

testo 350

Portable Emission Analyzer



Recommended
for testing
US EPA methods
CTM-030 & CTM-034
& ASTM D5622



US EPA
Advanced Testing
Program

Ideal for testing:
Engines • Furnaces • Diesels • Boilers • Turbines
SCR • US EPA & State Compliance • Low NO_x



www.testo350.com

The World's Most Advanced Emission Analyzer

Testing Simplified

Ask any one of the hundreds of satisfied customers, and they will tell you, the testo 350 is simply the only choice. The 350 is high performance sensors, complete gas conditioning and intuitive operation, all seamlessly integrated into a lightweight emission monitoring solution. For compliance testing or combustion tuning, the testo 350 does it all, with ease.

It's about the sensors!

For years Testo's R&D has proven that all sensors are not created equal. The 350's exclusive sensor design is the foundation for high accuracy emission monitoring.

- Greater sensor accuracy with **NEW** generation **Low NO_x** and **Low CO** sensors (1.0 ppm resolution)
- Wide range **CO₂** measurement using Testo's advanced **NDIR** technology
- Revolutionary **continuous temperature compensation** and control
- Innovative **dilution system** for the widest CO testing range and longest sensor life

It's Testo's technical innovation that sets the testo 350 apart.

- Exclusive sensor design
- High velocity gas paths
- Miniaturized chiller system
- Rugged materials
- Application know-how

Expand your testing imagination with some of the many outstanding capabilities!

- Extensive remote control capabilities
- Comprehensive combustion and environmental calculations
- Automatic testing programs for short-term tests or long-term monitoring
- On-board memory to 250,000 readings
- Extensive data management including advanced bus system for system wide multi-unit logging



Sensor replacement takes seconds with pre-calibrated plug and play sensors



NO_x testing simplified!



Technical Information

	O ₂	CO	CO LOW	NO	NO LOW	NO ₂	SO ₂	H ₂ S	C _x H _y
Range	0 to 25% vol.	0 to 10,000 ppm H ₂ comp.	0 to 500 ppm H ₂ comp.	0 to 3,000 ppm	0 to 300 ppm	0 to 500 ppm	0 to 5,000 ppm	0 to 300 ppm	0.01 to 4%
Accuracy	< 0.2% of m.v.	< 5 ppm 0 to 99 ppm < 5% of m.v. 100 to 2,000 ppm < 10% of m.v. 2,001 to 10,000 ppm	< 2 ppm 0 to 39.9 ppm < 5% of m.v. 40 to 500 ppm	< 5 ppm 0 to 99 ppm < 5% of m.v. 100 to 2,000 ppm < 10% of m.v. 2,001 to 3,000 ppm	< 2 ppm 0 to 39.9 ppm < 5% of m.v. 300 ppm	< 5 ppm 0 to 99 ppm < 5% of m.v. 500 ppm	< 5 ppm 0 to 99 ppm < 5% of m.v. 100 to 2,000 ppm < 10% of m.v. 2,001 to 5,000 ppm	< 2 ppm 0 to 39.9 ppm < 5% of m.v. 40 to 300 ppm	< 400 ppm 100 to 4,000 ppm < 10% of m.v. > 4,000 ppm
Resolution	0.1 vol. %	1 ppm	0.1 ppm	1 ppm	0.1 ppm	0.1 ppm	1 ppm	0.1 ppm	0.001 vol. % =10 ppm
Resp. Time	20 s (t95)	40 s (t90)	40 s (t90)	30 s (t90)	30 s (t90)	40 s (t90)	30 s (t90)	35 s (t90)	40 s (t90)

	CO ₂	CO ₂	DIFFER. PRESS. 1	DIFFER. PRESS. 2	EFFICIENCY	FLOW VELOCITY	CURRENT VOLTAGE	RPM	TEMP.
Range	0 to 50% vol.	0 - CO ₂ max vol. %	±80" H ₂ O	±16" H ₂ O	0 to 100%	0 to 7900 ft/min	0 to 20 mA 0 to 10 V	20 to 20,000 rpm	-40 to 2192°F
Accuracy	±0.3% vol. +1% of m.v. (0 to 25% vol.) ±0.5% vol. +1.5% of m.v. (> 25 to 50% vol.)	Calculated from O ₂	< 1% m.v. -20" to -80" H ₂ O < 1% m.v. +20" to +80" H ₂ O < 0.5% -19" to +19" H ₂ O	< 1% m.v. -16" to +1.2" H ₂ O < 1% m.v. +16" to +1.2" H ₂ O < 0.5% -1.2" to +1.2" H ₂ O			±0.04 mA ±0.01 V		< 33°F -40 to +212°F < 0.5% m.v. +212 to +2,192°F
Resolution	0.01% vol. (0 to 25% vol.) 0.01% vol. (> 25% vol.)	0.01 vol. %	0.01" H ₂ O	0.01" H ₂ O	0.1%	10 ft/min	±0.01 mA ±0.01 V	1 ppm	

¹Lower explosion limit (LEL must be considered) ²The HC module is factory-adjusted to methane. The user can adjust the module to another gas. *All information subject to change without notice.

