



Combustion Efficiency Analyzer

ECA 450

DESCRIPTION

The ECA 450 is an industrial grade analyzer ideal for professionals concerned about combustion efficiency, environmental compliance, or both. Accommodating up to seven sensors, simultaneous measurements and calculated parameters are evaluated to ensure that industrial equipment is meeting environmental regulations while burning safely and efficiently.

The ECA 450 is designed for on-demand or semi-continuous sampling of industrial furnaces, boilers and other industrial combustion equipment. It complies with regulations such as U.S. EPA test methods, EN 50379, CTM-030 and state/local protocols including SCAQMD.

Note: The ECA 450 calculates CO₂ value based upon other measured values during the combustion process. It does not measure CO₂ directly.

FEATURES

Measures up to 7 gases simultaneously (minimum O₂ and CO), including NO_x, SO_x and combustibles

Sensors are easily replaced or upgraded in the field

Rugged suitcase design with large, easy-to-read display

Built-in printer for instant traceability and record-keeping





MEASUREMENT RANGES

MEASUREMENT	DESCRIPTION
O ₂	0.1 to 20.9%
CO (H2 Compensated)	0 to 4,999 ppm
CO (High Range)	4,001 to 80,000 ppm
NO	0 to 3,500 ppm
NO ₂	0 to 500 ppm
SO ₂	0 to 4,000 ppm
Combustibles	0 to 5.00% (application dependent)
Stack Temperature	-4 to 2,400° F (-20 to 1,215° C)
Primary / Ambient Temperature	-4 to 999° F (-20 to 999° C)
Pressure / Draft	-27.7 to 27.7 inwc

CALCULATED RANGES

MEASUREMENT	DESCRIPTION
Combustion Efficiency	0.1 to 100%
Excess Air	1 to 250%
CO ₂	0 to fuel dependent maximum
NOx (NO + NO ₂)	0 to 4,000 ppm
NOx (Referenced to %O ₂)	0 to 17,000 ppm
CO (Referenced to %O ₂)	0 to 99,999 ppm
NO (Referenced to % O ₂)	0 to 14,900 ppm
NO ₂ (Referenced to %O ₂)	0 to 2,100 ppm
SOx (Referenced to %O ₂)	0 to 17,000 ppm

ACCURACY

MEASUREMENT	DESCRIPTION
O ₂	±0.3% O ₂ on practical concentration of flue gas
Stack Temperature	±4°F from 32 to 255° F (±2°C from 0 to 124° C) ±6° F from 286 to 480° F (±3°C from 125 to 249° C) ±8° F from 481 to 752° F (±4°C from 250 to 400° C)
Primary / Ambient Air Temperature	±2° F from 32 to 212° F (±1° C from 0 to 100° C)
Pressure / Draft	±2% of reading or ± 0.02 inwc, whichever is greater
CO	±5% of reading or ±10 ppm, whichever is greater from 0 to 2,000 ppm ±10% of reading from 2,001 to 4,000 ppm
NO	±5% of reading or ±5 ppm, whichever is greater from 0 to 2,000 ppm
NO ₂	±5% of reading or ±5 ppm, whichever is greater from 0 to 500 ppm
SO ₂	±5% of reading or ±10 ppm, whichever is greater from 0 to 2,000 ppm
HC	±5% of full scale
Selectable Fuels	Natural Gas, Oil #2, 4, 5, 6, Propane, Coal, Wood, Kerosene, Bagasse