

FLUE GAS ANALYSIS

BURNER & BOILER INDUSTRY – FACILITY – ADJUSTMENT MEASUREMENTS



ecom®

ECOM-EN3-F EXPERT

- COMPACT FLUE GAS ANALYSER IN HEATING PROFI PACKAGE
- FITTED WITH O₂, CO, NO, NO₂ LONGLIFE GAS SENSORS
- HEATED SAMPLING PROBE; LENGTH 350 MM, Ø 10 MM
- NOx SAMPLING TUBING, 3-CHAMBER, LENGTH 3.5 M
- HIGH-VALUE T-GAS PLUG
- INTEGRAL THERMAL QUICK-PRINTER
- BLUETOOTH LOW ENERGY –BLE–
- HIGH-PERFORMING GAS PUMP WITH LOW MAINTENANCE
- DIGITAL STATUS INDICATION (BATTERY CHARGING STAND, INSTRUMENT STAND, DATA TRANSFER QUALITY)
- BACKLIT TFT COLOUR DISPLAY & KEYPAD
- MINI GAS COOLER
- LI-ION BATTERY
- ROBUST HARDTOP TRANSPORT CASE




ECOM-EN3-F EXPERT - FLUE GAS ANALYSER

✓ = Standard • = Option

TECHNICAL DATA & FEATURES BASIC MODEL				✓ = Standard	● = Option
MEASUREMENT	RANGE	RESOLUTION	ACCURACY		
Maximal amount of gas sensors			*= Higher value prevails		6
O ₂	0...21 %	0,01 vol.%	± 0,3 vol. %		✓
CO ppm (H ₂ -comp.)	0...4000 ppm	1 ppm	± 20 ppm / 5% meas. value*		✓
NO	0...5000 ppm	1 ppm	± 5 ppm / 5% meas. value*		✓
NO ₂	0...1000 ppm	1 ppm	± 5 ppm / 5% meas. value*		✓
T-Gas	0...500°C	1°C	± 2°C (0-125°C) ± 3°C (125-250°C) ± 4°C (250-500°C)		✓
T-Air	0...99°C	1°C	± 1°C		✓
Pressure / ΔP	± 100 hPa	0,01 hPa	± 2%		✓
Soot (integral)	0...9				✓
CALCULATION			RANGE		
CO ₂			0...CO ₂ max		✓
Combustion efficiency (ETA)			0...120%		✓
Excess air (Lambda)			>1		✓
Losses			0...100%		✓
CO _(U) undiluted			x ppm		✓
Dew point			x°C		✓
mg/m ³			x mg/m ³		✓
mg/kWh			x mg/kWh		✓
O ₂ reference			x %O ₂		✓
GAS SAMPLING GAS TEMPERATURE MEASUREMENT					
Sampling probe (SB), heated 350 mm (1.1 ft.), Ø 10 mm, with thermocouple				1	✓
NOx sampling tubing 3-chamber 3.5 m (11.5 ft.)					✓
Fixation cone with Teflon protection ring and stainless-steel tip				2	✓
High-value T-Gas plug					✓
COMBUSTION AIR SENSOR					
T-Room sensor (PT 2000) 100 mm, cable ca. 3 m (10 ft.), magnet fixation & fixation cone					✓
DATA INDICATION / INPUT					
TFT colour display 78 x 58 cm, 320 x 240 Dots, backlitged, graphic-/zoom-capable				3	✓
Keypad with alphanumerical input function				4	✓
DATA PRINTOUT					
Integral thermal quick-printer, paper width 58 mm (2.2 in.)				5	✓
DATA PROCESSING					
Slot for MM card; data logger function					✓
Bluetooth Low Energy (BLE) interface					✓
Wi-Fi interface (instead of BLE)					●
Data exchange with gratis ecom® PC software MiniDV, DAS.NT.2, DAS 5.01					✓
CONNECTIONS					
Charging connection at instrument					✓
Multi-function interface					✓
USB interface for data transfer					✓
MEASUREMENT GAS PREPARATION					
Extra-quick gas transport (quick availability of measurement data)					✓
High-performing gas pump with low maintenance					✓
Electric gas cooler with automatic condensation evacuation				6	✓
Soot filter for additional soot and dust particle filtering					✓
POWER SUPPLY					
Mains / battery operation - Lithium-Ion battery 7,2 V / 11,6 Ah with long-operation time					✓
Mains power cord length approx. 2.3 m (7.5 ft.)					✓
OPERATION SAFETY					
Temperature trend indication for stream core search					✓
Automatic self-test during calibration phase					✓
Automatic CO switch-off (= sensor protection & prolongation of life span)					✓
Fresh air purge w/o. measurement interruption (= other values measured w/o. time loss)					✓
Fresh air purge after operation					✓
Pressure-compensated gas channel plate (optimized gas flow w/o. pressure fluctuation)					✓
Integral flow measurement for control of pump performance				7	✓
Electronic condensation monitoring					✓

DIFFERENTIAL PRESSURE | ACCESSORY

TUBING, for ΔP measurement (± 0-100 hPa),
Length approx. 1.5 m (4.9 in.)



