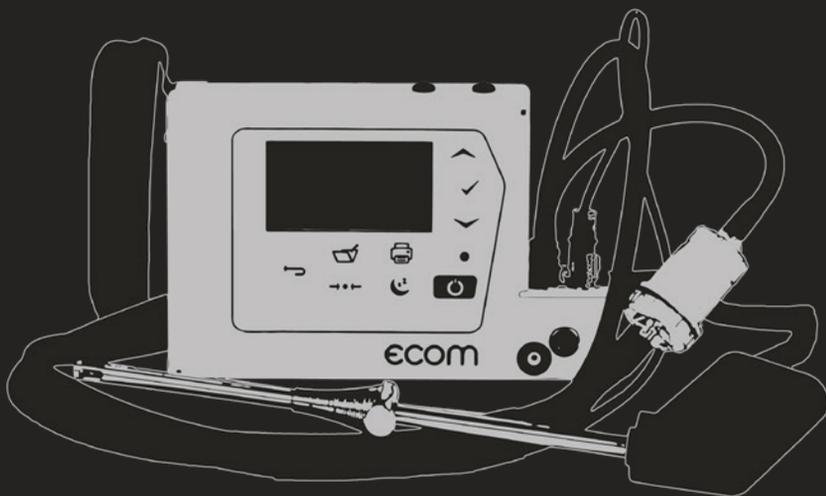


ecom

INTELLIGENT MESSEN!
MEASURE WITH INTELLIGENCE!

ecom[®] B

Flue Gas Analysis



ADDRESS

AM GROSSEN TEICH 2
D-58640 ISERLOHN

TEL.: +49 (0) 2371 | 945 - 5

FAX: +49 (0) 2371 | 40305

INFO@ECOM.DE

WWW.ECOM.DE

ecom GMBH

ecom PRODUCTS OFFER YOU MANY BENEFITS...



EXTREM EFFICIENT.

The high output level (up to 2.6 liters/minute) not only enables ecom analyzers to provide a fast reading: It also makes it possible to bridge long distances during sampling, or negative pressure in the application. Manometers also provide readings in record time.



EXTREM ACCURATE.

The reading accuracy of gas sensors (CO, NO, SO₂) is determined and adjusted at 5, 20 and 40°C in the climatic test chamber using standardized test gases. High-quality sensors provide a perfect reading for pressure-measurements.



EXTREM COMPLETE.

ecom analyzers are sold and designed as an entity (device, probe, probe hose, case). In addition: Printer paper and filter, a solid shoulder strap, PC software and Apps.



EXTREM COOL.

The drier, the better: The gas to be measured is continually cooled to 5°C using a gas cooler. This way, the drying process is controlled. Collected condensate can be easily emptied in some cases this occurs in automatic mode.



EXTREM FAR-REACHING.

ecom analyzers communicate wirelessly: Via Bluetooth, WLAN (wider range, more stable connection), as well as radio (highest range with the most stable connection). This way instruments can be remote-controlled via e.g. smartphones or ecom remote control unit.



EXTREM ROBUST.

Hard on the outside - even harder on the inside! Almost all ecom measuring devices are housed in an ultra-light aluminium casing. Its durability pays off in its daily use - especially in rougher conditions.



EXTREM SAFE.

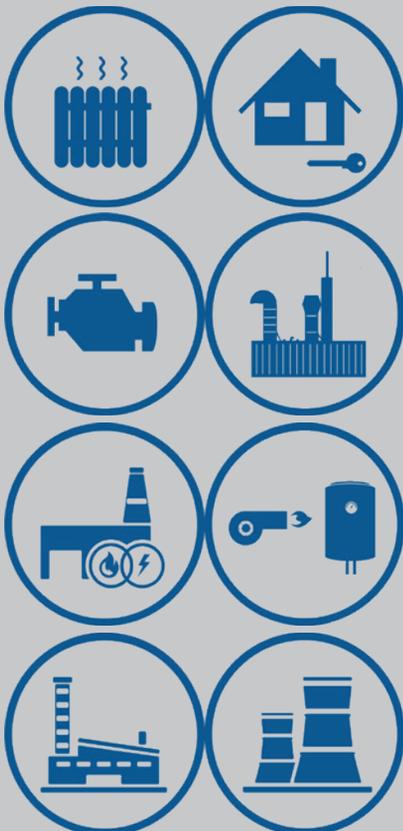
The condensation control protects from moisture. An automatic CO shut-off (flushing of the CO sensor) without interruption of the measuring process ensures the long lifespan of the CO sensor. Each ecom instrument has its own „safety equipment.“



EXTREM LOSS-FREE.

