MODEL 500-19

Handheld Combustion Efficiency Emissions Analyzer

Compliance-Level

Local, County, District, State and Federal emissions reporting requirements

- O_2
- CO
- CO_2
- NO
- NO_2
- NO_x
- SO_2
- DRAFT
- COMBUSTIBLES (HCs)
- SMOKE (DPM)

MADE IN THE USA

A NEW GENERATION COMPLIANCE-LEVEL HANDHELD COMBUSTION AND EMISSIONS MONITORING SYSTEM

500 is everything you ever wanted in a low-cost, easy-to-use emissions monitoring system.

RUGGED

- Heavy Duty Light-Weight Aluminum Case
- Simple Modular Design
- 2 Year Warranty
- Download Latest Firmware Upgrades from our Website
- Work-Horse of the Industry

COMPREHENSIVE

- Basic O_2-Efficiency Analyzer
- CO, Combustibles & Draft options
- NO, NO_2, NO_x & SO_2 Options
- Expandable Emissions Package
- Thermoelectric Condenser
- Built-in Printer
- Interface Computer Software

AFFORDABLE

- Buy Only What You Need and Add Later
- Reduce Testing Costs
- Reduce Energy Costs
- Receive a Generous Trade-In Allowance on your old analyzer.
- No-charge Loaners Available

We invented the first electronic portable multi-parameter combustion analyzer in 1979 (in the U.S.A.). We still service this analyzer today as well as all others we have manufactured. The Model 500-19 is a low-cost, easy to use (no technical expertise needed, etc.) portable compliance-level combustion efficiency emissions analyzer.

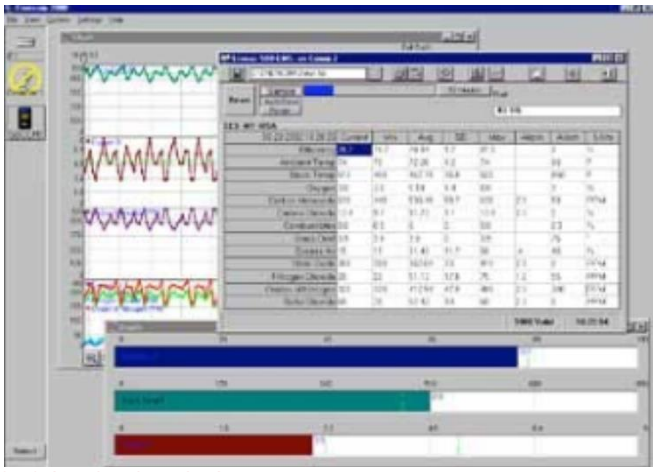
The 500-19 is perfect for both determining the efficiency of a combustion source as well as collecting advanced emissions data for internal use or for local, state and federal emissions reporting requirements (a compliance-level portable combustion analyzer). The 500-19 is perfect for testing various combustion sources, such as boilers, burners, engines, turbines, generators, kilns, dryers, heaters and ovens, just to name a few. Equally, with a simple combustion efficiency test or a more advanced combustion emissions test, the 500-19 is designed to provide years of trouble-free service. It is flexible enough to be tailored to meet your specific needs, yet simple enough to be completely maintained in the field. Advanced design, rugged construction and an impressive array of options are its hallmark. Constructed as a field workhorse, the 500-19 can be upgraded at any time (adding options to the same unit) to meet your changing needs.

The 500-19 comes with free data collecting software, time stamped internal data storage buffers and a built-in printer. The 500-19 has total NOx capabilities (NO + NO_2 = NOx) as well as high sensitivity/ low range sensors available. The 500-19 has an optional sample conditioning system available (for proper NO_2 and/or SO_2 gas detection and measurement) as well as a high quality viton hose option. The 500-19 has field replaceable sensors and can be field calibrated (if desired). The 500-19 is great for local, county, district, state and federal emissions reporting requirements.

