

ENERAC 500

Handheld Combustion Efficiency Emissions Analyzer



Compliance-Level

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

O₂

CO

NO

NO₂

NO_x

SO₂

H₂S

DRAFT

COMBUSTIBLES (HCs)

SMOKE (DPM)

MADE IN THE
USA

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

The ENERAC 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 O₂-Efficiency Analyzer
- CO, Combustibles & Draft options
- NO, NO₂, NO_x & SO₂ Options
- Expandable Emissions Package
- Thermoelectric Condenser
- Built-in Printer
- Interface Computer Software

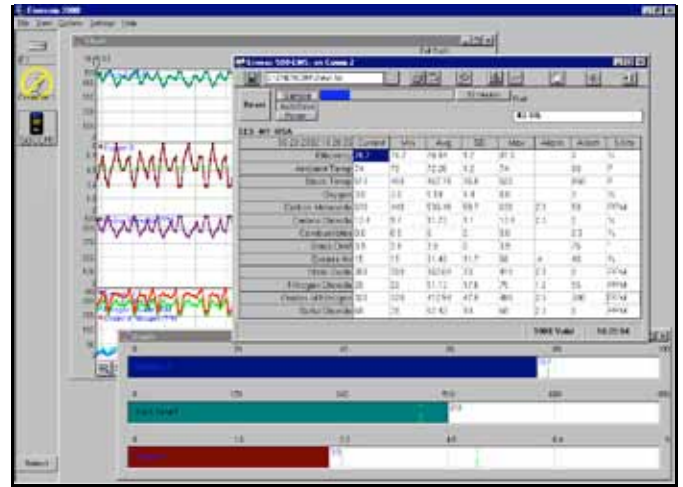
AFFORDABLE

- 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 compliance-level 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 comes with free data collecting software (enercom software), time stamped internal data storage buffers and a built-in printer. The Enerac 500 has total NOx capabilities (NO + NO₂ = NOx) as well as high sensitivity/ low range sensors available. The 500 has an optional sample conditioning system available (for proper NO₂ and/or SO₂ gas detection and measurement) as well as a high quality viton hose option. The Enerac 500 has field replaceable sensors and can be field calibrated (if desired). The Enerac 500 is great for local, county, district, state and federal emissions reporting requirements.



ENERCOM WINDOWS SOFTWARE

MODEL 500 SPECIFICATIONS

PHYSICAL:

- CASE: 9.75" x 4" x 2.75"
Aluminum case with magnetic support
- Weight: 3 lbs.
- 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:

- BATTERY: 4-6 VDC. Rechargeable NiMH (included) or 4 disposable AA alkaline cells. Approx. 6-8 hours operating time with water trap.
- AC Adapter/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.

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. Custom fuels available on request or by customer programming using ENERCOM software

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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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	0-500 0-2,000 or 0-20,000PPM	1 PPM	+/- 2% M**
5. NITRIC OXIDE (NO) Electrochemical Cell	0-300 0-2,000 or 0-4,000 PPM	0.1 PPM 1 PPM 1 PPM	+/- 2% M**
6. NITROGEN DIOXIDE (NO ₂) Electrochemical Cell	0-500 or 0-1,000 PPM	0.1 PPM 1 PPM	+/- 2% M**
7. SULFUR DIOXIDE (SO ₂) Electrochemical Cell	0-2,000 PPM	1 PPM	+/- 2% M**
8. COMBUSTIBLES Catalytic Sensor	0-5%	0.1%	+/- 2%(CH ₄)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 (NO _x)	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 , SO ₂)	0-99.99 #/mBtu	0.01 #/B	+/- 2%
6. GRAMS / BRAKE-HP-HR (CO, NO, NO ₂ , SO ₂)	0-99.99g/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 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!



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