no.	0564 3002 82	0564 3002 83	€ 10000 2. 100000000 17.2 3 %	
Instrument, including power supply	O <sub>2</sub> , CO, 4,000 ppm	O <sub>2</sub> , CO, 4,000 ppm	12,17 % 6,30 % 1,27 ' 4,40 %	
Probe, including 10 spare filters	Compact flue gas probe (12 inch, Ø 0.25 inch)	Compact flue gas probe (12 inch, Ø 0.25 inch)	9 ppm ©	
Printer, including spare paper	•		16510 300	
testo EasyHeat PC software				testo
Instrument bag				
Warranty	2 years	2 years	Illustration differs depending	on kit type
	te	sto 300 Longlife kit	S	
Order no.	testo 300 Residential / Commercial Kit with printer 0564 3004 79	testo 300 Commercial Kit 0564 3004 92	testo 300 Commercial Kit with printer 0564 3004 93	testo 300 Commercial Kit with NO and printer 0564 3004 94
Instrument, including power supply	O <sub>2</sub> , CO, 4,000 ppm	O <sub>2</sub> , CO, 4,000 ppm, NO sensor - can be retrofitted	O <sub>2</sub> , CO, 4,000 ppm, NO sensor - can be retrofitted	O <sub>2</sub> , CO, 4,000 ppm, NO sensor installed
Probe, including 10 spare filters	Compact flue gas probe (12 inch, Ø 0.25 inch)	Compact flue gas probe (12 inch, Ø 0.25 inch)	Modular flue gas probe (12 inch, Ø 0.25 inch)	Modular flue gas probe (12 inch, Ø 0.25 inch)
Printer, including spare paper		8		
testo EasyHeat PC software				
Instrument case				
Warranty (excludes NO sensor)	4 years	4 years	4 years	4 years

### testo 300 Longlife kits

Order no.	testo 300 Commercial / Industrial Kit 0564 3004 95	testo 300 Commercial / Industrial Kit with printer 0564 3004 96
Instrument, including power supply	O <sub>2</sub> , CO, 30,000 ppm, NO Sensor - can be retrofitted	O <sub>2</sub> , CO, 30,000 ppm, NO sensor installed
Probe, including 10 spare filters	Modular flue gas probe (12 inch, Ø 0.25 inch)	Modular flue gas probe (12 inch, Ø 0.25 inch)
Printer, including spare paper	8	
testo EasyHeat PC software		
Instrument case	$\checkmark$	
Warranty (excludes NO sensor)	4 years	4 years



Illustration differs depending on kit type



## Reference guide.

	Previous	New		
	testo 320	testo 300 Combustion Analyzer	Sensor warranty	
And Andrew Control of	<b>testo 320 – Combustion analyzer kit</b> O2, CO (0-4,000 ppm), hard case Part No. 0563 3220 70	<b>testo 300 – Residential / Commercial Combustion Analyzer</b> O2, CO (0-4,000 ppm), soft case Part No. 0564 3002 82	2 years	
	<b>testo 320 – Combustion analyzer kit</b> O2, CO (0-4,000 ppm), hard case, printer Part No. 0563 3220 71	testo 300 - Residential / Commercial Combustion Analyzer with printer O2, CO (0-4,000 ppm), soft case, printer Part No. 0564 3002 83	2 years	
	<b>testo 320 – Combustion analyzer kit</b> O2, CO (0-4,000 ppm), hard case, printer Part No. 0563 3220 71	testo 300 LL – Residential / Commercial Combustion Analyzer with printer O2, CO, hard case, printer Part No. 0564 3004 79	4 years	

	testo 330-1	testo 300 Longlife Combustion Analyzer	Sensor warranty	
1000 € 300 1/2	<b>testo 330-1 LX – Commercial combustion analyzer kit 1</b> O2, CO (0-4,000 ppm), 3rd socket, hard case Part No. 0563 3371 70	<b>testo 300 LL - Commercial Combustion Analyzer</b> O2, CO (0-4,000 ppm), 3rd socket, hard case Part No. 0564 3004 92	4 years	
	testo 330-1 LX – Commercial combustion analyzer kit 2 with printer O2, CO (0-4,000 ppm), 3rd socket, hard case, printer Part No. 0563 3371 75	testo 300 LL - Commercial Combustion Analyzer with printer O2, CO (0-4,000 ppm), 3rd socket, hard case, printer Part No. 0564 3004 93	4 years	
	testo 330-1 LX – Commercial combustion analyzer kit 4 with printer and NOx measurement O2, CO (0-4,000 ppm), NOx sensor, hard case and printer Part No. 400563 3304	testo 300 LL – Commercial Combustion Analyzer with printer and NOx measurement O2, CO (0-4,000 ppm), NOx sensor, hard case and printer Part No. 0564 3004 94	4 years (NO sensor 2 years)	
			Concer	