MEASURED PARAMETERS	RANGE	RESOLUTION	ACCURACY
1. AMBIENT TEMPERATURE Type RTD	0-150˚F	1˚F or ˚C	+/- 2˚F M
2. STACK TEMPERATURE(Net) Type K Thermocouple	0-2,000˚F (1,100˚C)	1˚F or ˚C	+/- 2˚F M
3. OXYGEN (O_2) Electrochemical Cell	0-25%	0.1%	+/- .2% M
4. CARBON MONOXIDE (CO) Electrochemical Cell	0-2,000 PPM Std. or 0-20,000 PPM or 0-40,000 PPM	1 PPM	+/- 2% M**
5. NITRIC OXIDE (NO) Electrochemical Cell	0-300 PPM or 0-2,000 PPM Std. or 0-4,000 PPM	0.1 PPM 1.0 PPM 1.0 PPM	+/- 2% M**
6. NITROGEN DIOXIDE (NO_2) Electrochemical Cell	0-200 PPM or 0-500 PPM Std. or 0-1,000 PPM	0.1 PPM 0.1 PPM 1.0 PPM	+/- 2% M**
7. SULFUR DIOXIDE (SO_2) Electrochemical Cell	0-2,000 PPM Std. 0-4,000 PPM	1 PPM	+/- 2% M**
8. COMBUSTIBLES Catalytic Sensor	0-5%	0.1%	+/- 2%(CH4)M
9. STACK DRAFT / WC	+10" to -40" WC	0.1" WC	+/- 2% M
10. SMOKE TEST	ASTMD method D2156		
COMPUTED PARAMETERS	**RANGE**	**RESOLUTION**	**ACCURACY**
1. COMBUSTION EFFICIENCY	0-100%	0.1%	+/- 1%
2. CARBON DIOXIDE (CO_2)	0-40%	0.1%	+/- 2%
3. EXCESS AIR	0-1,000%	1%	+/- .2%
4. OXIDES OF NITROGEN (NOx)	0-500 0-800 0-3,000 0-5,000 PPM or other	0.1 PPM 1 PPM 1 PPM	+/- 4%
5. POUNDS / MILLION Btu (CO, NO, NO_2, $S0_2$)	0-99.99 #/mBtu	0.01 #/B	+/- 2%
6. GRAMS / BRAKE-HP-HR (CO, NO, NO_2, SO_2)	0-99.99 g/bhp-hr	0.01 GBH	+/- 2%

Oxygen Correction factor for emissions adjustable 0-20% in 1% steps plus TRUE.
M = Measured: Accuracy when calibrated prior to use per specifications.
**+/- 1 to 2 ppm for less than 100 ppm range

Note: Other sensor ranges available for parameters of interest



500-19 SPECIFICATIONS

PHYSICAL:

1. CASE: 9.75" x 4" x 2.75" Aluminum case with magnetic support
2. Weight: 3 lbs.
3. PROBE: 9" L x 3/8" OD (other lengths available) Inconel stack probe. Probe housing connects to instrument via a 10 ft. hose (other lengths available) and water trap or thermoelectric condenser. Maximum continuous temperature: 2,000 F.

ELECTRICAL POWER:

1. BATTERY: 4-6 VDC. Rechargeable NiMH (included) or 4 disposable AA alkaline cells. Approx. 6-8 hours operating time with water trap.
2. AC Adapter/Charger: 120/240v. 60/50 hz. 9vdc output
3. External Battery Options

DISPLAY:
Four line by 16-character Liquid Crystal Display with backlight illumination.

PRINTER:
Internal 2" thermal printer.

500 PRINTOUT

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Serial #: 51XXX
Company Name

Time: 12:00:00
Date: 01/31/13

Fuel: #2 OIL

Effic:  79.5  %
Amb Temp:  75  F
Stack T:  425  F
Oxygen:  6.0  %
CO:  490  PPM
CO2:     11.2  %
Combust:  0.2  %
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DATA STORAGE:
Internal: 400 individually selectable buffers hold one complete set of measurements each in non-volatile memory. Buffer contents can be sent to printer or serial port. Data is stored by pressing the STORE key or automatically on a periodic basis.

COMMUNICATIONS:
Serial Port (RS-232 port) settings: 9600,N,8,1
USB Port
Bluetooth Wireless (Class 1 – 100m)

FUELS:
15 Fuels: #2 Oil, #4 Oil, #6 Oil, Natural Gas, Anthracite, Bituminous, Lignite, Wood (50% H2O), Wood (0% H2O), Kerosene, Propane, Butane, Coke Oven Gas, Blast Furnace & Sewer Gas.
Diesel, Gasoline, LPG, CNG, and all other engine fuels.
Custom fuels available on request or by customer programming using software