



Two powerful rear magnets for instrument positioning on metal surfaces...  
... effortless release thanks to the detaching aid.



With length-adjustable holding strap. Can be fitted to the individual hand size thanks to Velcro strip.



View with mini gas cooler and T-Room stick – instead of T-Room sensor

## ECOM-D

■ HANDY AND COMPACT ANALYSER  
FOR CONTROL MEASUREMENTS

- BASIC MODEL WITH O<sub>2</sub> / CO  
LONGLIFE SENSORS – FURTHER  
GAS SENSORS POSSIBLE
- ERGONOMIC SAMPLING PROBE,  
UNHEATED, LENGTH 300 MM
- 3-CHAMBER TUBING 2.6 M
- HIGH-VALUE T-GAS PLUG
- BACKLIT DISPLAY & KEYPAD
- BLUETOOTH LOW ENERGY –BLE-

■ LI-ION BATTERY

■ ROBUST & ULTRALIGHT  
PROTECTION HOUSING –  
GUARANTEED 10 YEARS



View ecom-D in full, optional equipment:  
thermal quick printer module, mini gas  
cooler and NOx amplifying tubing



TECHNICAL DATA & FEATURES BASIC MODEL				✓ = Standard • = Option
MEASUREMENT	RANGE	RESOLUTION	ACCURACY	
Maximal amount of gas sensors			*= Higher value prevails	4
O <sub>2</sub>	0...21 %	0,01 vol.%	± 0,3 vol. %	✓
CO ppm (H <sub>2</sub> -comp.)	0...4000 ppm	1 ppm	± 20 ppm / 5% of meas. value*	✓
CO ppm (H <sub>2</sub> -comp.)	0...10.000 ppm	1 ppm	± 20 ppm / 5% of meas. value*	•
CO ppm (n. H <sub>2</sub> -comp.)	0...20.000 ppm	1 ppm	± 40 ppm / 10% of meas. value*	•
CO %	0...63.000 ppm	5 ppm	± 100 ppm / 10% of meas. value*	•
CO <sub>2</sub> IR sensor	0...20%	0,1 vol.%	± 0,5 vol. % / 5% of meas. value*	•
NO	0...5000 ppm	1 ppm	± 5 ppm / 5% of meas. value*	•
NO ExtraLow	0...300 ppm	0,1 ppm	± 2 ppm / 5% of meas. value*	•
NO <sub>2</sub>	0...1000 ppm	1 ppm	± 5 ppm / 5% of meas. value* <sup>(1)</sup>	•
NO <sub>2</sub> Low	0...100 ppm	0,1 ppm	± 5 ppm / 5% of meas. value* <sup>(1)</sup>	•
SO <sub>2</sub>	0...5000 ppm	1 ppm	± 5 ppm / 5% of meas. value* <sup>(1)</sup>	•
SO <sub>2</sub> (Low CO)	0...5000 ppm	1 ppm	± 5 ppm / 5% of meas. value* <sup>(1)</sup>	•
SO <sub>2</sub> Low	0...100 ppm	0,1 ppm	± 5 ppm / 5% of meas. value* <sup>(1)</sup>	•
H <sub>2</sub>	0...20.000 ppm	1 ppm	± 100 ppm or 5 % of measured value*	•
H <sub>2</sub> S ppm	0...1000 ppm	1 ppm	± 10 ppm / 5% of meas. value*	•
CH <sub>4</sub> IR sensor	0...5%	0,01 vol.%	± 0,3 vol. % / 3% of meas. value*	•
CH <sub>4</sub> IR sensor	0...100%	0,1 vol.%	± 5% of measuring range end 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 (manual)	0...9			•
CALCULATION		RANGE		
CO <sub>2</sub>		0...CO <sub>2</sub> max		✓
Combustion efficiency (ETA)		0...120%		✓
Excess air (Lambda)		>1		✓
Losses		0...100%		✓
CO <sub>(U)</sub> undiluted		x ppm		✓
Dew point		x°C		✓
mg/m <sup>3</sup>		x mg/m <sup>3</sup>		✓
mg/kWh		x mg/kWh		✓
O <sub>2</sub> reference		x %O <sub>2</sub>		✓
NO <sub>x</sub> via NO measured (estimated NO <sub>x</sub> value) <sup>(2)</sup>		= 1.05 NO		•
GAS SAMPLING   GAS TEMPERATURE MEASUREMENT				
Sampling probe (SU), unheated 250 mm (9.8 in.), Ø 10 mm, with thermocouple	1			✓
Fixation cone with Teflon protective ring and stainless-steel tip	2			✓
3-chamber tubing, length 2.6 m (8.5 ft.)	3			✓
High-value T-Gas plug	4			✓
NO <sub>x</sub> sampling tubing with Teflon sleeve				•
COMBUSTION AIR SENSOR				
T-Room sensor (PT 2000) with cable ca. 3 m (10 ft.), magnet fixation & fixation cone				✓
DATA INDICATION / INPUT				
LCD display 79 x 53 mm, 240 x 160 Dots, backlit, graphic-/zoom-capable	6			✓
Keypad with alphanumeric input function	7			✓
DATA PRINTOUT				
Integral thermal quick-printer, paper width 58 mm (2.2 in.)	8			•
External IR-printer 58 mm (2.2 in.)	9			•
Address on protocol changeable by user (via keypad)				•
DATA PROCESSING				
Slot for MM card; data logger function	10			✓
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				✓
Disturbance diagnosis with ecom-AK via connection cable				✓
CONNECTIONS				
Charging connection at instrument				✓
Multi-function interface	10			✓
USB interface for data transfer	10			✓
Analog outputs				•

