TECHNICAL DATA SHEET

ecom-EN3-R

MOBILE FLUE GAS ANALYSIS

Ideal for inspection and adjustment work, also on oil heating systems in the lower to medium performance range

The ecom-EN3-R combines compact flue gas analysis with integrated soot measurement in a single, robust device - specially developed for quick inspection and adjustment work on gas, oil and solid fuel systems. Without additional devices or accessories, simply via the sampling system.

In addition to soot measurement, the device provides precise flue gas values, while integrated gas conditioning ensures stable measurement results. Operation is intuitive, the design is mobile and service-friendly - ideal for daily use on site.

Dimensions: approx. 400 x 275 x 205 mm (W x H x D)
Weight: approx. 7,5 kg with sampling system

Technical data

Measured values	Range	Resolution	Accuracy *= Higher value prevails	
√ = Standard; ● = Optional EC; ● = Optional NDIR; ● = Optional Pellistor				
Maximum number of measurable gas components				6
O_2	0...21 %	0,1 vol. %	± 0,3 vol. %	√
CO (H_2-comp.)	0...2.500 ppm (10.000 ppm)	1 ppm	± 20 ppm / 5 % of measured value*	√
CO (n. H_2-comp)	0...20.000 ppm	1 ppm	± 40 ppm / 10 % of measured value*	·
CO%	0...63.000 ppm	5 ppm	± 100 ppm / 10 % of measured value*	·
CO_2	0...100 vol. %	0,01 vol. %	up to 5 % of the measuring range end value	·
NO	0...5.000 ppm	1 ppm	± 5 ppm / 5 % of measured value*	·
$NO_{ExtraLow}$	0...300 ppm	0,1 ppm	± 2 ppm / 5 % of measured value*	·
NO_2	0...1.000 ppm	1 ppm	± 5 ppm / 5 % of measured value*	·
$NO_{2\ Low}$	0...100 ppm	0,1 ppm	± 5 ppm / 5 % of measured value*	·
SO_2	0...5.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	·
$SO_{2\ Low\ CO}$	0...5.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	·
$SO_{2\ Low}$	0...100 ppm	0,1 ppm	± 5 ppm / 5 % of measured value*	·
H_2	0...2.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	·
H_2	0...20.000 ppm	1 ppm	± 100 ppm / 5 % of measured value*	·
H_2S	0...1.000 ppm	1 ppm	± 10 ppm / 5 % of measured value*	·
CH_4	0...5 vol. %	0,01 vol. %	± 0,2 vol. % / 5 % of measured value*	·
CH_4	0...100 vol. %	0,1 vol. %	± 5 % of the measuring range end value	·
C_xH_y	0...4 vol. %	0,01 vol. %		·
Other measured variables	**Range**	**Resolution**	**Accuracy *= Higher value prevails**	
T-Gas	0...500 °C	1 °C	± 2 °C / 1,5 % of measured value*	√
	0...1.100 °C	1 °C	± 2 °C / 1,5 % of measured value*	·
T-Air	0...99 °C	0,1 °C	± 1 °C	√
Pressure | △P	± 100 hPa	0,01 hPa	± 0,5 hPa / 1 % of measured value*	√
Calculation values			**Range**	
CO_2			0...$CO_{2\ max}$	√
Combustion efficiency (ETA)			0...120 %	√
Excess air (Lambda)			>1	√
Losses qA			0...100 %	√
$CO_{(U)}$ undiluted			x ppm	√
Dew point			x° C	√
mg/m³			x mg/m³	√
mg/kWh			x mg/kWh	√
O_2 reference			x % O_2	√

Equipment

Gas sampling	
Heated probe 250 mm, Ø 10 mm	√
3-chamber tubing 3 m	√
NO_x tubing with PTFE inner coating	·
High temperature probe Ø 10 mm	·
Measurementgas preparation	
Electronic condensate monitoring	√
Electronic sample gas cooler	·
Combustion air temperature measurement	
T-room sensor with cable, cone and magnet	√
Operation safety	
Pressure-equalizing gas duct plate	√
Temperature display for stream core search	√
Automatic self-test in the calibration phase	√
CO switch-off by concentration overload	√
Fresh air purge by CO exceeding	√
Fresh air purge after measuring operation	√
Flow meter for pump performance check	√
Pollutant filter for CO sensor	·
Data proccessing	
Integrated high-speed thermal printer	√
External memory via SD card	√
Wireless data interface (BLE) for connection with mobile devices	√
WiFi interface (instead of BLE)	·
Serial interface	√
USB interface	√
Data display / input	
TFT color display, backlit, zoomable	√
Backlit keyboard	√
Transport	
Aluminium framed case with carrying strap	√
Undercase	·
Proof of conformity / calibration	
EN 50379-2	√
1. BImSchV	√
Certificate after climate chamber calibration	√

ecom GmbH
Am Großen Teich 2
58640 Iserlohn
info@ecom.de

ecom®
Measurement Technology