	METHANE	PROPANE	BUTANE
Range¹	0.001 to 4%	0.01 to 2.1%	0.01 to 1.8%
Accuracy	See C _x H _y	See C _x H _y	See C _x H _y
Resolution	See C _x H _y	See C _x H _y	See C _x H _y
Min. O₂ Required In Stack Gas	2% + (2x m.v. Methane)	2% + (5x m.v. Propane)	2% + (6.5x m.v. Butane)
Response Factor²	1	1.5	2

Weight: 9 lbs

Dimension:
16" x 11" x 4"

Storage Temp.:
-4° to 122°F

Operating Temp.:
20° to 115°F

Material: ABS

Memory:
250,000 Readings

Power Required:
110 - 230, 90 - 260 V or rechargeable battery
NiMH 2-3 hrs or use any DC current

Max. Positive Pressure: 20" H₂O

Max. Negative Pressure: 80" H₂O

CO Dilution:

Factors: 0, 2, 5, 10, 20, 40

Accuracy: Readings + 2%

Gas: Fresh Air or N₂

Warranty Information:

Analyzer: 2 years

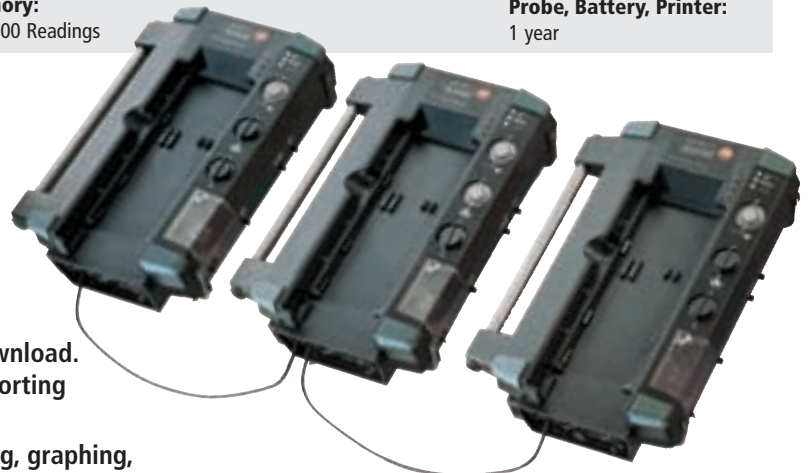
O₂ cell: 1.5 years

CO, NO, NO₂, SO₂, C_xH_y,

H₂S: 1 year

Probe, Battery, Printer:

1 year



...multi-analyzer control!

Simple touch screen option enhances the intuitive operation



Software options:

- **Excel-based "add in"** - real time logging or download. Ideal for USEPA/State reporting CTM-030 & CTM-034
- **Comsoft**, real time logging, graphing, complete analyzer control, standard report templates and...

testo 350

Ordering Information



Standard Kit Parts:

- Remote control unit
- 12" probe with 7 ft. or 16 ft. hose
- Delta pressure sensors with auto flow calculation
- 6 ft. or 16 ft. control cable
- Memory to 256K values
- CO overage protection with CO rinse
- Sensor temperature and sample flow rate
- Sensor temperate control
- Differential temperature
- Analyzer case
- Instruction manual, extra filters and paper
- Certificate of calibration

Some Kit Options and Upgrades:

- CO dilution system
- Touch screen display
- Remote control cables to over 1,000 ft. away
- Software for full range trending and control
- Pitot tubes
- Relative humidity probes
- Current/voltage measurement
- Analog input/output 4 to 20 mA
- Probe lengths to 9 ft.
- Probe temperatures to 3200° F

	Boiler Kit #1 0000.3501	Basic Kit #2 0000.3502	Engine Kit #3 0000.3503	Turbine Kit #4 0000.3504
Max. # of sensors	4	6	6	6
O ₂	■	■	■	■
CO	■	■	■	■
CO _{LOW}	n/a	●	●	■
CO (dilution)	●	●	■	■
NO	n/a	■	■	●
NO _{LOW}	n/a	●	●	■
NO ₂	●	■	■	■
SO ₂	●	●	●	●
C _x H _y	n/a	●	●	●
H ₂ S	n/a	●	●	●
CO ₂ (NDIR)	n/a	●	●	●
Fresh Air Purge	●	■	■	■
Sample Condition (Peltier)	■	■	■	■
Special NO/NO ₂ hose	●	■	■	■
Software & RS232	●	■	■	■

Standard Calculated Parameters:
CO₂, efficiency, excess air, corrected NO_x, CO, and SO₂
Units: ppm, lbs/mmBtu, tons/day, pounds/hr., O₂ reference

KEY: ■ = standard kit part ● = option

Call for details about upgrades and options.

NIST Traceable Calibrations are available. Testo factory-certifies the accuracy of all Combustion, Temperature, Humidity, Velocity, and Pressure products it sells. Routine instrument maintenance and calibrations assure maximum performance as well as adherence to the highest standards. It's Fast, Convenient, Reliable and Guaranteed! Portable Calibration Gas also available!



Your local distributor is:



Kits configured for you!

Visit www.testo350.com. Your online emission testing resource.

E-mail: info@testo.com • 800-227-0729 • www.testo350.com

All information subject to change without notice. 1/05