GAS SENSORS   OPTIONS
NO MEASUREMENT, 0-5000 PPM (Item no. 103934)
NO MEASUREMENT, EXTRALOW 0-300 PPM (Item no. 108507)
NO <sub>2</sub> MEASUREMENT, 0-1000 PPM <sup>(1)</sup> (Item no. 104112)
NO <sub>2</sub> MEASUREMENT, LOW 0-100 PPM <sup>(1)</sup> (Item no. 104125)
SO <sub>2</sub> MEASUREMENT, 0-5000 PPM <sup>(1)</sup> (Item no. 103767)
SO <sub>2</sub> MEASUREMENT, 0-5000 PPM (LOW CO) <sup>(1)</sup> (Item no. 108550)
SO <sub>2</sub> MEASUREMENT, LOW 0-100 PPM <sup>(1)</sup> (Item no. 107052)
CO PPM ENHANCED RANGE, 0-10.000 PPM (Item no. 50102221)
CO% MEASUREMENT, 0-63.000 PPM <sup>(2)</sup> (Item no. 103902)
CO 0-20.000 PPM (NON H <sub>2</sub> -COMP.), inst. of H <sub>2</sub> -comp. (Item no. 104126)
CO <sub>2</sub> MEASUREMENT 0-20%, IR SENSOR (Item no. 104774)
H <sub>2</sub> MEASUREMENT 0-20.000 PPM (Item no. 107343)
H <sub>2</sub> S MEASUREMENT 0-1000 PPM (Item no. 104816)
CH <sub>4</sub> -MESSUNG 0-5%, IR SENSOR (Item no. 105094)
CH <sub>4</sub> -MESSUNG 0-100%, IR SENSOR, Biogas <sup>(3)</sup> (Item no. 107382)
<sup>(1)</sup> Gas cooler and NO <sub>x</sub> tubing recommended. <sup>(2)</sup> Additional filtering recommended. <sup>(3)</sup> Special tubing instead probe optionally available.
GAS PREPARATION   OPTIONS
CONDENSATE TRAP, with electronic monitoring – instead of condensate trap with optical control (Item no. 104626)
MINI GAS COOLER, with electronic monitoring – instead of condensate trap with optical control (Item no. 103843)
DIFFERENTIAL PRESSURE   ACCESSORY
TUBING, for ΔP measurement (± 0-100 hPa), Length approx. 1.5 m (4.9 in.) Item no. 104111
DATA TRANSFER / PRINTOUT   OPTIONS
WI-FI OPTION, instead of Bluetooth Low Energy Item no. 104121



<sup>(1)</sup> Guaranteed by use of NO<sub>x</sub> sampling tubing. | <sup>(2)</sup> When only NO; by NO+NO<sub>2</sub> = NO<sub>x</sub> measurement.