To measure the full concentration of extremely water soluble gases an inner PTFE coated hose or a heated sampling system are available. This guarantees the fast and condensate free flue gas transport.

...BY EVERY APPLICATION.



HEATING

Combustion gas analysers, pressure meters, leak detectors and more for HVAC handcraft, chimney-sweep and heating after-sales service. For control and adjustment works in order to reduce emissions and to optimize the efficiency of heating plants.

ENGINES

For control and adjustment works among all by commissioning of gas engines, thermal power blocks, etc. as well for the perfect measurement of water-soluble gases like nitrogen oxide – especially recommended for the NO_x measurement.

COMBUSTION

Combustion gas analysers, pressure meters, leak detectors and more for control and adjustment works at burners and large-scale firing plants in order to reduce emissions, to arrange for a more efficient combustion process and to optimize the thermal process.

INDUSTRY

Combustion gas analysers, pressure meters, leak detectors and more for the perfect preparation of water-soluble gases (i.a. NO₂ and SO₂) by industrial applications (like e.g. aluminium process, coke oven plants, cement processing, power plants, refineries, waste incineration...).

Overview of technical data

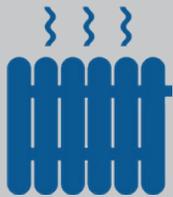
√ Standard • Optional

Flue gas analyser model				B
Gas Components		Resolution	Accuracy	max. 3
O₂	O ₂ (0 - 21 vol.%) - electrochemical	0,1 vol.%	± 0,3 vol.%	√
CO	CO (n. H ₂ -komp. 0 -2.000 ppm) - electrochemical	1 ppm	± 20 ppm or 5 % of reading*	•
	CO (H ₂ -komp. 0 -10.000 ppm) - electrochemical	1 ppm	± 20 ppm or 5 % of reading*	√
NO	NO (0 - 5.000 ppm) - electrochemical	1 ppm	± 5 ppm or 5% of reading*	•
Additional Measurements Display Options		Resolution	Accuracy	
T-Gas	0 - 500 °C	1 °C	± 2 °C or 1,5 % of the reading*	√
T-Air	0 - 99 °C	1 °C	± 1 °C	√
Pressure ΔP	± 100 hPa	0,01 hPa	± 0,5 hPa or 1 % of the reading*	•
Calculated values				
CO ₂ - 0 - CO ₂ max				√
Combustion efficiency (ETA)				√
Excess air (Lambda) - > 1				√
Losses qA - 0 - 100 %				√
Dew point - x °C				√
mg/m ³ - x mg/m ³				√
mg/KWh - x mg/KWh				√
O ₂ reference - x % O ₂				√
Gas processing				
Condensation trap with moisture-absorbing pad				√
Operation safety				
Temperature trend indication for core stream search				√
CO switch-off				√
Fresh air purge by CO exceeding				√
Fresh air purge after operation				√
Sampling system				
Unheated probe, type BB				√
Gas transportation (tubing)				
Multi-chamber silicone tubing				√
Printer				
Infrared interface for external printer				√
Data processing				
Serial interface for data transfer				√
Wireless data interface (e.g. for connection to a smartphone or tablet)				√
Internal memory				√
Remote control				
via backlit keypad				√
via smartphone/tablet (free iOS + Android app)				√
Transport				
Carrying bag				•

