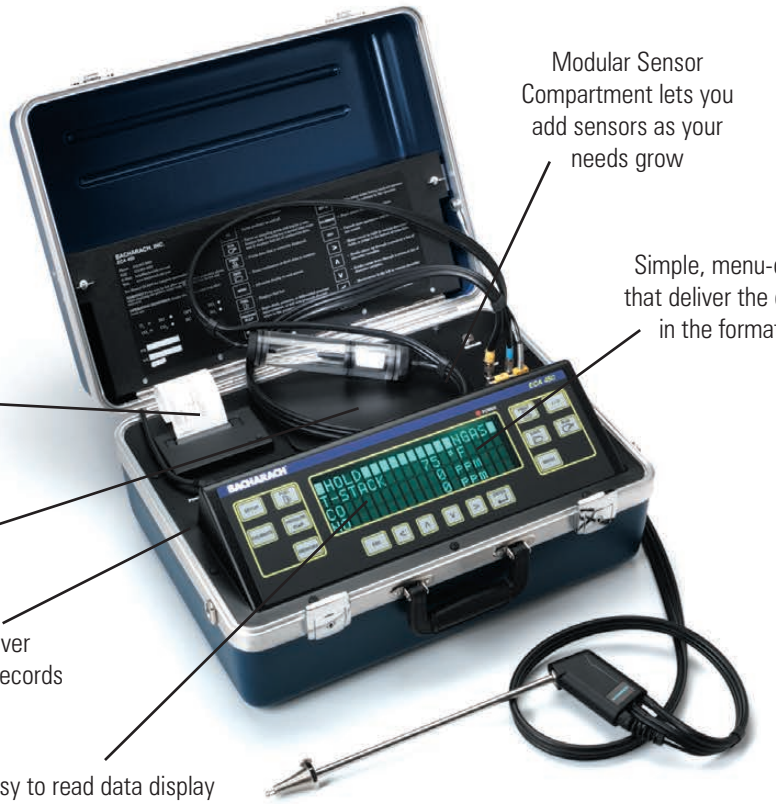
ECA 450

Combustion Efficiency & Environmental Analyzer

Combustion & Environmental Analyzers

"Unlike any other industrial grade combustion efficiency and environmental analyzer on the market today, the ECA 450 conducts accurate combustion and emissions tests that will help you meet environmental regulations and ensure your equipment is burning efficiently."



ETV CE

EPA/ETV Test Verified Performance

Complies with: U.S. EPA Test Methods, CTM-030, & State and Local Protocols including SCAQMD

MODULAR SENSORS

1) Carbon Monoxide (High)
2) NO Sensor
3) NO_2 Sensor
4) SO_2 Sensor
5) Combustible Sensor

TECHNICAL DATA	
Measurements & Ranges	
Oxygen	0.1 to 20.9%
Carbon Monoxide (hydrogen compensated)	0 to 4000 ppm (hydrogen compensated)
Carbon Monoxide (high)*	4001 to 80000 ppm
Nitric Oxide*	0 to 3500 ppm
Nitrogen Dioxide*	0 to 500 ppm
Sulfur Dioxide*	0 to 4000 ppm
Combustibles*	0 to 5.00% (application dependent)
Stack Temperature	-4 to 2400 degrees F (-20 to 1215˚C)
Primary/Ambient Temperature	-4 to 999 degrees F (-20 to 999˚C)
Pressure/Draft	-27.7 to 27.7 inches of H2O
Calculations & Ranges	
Combustion Efficiency	0.1 to 100.0%
Excess Air	1.0 to 250%
Carbon Dioxide (dry basis)	0 to fuel dependent maximum
NO_X (NOX=NO+NO_2)	0 to 4000 ppm
NO_X referenced to % O_2	0 to 17000 ppm
CO referenced to % O_2	0 to 99999 ppm
NO referenced to % O_2	0 to 14900 ppm
NO_2 referenced to % O_2	0 to 2100 ppm
SO_X referenced to % O_2	0 to 17000 ppm
Accuracy	
Oxygen	± 0.3% O2 on practical concentration of flue gas
Stack or Flue Gas Temp.	± 4°F between 32 and 255°F (± 2°C between 0 and 124°C) ± 6°F between 286 and 480°F (± 3°C between 125 and 249°C) ± 8°F between 481 and 752°F (± 4°C between 250 and 400°C)
Primary-air/ambient Temp.	± 2°F between 32 and 212°F (± 1°C between 0 and 100°C)
Pressure Draft	± 2% of reading or ± .02 in wc whichever is greater
CO	± 5% of reading or ± 10 ppm whichever is greater between 0-2000 ppm CO ± 10% of reading between 2001 to 40000 ppm CO
NO	± 5% of reading or ± 5 ppm whichever is greater between 0-2000 ppm NO
NO_2	± 5% of reading or ± 5 ppm whichever is greater between 0-500 ppm NO_2
SO_2	± 5% of reading or ± 10 ppm whichever is greater between 0-2000 ppm SO_2
HC	± 5% of full scale
Selectable Fuels	Natural Gas, Oil #2, Oil #4, Oil #5, Oil #6, Propane, Coal, Wood, Kerosene, Bagasse
Power	Universal AC adapter and an internal battery pack. Adapter will accept input voltages from 100 to 240V. Fully charged battery pack provides a minimum of 8 hrs of operation
Pumps & Probe	Two pumps are included. The first pump supplies gas sample to the sensors. The second pump supplies fresh air to purge the low range CO sensor when CO levels exceed 4000 ppm. Probe includes a standard probe and hose assembly equipped with a water trap, particulate filter, probe stop, 15 feet of hose, and 12-inch probe tube.
Size	13.5" H x 18.5" W x 9" D
Weight	25 lbs. (11.34 kg)
Warranty	1 year, extended warranty available

* Optional

Applications

The ECA 450 is ideal for professionals concerned about combustion efficiency, environmental compliance, or both. It enables plant maintenance engineers and managers, industrial boiler/furnace service technicians, energy coordinators, compliance officers, environmental auditors and safety managers to ensure that industrial equipment is burning efficiently while environmental regulations are being met.

ORDERING INFORMATION	
PART NO.	**DESCRIPTION**
24-7221	Base Unit (O_2, CO, T_S, T_a, DP)
24-8400	NO_X Kit with NO / NO_2 sensors and compact sample conditioner
24-8401	NO_X and SO_X Kit with NO, NO_X and SO_2 sensors and compact sample conditioner
PART NO.	**REPLACEMENT SENSORS**
24-0788	O_2 Sensor
24-0789	CO (low) Sensor
24-0997	CO (high) Sensor
24-0881	NO Sensor
24-1055	Combustible Sensor
24-1027	NO_2 Sensor
24-0998	SO_2 Sensor (requires NO_2 option)
PART NO.	**ACCESSORIES**
07-1644	Filters (pkg. of 3)
24-7059	Calibration Kit (does not include gas)
104-1800	Thermocouple Wand Extension, 5 feet
104-4027	Serial Cable DB.9M to DB.9F
24-0980	Printer Paper (5 rolls)

The maximum operating temperature for probes included in 24-7221, 24-7224, 24-7223, 24-3024 and 24-3025 is 1472°F (800°C). The maximum operating temperature for high temperature probes 24-3035, 24-3036 and 24-3037 is 2000°F (1093°C).

Distributed By:

Contact:
Industrial Process Measurement, Inc.
3910 Park Avenue, Unit 7
Edison, NJ 08820
732-632-6400
support@instrumentation2000.com
http://www.instrumentation2000.com

Product Bulletin-4144 01/10 10M PT
Printed in U.S.A.