MEASUREMENT GAS PREPARATION		
Condensation trap with optical monitoring and moisture-absorbing pad	11	✓
Condensation trap with electronic monitoring		•
Electric mini gas cooler		•
POWER SUPPLY		
Mains / battery operation		✓
Mains charger, cable length approx. 3 m (10 ft.)		✓
Battery charging via car cigarette lighter		•
Lithium-Ion battery 6 V / 3,3 Ah with long-operation time		✓
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)		✓
Electronic condensation monitoring		•
Longlife sensors		✓
Shock-protection thanks to rubber pieces at corners and front housing	12	✓
TRANSPORT		
Cordura® length-adjustable holding strap with Velcro strip	13	✓
Plastics transport case	14	•
Textile transport bag	15	•
Hardtop case made out of plastics	16	•
DIMENSIONS   WEIGHT   OTHERS		
Dimensions (W x H x D): approx. 400 x 275 x 205 mm (15.7 x 10.8 x 8 in.)		
Weight: approx. 7 kg (15 pd.)		
Calibration certificate, issued after instrument calibration into calibration chamber		✓
Tested and approved acc. to 1. BImSchV (O <sub>2</sub> /CO/Temp./Pressure) and EN 50379-2		✓
Aluminium housing with 10 years guarantee		✓
Admissible ambient temperature: +5... +40°C; max. 90 % rH, non-condensing		
Admissible storage temperature: -20... +50°C		
Fuel types: up to maximal 16 possible		
Recommended interval for check/maintenance: 1 year		
Item no. basic model 7103801		

### DATA PRINTOUT | OPTIONS

#### THERMAL QUICK-PRINTER MODULE 8

INTEGRAL  
58 mm paper width

(Item no. 103840)



#### ECOM-P, INFRARED PRINTER 9

For the documentation of the measured values

- Weight: approx. 350 g (12.3 oz.)
- Dim.: appr. 77 x 77,5 x 40 mm (3 x 3 x 1.5 in.)
- Delivered with 1 printer roll & batteries

Item no. 104630



### DATA RECORDING | ACCESSORY

#### MM CARD 2 GB

Item no. 102469



### DATA TRANSFER | ACCESSORY & OPTIONS

#### DATA CABLE USB, ANALYSER -> PC

- For data transfer to PC
- Length approx. 2 m (6.5 ft.)

Item no. 55818



#### 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. 103903

Printer paper roll (module) Item no. 50513

Printer paper roll (ecom-P) Item no. 56181

\* For gas cooler

Close-up view upper compartment:  
MM card slot, USB & AUX connections,  
connections pressure and 4Pa sensor.



Close-up view lateral connection panel: gas inlet, T-Gas, pressure.





### TRANSPORT | ACCESSORIES

#### PLASTICS TRANSPORT CASE <sup>14</sup>

- Colour: grey with blue folding locks and foam inserts
- Compartments for instrument, IR printer, charger
- Dim.: approx. 460 x 360 (incl. grip) x 110 mm (18.1 x 14.1 x 4.3 in.)
- Weight: approx. 1.25 kg (2.7 pd.)



Item no. 104741 – Available as long as stocks last.

#### TEXTILE TRANSPORT BAG <sup>15</sup>

- Document compartment in bag lid
- Storage compartments for analyser, IR printer, charger
- With shoulder carrying strap
- Dim.: appr. 64 x 40 x 12 cm (25.1 x 15.7 x 4.7 in.)
- Weight: approx. 1.7 kg (3.7 pd.)



Item no. 106548

#### HARDTOP TRANSPORT CASE <sup>16</sup>

Top comfort style (analyser operable out of case)

##### Large stowage space

- With inner holding device for ecom-D analyser
- Shock- and impact-absorbing corners
- Lockable (keys included)
- Inner padded grip in ergonomic design
- Corner stiffening made out of semi-hard plastics, shock-protective strip
- Dimensions: approx. 515 x 325 x 175 mm (20.2 x 12.7 x 6.8 in)
- Weight: approx. 5.5 kg (12.1 pd.)



Item no. 104141

### SOOT MEASUREMENT | MANUAL

Consisting of each 1 manual soot, pump, soot comparison scale, tube of piston grease, socket wrench and 200 soot papers  
Length: 39 cm (15 in.); weight: approx. 0.5 kg (1.1 pd.)



Item no. 50538

### POWER SUPPLY | ACCESSORY

#### CAR CHARGING CABLE

Item no. 30000460



### ΔT MEASUREMENT | ACCESSORIES

#### CONTACT SENSOR T-ROOM (PT2000)

- Range: -20 to 100°C
- Resolution: 0,1°C
- Measurement uncertainty: ± 1°C
- Suitable for pipe Ø up to 100 mm
- Cable length: 3 m (10 ft.)