	testo 330-2	testo 300 Longlife Combustion Analyzer	Sensor warranty	
200 2012 7735 12275 12275 1247	testo 330-2 LX – Industrial combustion analyzer Kit 1 O2, CO (0-8,000 ppm w/ dilution to 30,000 ppm), 3rd socket, hard case Part No. 0563 3372 71	testo 300 LL – Commercial / Industrial Combustion Analyzer O2, CO (0-8,000 ppm w/ dilution to 30,000 ppm), 3rd socket, hard case Part No. 0564 3004 95	4 years	
	testo 330-2 LX – Industrial combustion analyzer Kit 2 with NOx measurement O2, CO (0-8,000 ppm w/ dilution to 30,000 ppm), NOx sensor, hard case Part No. 400563 3372	testo 300 LL – Commercial / Industrial Combustion Analyzer with printer and NOx measurement O2, CO (0-8,000 ppm w/ dilution to 30,000 ppm), NOx sensor, hard case, printer Part No. 0564 3004 96	4 years (NO sensor 2 years)	

Spare gas sensors/retrofitting	Order no.	
O <sub>2</sub> sensor, with 4-year warranty	0393 0023	
CO sensor (without H <sub>2</sub> compensation), with 4-year warranty	0393 0051	
CO sensor (without H <sub>2</sub> compensation), with 2-year warranty	0393 0053	
CO sensor, H <sub>2</sub> -compensated, with 4-year warranty	0393 0101	
CO sensor, H2-compensated, with 2-year warranty **SPECIAL ORDER**	0393 0105	
NO sensor with 2-year warranty	0393 0151	
Accessories	Order no.	
testo Bluetooth <sup>®</sup> printer, including 1 roll of thermal paper, rechargeable battery and power supply, for instruments including the testo 300, testo 330i and testo 440	0554 0621	
Spare thermal paper for printer, permanent ink	0554 0568	
Smoke tester, including oil and soot papers for measuring soot in flue gas, excluding cone (order no. 0554 9010)	0554 0307	
Filter paper for determining soot number, 40 measuring strips for approx. 200 measurements	0554 0308	
USB power supply, including USB cable	0554 1106	
testo EasyHeat PC software for displaying measurement procedures as diagrams, tables and for customer data management.	0554 3332	
ISO calibration certificate for flue gas	0520 0003	
Cases and carrying bags	Order no.	
Instrument case (height: 5.11 inch (130 mm)) for instrument, probes and accessories	0516 3300	
Instrument case with double base (height: 7.09 (180 mm)) for instrument, probes and accessories	0516 3301	
testo 300 instrument bag with carrying strap	0516 3001	

## **Probes and accessories**

Cone with spring clamp and handle option, Tmax. 392  $^{\circ}\text{F},$  Teflon material, Ø 0.3125 inch

Modular flue gas probes	Order no.
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 7.2 feet; dirt filter; length 7 inch; $\emptyset$ 0.3125 inch; Tmax. 932 °F	0600 9760
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 7.2 feet; dirt filter; length 12 inch; Ø 0.3125 inch; Tmax. 932 °F	0600 9761
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 7.2 feet; dirt filter; length 7 inch; Ø 0.25 inch; Tmax. 932 °F	0600 9762
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 7.2 feet; dirt filter; length 12 inch; Ø 0.25 inch; Tmax. 932 °F	0600 9763
Flexible flue gas probe; thermocouple NiCr-Ni; hose 7.2 feet; dirt filter; length 13 inch; Ø .35 inch; Tmax. 356 °F; short-term 392 °F; ideal for measurements in difficult-to-access locations	0600 9770
Compact flue gas probes	Order no.
Compact basic flue gas probe, 7 inch, Ø 0.25 inch, Tmax. 932 °F	0600 9740
Compact basic flue gas probe, 12 inch, Ø 0.25 inch, Tmax. 932 °F	0600 9741
Probe accessories and probe filter	Order no.
Modular probe shaft; length 7 inch, Ø 0.3125 inch, Tmax. 932 °F	0554 9760
Modular probe shaft; length 12 inch, Ø 0.3125 inch, Tmax. 932 °F	0554 9761
Probe shaft; length 13.2 inch; including cone; Ø 0.3125 inch; Tmax. 1,832 °F	0554 8764
Flexible probe shaft; length 13 inch; Ø 0.35 inch; Tmax. 356 °F	0554 9770
Multi-hole probe shaft; length 12 inch; Ø 0.3125 inch; for CO mean value calculation	0554 5762
Multi-hole probe shaft; length 7 inch; Ø 0.3125 inch; for CO mean value calculation	0554 5763
Hose extension; 9 feet; probe-instrument extension tube	0554 1202
Spare dirt filter, modular probe, 10 count	0554 3385
Spare dirt filter, compact probe, 10 count	0554 0040
Cone with spring clamp and handle option, Tmax. 392 $^\circ$ F, Teflon material, Ø 0.25 inch	0554 3327

