ENERAC 500

Handheld Combustion Efficiency Emissions Analyzer

O_2
CO
NO
NO_2
NO_x
SO_2
DRAFT
COMBUSTIBLES (HCs)

MADE IN THE USA

A NEW GENERATION IN HANDHELD COMBUSTION AND EMISSIONS MONITORING

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

RUGGED

- Heavy Duty Aluminum Case
- Simple Modular Design
- 2 Year Warranty
- Download Latest Firmware Upgrades from our Website

COMPREHENSIVE

- Basic O_2-Efficiency Analyzer
- CO, Combustibles & Draft options
- NO, NO_2 & 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

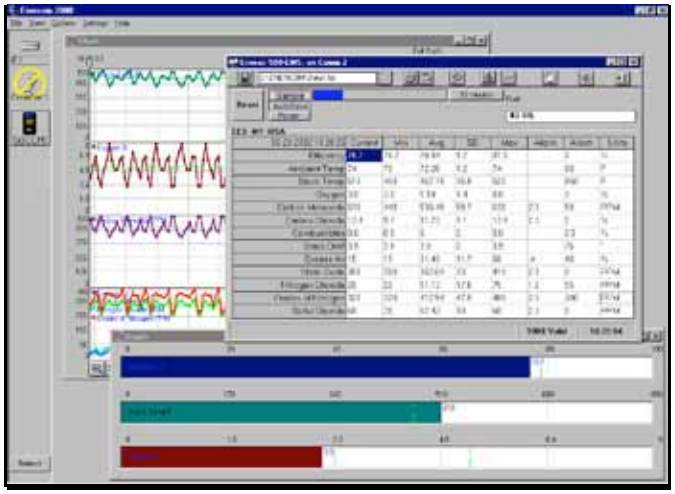
ENERAC™ invented the first electronic portable multi-parameter combustion analyzer in 1979 (in the U.S.A.). ENERAC™ still services this analyzer today as well as all others ENERAC has manufactured. The ENERAC™ Model 500 is a low-cost, easy to use (no technical expertise needed, etc.) portable combustion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

The ENERAC™ 500 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 ENERAC™ 500 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 ENERAC™ 500 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 ENERAC™ 500 can be upgraded at any time (adding options to the same unit) to meet your changing needs.

The ENERAC™ 500 provides a comprehensive range of automatic emissions calculations (grams/brake horsepower hour; pounds/million Btu) advanced enercom windows software, two way communications and factory support. From low NO_X burners (0.1 ppm NOx resolution) to large rich burn engines (5,000ppm NO_X/20,000ppm CO,) the ENERAC™500 is designed to help you meet your needs of various monitoring applications at an affordable price.

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	0-2000˚F (1100˚C)	1˚F or C	+/- 2˚F M
3. OXYGEN (O_2) Electrochemical Cell	0-25%	0.1%	+/- 0.2% M
4. CARBON MONOXIDE (CO) Electrochemical Cell	0-500 0-2000 or 0-20000PPM	1 PPM	+/- 0.2% M**
5. NITRIC OXIDE (NO) Electrochemical Cell	0-300 0-2000 or 0-4000 PPM	0.1 PPM 1 PPM 1 PPM	+/- 0.2% M**
6. NITROGEN DIOXIDE (NO_2) Electrochemical Cell	0-500 or 0-1000 PPM	0.1 PPM 1 PPM	+/- 0.2% M**
7. SULFUR DIOXIDE (SO_2) Elecrochemical Cell	0-2000 PPM	1 PPM	+/- 0.2% M**
8. COMBUSTIBLES Catalytic Sensor	0-5%	0.1%	+/- 0.2%(CH4)M
9. STACK DRAFT	+10" to 40" WC	0.1˚ WC	+/- 0.2% 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	0-1000%	1%	+/- .2%
4. OXIDES OF NITROGEN (NOx)	0-800 0-3000 0-5000 PPM or other	0.1 PPM 1 PPM 1 PPM	+/- 4%
5. POUNDS / MILLION Btu (CO, NO, NO_2, SO_2)	0-99.99 #/mBtu	0.01 #/B	+/- 2%
6. GRAMS / BRAKE-HP-HR (CO, NO, NO_2, SO_2)	0-99.99/bhp-hr	0.01g/bhp-hr	+/- 2%

Oxygen Correction factor for emissions adjustable 0.20% in 1% steps plus TRUE.
*Accuracy (M: Measured) When calibrated prior to use per ENERAC™ specifications.
**+/- 1 to 2 ppm for less than 100 ppm range
Note: Other sensor ranges available for parameters of interest
H2S sensor (0-200ppm) Can be substituted for another sensor slot!



ENERCOM WINDOWS SOFTWARE

MODEL 500 SPECIFICATIONS

PHYSICAL:

1. CASE: 9.75" x 4" x 2.75" Aluminum case with
2. magnetic support. Weight: 3 lbs.
3. PROBE: 9" L x 3.8" OD (other lengths available) Inconel steel stack probe. Probe housing connects to instrument via a 10 ft. Viton hose (other lengths available) and water trap and thermoelectric condenser. Maximum continuous temperature: 2000 F.

ELECTRICAL POWER:

1. BATTERY: 4-6 VDC. Rechargeable NiMH (included) or 4 disposable AA alkaline cells. Approx. 6-8 hours operating time (1.5 hours with T'cooler)
2. AC Charger: 120/240v. 60/50 hz. 9vdc output

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

PRINTER:
Internal 2" thermal printer.

ENERAC 500 PRINTOUT

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   ENERAC M500
Serial #: 000000
Company Name

Time: 12:00:00
Date: 01/31/03

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 %
Draft:   3.5 "
Ex.Air:   37 %
NO:       325 PPM
NO2:       60 PPM
NOX:      385 PPM
SO2:       40 PPM
Oxygen Ref:TRUE
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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-232C 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.
Custom fuels available on request or by customer programming using ENERCOM software

THE POWER TO KNOW ENERAC™
1-800-695-3637 www.enerac.com

1-800-695-3637
1320 Lincoln Ave. Unit 1 Holbrook, NY 11741
(631) 256-5903 • FAX: (516) 997-2129
Email:sales@enerac.com • www.enerac.com