Item no. 12019

#### CONTACT SENSOR GAS (PT2000)

- Technical data as 12019



Item no. 106982

Special version for connection to high-value plug.

### T-ROOM MEASUREMENT | ALTERNATIVE

#### T-ROOM-STICK PT 2000

- Dim.: approx. 28 x Ø 11 mm (1.1 x Ø 0.04 in.)
- Weight: approx. 5 g (0.17 oz.)



Item no. 102888

#### T-ROOM PROBE PT 2000

- Length 260 mm (10 in.), 3 m (10 ft.) cable



Item no. 104569

### FLOW VELOCITY / DYNAMIC PRESSURE

Internal hardware unit – enables the measurement (item doesn't cover any probe of random type)

- Range: 0-50 m / sec
- Accuracy: ± 0,2 m/s or ± 1% of measurement value
- Resolution: 0.1 m/s

Data valid by use of Prandtl / Pitot probe (not included in package – available from specialized trade).

(Item no. 107201)

#### DYNAMIC PRESSURE PROBE\*

- Range: up to 3 m / sec
- Accuracy: ± 2.5% of measuring range final value
- Length: approx. 250 mm (9.8 in.)
- Tubing/cable approx. 2.5 m (8.2 ft.) & fixation cone

Length = 250 mm (9.8 in.) Item no. 104118

Length = 1000 mm (39.3 in.) Item no. 104560

Length = 1500 mm (59 in.) Item no. 105333



\* The offered item is **not** a Pitot tube.

### GAS SAMPLING | ALTERNATIVE

#### PROBE TIPS SB/SU Ø 10 MM

Length 300 mm (1 ft.) (Item no. 100912)

Length 350 mm (1.1 ft.) (Item no. 106832)

Length 500 mm (1.6 ft.) (Item no. 100914)

#### NO<sub>x</sub> TUBING (with high-value T-Gas socket)

Length 3.5 m (11.4 ft.) (Item no. 103796)





## SIMPLE & MODERN DATA MONITORING & TRANSFER WITH THE APP ECOMMANDER

MEASURE | DISPLAY | RECORD | TRANSFER

1. Download App  
from App Store /  
Playstore  
free of charge



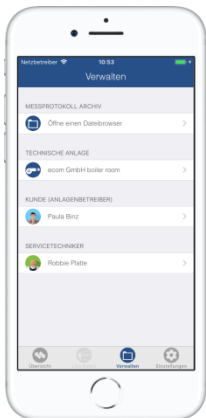
2. Activate pairing via wireless  
connection | Select instrument | Done!



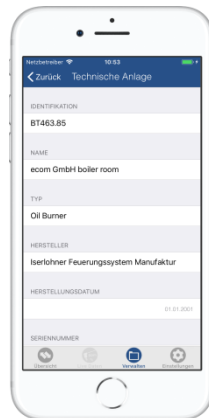
3. Live display of  
measurement values



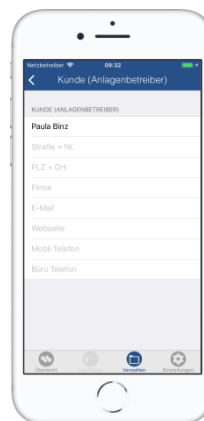
3. Spot and punctual  
measurements



3. Intuitive menu



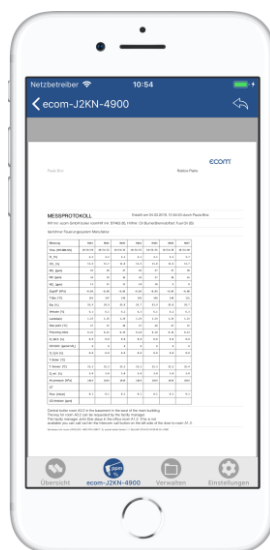
3. Data of  
combustion plant



3. Customer data



3. Data related to  
service engineer



4. Creation of measurement  
protocols in  
practical PDF format



### 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



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 LE (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



OUR [YOUTUBE](#) CHANNEL



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<sub>x</sub> 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.



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FLUE GAS ANALYSIS    PRESSURE MEASUREMENT

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