More probes and accessories	Order no.
Dual wall clearance probe for $O_2$ air input measurement	0632 1260
Ambient CO probe (digital), fixed cable	0632 1272
Solid fuel kit, including probe shaft, adapter	0600 9765
Hose connection kit with adapter for testo 300 for separate gas pressure measurement	0554 1203
Pressure connection hose, single, Ø 0.15 inch / 0.24 inch	0554 0449
Pressure test kit for gas pipe test, testo 300, testo 330-1/-2 LL version 2010	0554 1213

Temperature probes	Order no.
Combustion air temperature probe with 7.5 inch probe shaft incl. cone and magnets for attachment	0600 9799
Clamp probe with NTC temperature sensor for measurements on pipes (Ø 0.25 inch to 1.38 inch)	0615 5505
Pipe wrap probe (NTC) for pipe diameters from 0.2 inch to 2.65 inch	0615 5605
Waterproof immersion/penetration probe with NTC temperature sensor	0615 1212
Temperature probe with Velcro (NTC)	0615 4611



0554 3328



## **Technical data**

Measurement parameter	Measuring range	Accuracy (±1 digit)	Resolution
O <sub>2</sub> measurement	0 to 21 vol. %	±0.2 vol. %	0.1 vol. %
CO measurement (without $H_2$ compensation)	0 to 4,000 ppm	±20 ppm (0 to 400 ppm) ±5% of m.v. (401 to 2,000 ppm) ±10% of m.v. (2,001 to 4,000 ppm)	1 ppm
<b>CO</b> measurement (with $H_2$ compensation)	0 to 8,000 ppm	±10 ppm or ±10% of m.v. (0 to 200 ppm) ±20 ppm or ±5% of m.v. (201 to 2,000 ppm) ±10% of m.v. (2,001 to 8,000 ppm)	1 ppm
CO measurement **SPECIAL ORDER**	0 to 15,000 ppm	±200 ppm or ±20% of m.v.	1 ppm
(without H <sub>2</sub> compensation and dilution)			
CO measurement (with H <sub>2</sub> compensation and dilution)	0 to 30,000 ppm	±100 ppm or ±10% of m.v.	1 ppm
NO measurement	0 to 3,000 ppm	±5 ppm (0 to 100 ppm) ±5% of m.v. (101 to 2,000 ppm) ±10% of m.v. (2,001 to 3,000 ppm)	1 ppm
Efficiency testing (Eta)	0 to 120%		0.1%
Flue gas loss	0 to 99.9%		0.1%
$CO_2$ determination (digital calculation from $O_2$ )	Display range 0 to CO <sub>2</sub> max.	±0.2 vol. %	0.1 vol. %
Draft measurement	-10 to 40 inH <sub>2</sub> O	±0.002 inH <sub>2</sub> O (0 to ±0.04 inH <sub>2</sub> O) ±0.02 hPa (±0.04 to ±1.2 inH <sub>2</sub> O) ±1.5% of m.v. (remaining meas. range)	0.0001 inH <sub>2</sub> O
Pressure measurement	-40 to 80 inH <sub>2</sub> O	±0.2 inH <sub>2</sub> O (0 to ±20 inH <sub>2</sub> O) ±1% of m.v. (±20.1 to ±40 inH <sub>2</sub> O) ±1.5% of m.v. (remaining meas. range)	0.01 inH <sub>2</sub> O
Temperature (instrument)	-40 to 2,192 °F	±1 °F (32 to 212 °F) ±0.5 % of m.v. (remaining meas. range)	0.1 °F (-40 to 1,831.82 °F) 1 °F (remaining meas. range)
Ambient CO measurement (internal/flue gas probe)	0 to 2,000 ppm	±10 ppm (0 to 100 ppm) ±10 % of m.v. (101 to 2,000 ppm)	1 ppm
Ambient CO measurement (external with CO probe)	0 to 500 ppm	±3 ppm (0 to 29 ppm) ±10 % of m.v. (30 to 500 ppm)	1 ppm

#### General technical data

Storage temperature	-4 to 122 °F	
Operating temperature	-23 to 113 °F	
Charging temperature	32 to 113 °F	
Humidity application range	15 to 90 %RH, not condensing	
Power supply	Rechargeable battery, USB power supply	
Rechargeable battery life	10 hrs	
Protection class	IP 40	
Memory	1 million measuring values	
Display	5.0" touch display, HD 1280*720 pixels, IPS (160 k)	
Weight	Approx. 1.76 lbs (0.8 kg)	
Dimensions	L: 9.6 inch (244 mm) (including probe connection) H: 2.32 inch (59 mm) W: 3.86 inch (98 mm)	
testo 300 warranty	Instrument/probe/gas sensors	
,	O <sub>o</sub> , CO sensor 24 months	
	Thermocouple and rechargeable battery 12 months	
testo 300 Longlife warranty	Instrument/probe/gas sensors	
, , , , , , , , , , , , , , , , , , ,	O <sub>2</sub> , CO sensor 48 months	
	NO sensor 24 months	
	Thermocouple and rechargeable battery 12 months	
Warranty terms	https://www.testo.com/auarantee	



### Don Wolf & Associates, Inc

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