TECHNICAL DATA SHEET

ecom-D *Engine*

COMPACT FLUE GAS ANALYSIS

Handy, compact and perfect for measurements on CHP units, gas engines and industrial systems

The ecom-D *Engine* is specially designed to meet the requirements of exhaust gas analysis on stationary and mobile engine systems - whether combined heat and power plants, gas engines or emergency power generators. With precise sensors for O_2, CO, NO and NO_2, it delivers reliable measurement results for adjustment, service or emission control.

Its compact and robust design is ideal for versatile use. At choice it remains positioned in its protective transport case for operation - or it is detached from and it is a handheld. Which - by need and thanks to its rear magnets - becomes even a handfree instrument.

Dimensions: approx. 515 x 325 x 175 mm (W x H x D)
Weight: approx. 8 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	0,1 °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 effiiency(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	
Unheated probe 350 mm, Ø 8 mm	√
Fixing cone with mini heat protection shield	√
2-chamber NO_x sampling tubing with PTFE inner coating, 3.5 m	√
Unheated probe Ø 10 mm in alternative lengths	•
High temperature probe Ø 10 mm	•
Measurement gas preparation	
Electronic condensate monitoring	√
Electronic mini sample gas cooler	√
Combustion air temperature measurement	
T-room stick	√
Operation safety	
Pressure-equalizing gas duct plate	√
Temperature display 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	√
Data processing	
IR interface for optional printer	√
Integrated high-speed thermal printer	•
Infrared 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	
LCD display, backlit, zoomable	√
Backlit keyboard	√
Transport	
Hard-shell transport case	√
Proof of conformity / calibration	
EN 50379-2	√
1. BImSchV	√
Certificate after climate chamber calibration	√

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