Item no. **105484**

DATA STORAGE | ACCESSORY

MM CARD 2 GB



Item no. **102469**

DATA TRANSFER | ACCESSORIES & OPTION

DATA CABLE USB, ANALYSER -> PC

- For data transfer to PC
- Length approx. 2 m



Item no. **55818**

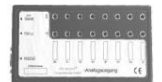
WI-FI OPTION, instead of Bluetooth Low Energy

Item no. **107203**

8-CHANNEL ANALOG OUTPUT BOX (V / mA)

Connection box for external logging/recording units

- Dim.: approx. 165 x 85 x 30 mm (L x W x H)
- Weight: approx. 0.3 kg
- Incl. charger, cable to analyser, RS 232 cable, software



Item no. **101769**

CONSUMABLES | FOR STOCK

Fine dust filter (pack of 10 pcs) Item no. **100568**

Thermal printer paper roll Item no. **50513**

Soot filter papers (pack of 200 pcs) Item no. **50515**

Soot filter Item no. **50508**

FLUE GAS ANALYSIS

CRAFTS - FACILITY – BURNER & BOILER INDUSTRY **ECOM-EN3-F EXPERT**



ecom[®]

OPERATION SAFETY		
Longlife sensors		✓
Digital status indication (battery charging stand, instrument, data transfer quality)		✓
TRANSPORT		
Hardtop transport case with shock-protective corners, lockable	8	✓
DIMENSIONS WEIGHT OTHERS		
Dimensions (W x H x D): approx. 515 x 325 x 175 mm (20.2 x 12.7 x 6.8 in.)		
Weight: approx. 9 kg (19.8 pd.)		
Calibration certificate, issued after instrument calibration into calibration chamber		✓
Tested and approved acc. to 1. BImSchV (O ₂ /CO/Temp./Pressure) and EN 50379-2		✓
Aluminium housing with 10 years guarantee		✓
Admissible ambient temperature: +5... +40°C		
Admissible storage temperature: -20... +50°C		
Fuel types: 5 pre-programmed, up to 16 possible		
Recommended interval for check/maintenance: 1 year		
Item no. basic model 7107014		

SIMPLE & MODERN DATA MONITORING & TRANSFER WITH THE APP **ecomMANDER**

MEASURE | DISPLAY | RECORD | TRANSFER

SIMPLE CONNECTION

- Automatic identification of ecom instrument via wireless pairing
- Recording of last active connection
- Use not limited to a specific instrument

SIMPLE HANDLING

- Remote monitoring of measurement
- Start / stop of CO sensor purge
- Printout of measurement results
- Switch to stand-by mode

SMART DATA PROCESSING

- Display of all measurement parameters
- Organisation of customer data
- Recording and management of measurement values
- Archiving and / or export of measurement values via PDF

Available on the
App Store





THE BELOW ICONS ILLUSTRATED IN ALL OUR PRODUCT INFORMATION SHEETS DO HAVE THE FOLLOWING MEANING:



EXTREMELY PRECISE - FOR EXACT MEASUREMENT ACCURACY.

After completion of the production process, the instrument is then professionally calibrated into a calibration chamber in order to eliminate possible cross-sensitivities. In order to measure in practice with the highest possible exactitude.



EXTREMELY EFFICIENT - ENHANCED CONVEYANCE CAPABILITY.

The product is fitted with a particularly performing pump which -compared to other instruments- is conveying many times over within the same period of time.



EXTREMELY BROAD REACH - WIRELESS COMMUNICATION.

Product fitted with radio module or Bluetooth Low Energy for wireless, unerring data transfer.



EXTREMELY SAFE – FOR MORE OPERATION SAFETY & PRODUCT LONGEVITY.

The model is or can be equipped with operation safety technique which protects its sensible components and contribute herewith to an increased life span.



EXTREMELY STABLE - SHOCK-PROOF.

Increased protection for safe transport / unintentional fall.
All-round protection provided by robust transport case resp. protective housing.



EXTREMELY COOL - DRIED SAMPLED GAS AND INCREASED READING ACCURACY.

The model is or can be equipped with a gas cooler which cools down the sampled gas and herewith makes sure that especially water-soluble gas components do not dilute but get conveyed to the sensors.



EXTREMELY LOSS-FREE – FOR SWIFT GAS TRANSPORT WITHOUT WASHOUT EFFECTS.

Special tubing either part of the standard model delivery package or available optionally provide with a quick gas transport, free of wash-out effects. Water-soluble components do not get lost but reach the measuring sensors.



EXTREMELY COMPLETE - ALL INCLUSIVE – PRODUCT READY-TO-MEASURE.

The product is completely ready to measure and does not require any further components to be operated. Respectively a kit of essential consumables is covered in the delivery package, thus avoiding being forced to quit a measurement process because of a missing spare filter or else small part.

WATCH AT VIDEO CLIPS ON



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AND EXPERIENCE UNIQUE



MEASUREMENT TECHNOLOGY!



FOCUSED APPLICATION RESPECTIVELY USER PROFILE ECOM® FLUE GAS ANALYSERS



CRAFTS
Chimney-sweep
Heating installer



SERVICE ORGANISATIONS & FACILITY-MANAGEMENT
Maintenance & adjustment of home smaller boilers. Manufacturers of smaller boilers; Facility Management (building maintenance companies). Service divisions with many technicians.



BURNER & BOILER MANUFACTURERS
Companies manufacturing resp. maintaining larger boiler and burner. Service divisions with lots of technicians.



COGENERATION
Companies manufacturing resp. maintaining engines or combined heat and power plants. An exact NO_x measurement is of specific importance in this sector.



OIL & GAS
Raw material production
Transport
Processing



INDUSTRIAL APPLICATIONS
Mining
Foundries
Cement factories
Cookery plants
Chemical process heating
Waste combustion, etc.



ECOM® PRODUCTS – YOUR PARTNERS FOR:
BURNER DIAGNOSIS GAS LEAK DETECTION
FLUE GAS ANALYSIS PRESSURE MEASUREMENT

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