* the higher value prevails

ecom[®] B

FLUE GAS ANALYSIS



ecom-B EASY

COMPACT, HANDHELD FLUE GAS ANALYZER

- O₂/CO (H₂-comp.) Longlife sensors
- Up to 3 sensors possible
- Aluminum housing fitted with magnets on the back
- Integral LiFePo4 high performance battery with long lifecycle
- Sampling probe, length 220 mm, with fixation cone; 3-chamber sampling tubing length 2.2 m
- T-Room sensor with cable and fixation cone
- Mains charger included
- Automatic CO-shutoff and flushing (without interruption of measurement)
- Optical condensate monitoring
- Calibration certificate
- Wireless data interface (e.g. for connection to a smartphone or tablet)

Dimensions (W x H x D) 220 x 125 x 75 mm

Weight approx. 1.5 kg (complete)

ecom-B ALU-CASE

ADDITIONALLY WITH PROTECTIVE HOUSING (FIG. RIGHT)

- Robust aluminium housing with swingable and lockable protective cover
- Backside magnets for attachment to boiler casing
- Side slots for optional carrying strap
- T-room stick (instead of sensor)
- Sampling probe, length 150 mm, with fixation cone; 3-chamber sampling tubing length 1.5 m

ADDITIONAL OPTION

- NO sensor
- Textile bag

Dimensions (W x H x D) closed 250 x 180 x 80 mm

open 250 x 350 x 80 mm

Weight approx. 2,1kg (complete)

Measurable Gases



● = Base; ● = Optional EC



ACCURATE



ROBUST



SAFE



FAR-REACHING



COMPLETE



Testing according to DIN EN 50379-2 and 1st. BImSchV.



- 1 Robust aluminum housing with swingable and lockable protective cover
- 2 Slot for carrying strap
- 3 LCD-Display with backlight
- 4 Condensate trap
- 5 Sampling probe with fixation cone and 3-chamber sampling tubing
- 6 T-Room stick
- 7 Two strong fixation magnets
- 8 Serial interface



USEFUL

ecom-AK

READOUT UNIT FOR DIGITAL AUTOMATIC BURNER CONTROLLERS

- Automatic identification of automatic burner controller type
- Readout feature for errors and operating conditions
- Built-in display
- Data transfer via cable to PC or ecom-EN3 analyzer
- Data transfer via radio to the ecom-J2KNpro control panel (display + printing via flue gas analyzer)

Displayed data:

- Display of recent and past failures
- Display of burner operating conditions
- Measurement of the flame signal/comparison with minimum value
- Checks of delayed flame development
- Detection of the number of burner starts
- Display of all relevant operating times (safety time, etc.)

Dimensions (W x H x D) approx. 88 x 41 x 32 mm

Weight approx. 322 g - incl. belt pouch



ROBUST



COMPLETE



EFFICIENT



ecom-AK will show the following display messages:

Automat DKO 972 / 22	Identification of burner controller (Honeywell-Satronic DKG, DKO, DKW, DMO, DMG, DLG, DVI, DIO, SH, SG incl. N versions as well as Siemens-Landis & Staefa LMG, LMO).
* 2.3µA 231V	Indication of burner operating mode.
* 2.2µA IS * 1.2µA MIN	Measurement of flame signal and comparison with minimal value.
Rest time TSA 3.9 sec	Check if flame occurs immediately or with delays.
Current error Flame signal during straylight check !	Indication of current disturbance source as well as of 5 past disturbances.
Start-ups counter 664	Determination of burner starts.



ecom-UNO

FOR THE ADJUSTMENT OF GAS BURNERS /GAS HEATINGS

- Device connection pressure (flow pressure)
- Nozzle pressure (flow pressure)
- Gas operating pressure (system pressure)
- Static pressure
- Switchable units: hPa / mbar, mmH₂O, psi, mmHg
- Measurement range: ± 200 hPa, ± 2038 mmH₂O, ± 2.9 psi, ± 150 mmHg
- Resolution: 0.01 hPa / 0.01 mmH₂O / 0.01 psi / 0.01 mmHg
- Accuracy: approx. 1%
- Overload: 300 hPa / 3060 mmH₂O / 4.35 psi / 225 mmHg

Dimensions (W x H x D) approx. 106 x 64 x 28 mm

Weight approx. 150 g



ecom-LSG

DETECTION OF FLAMMABLE GASES

- Three sensitivity levels adjustable
- Acoustic signal on/off at choice
- Display range up to 0.5% vol. CH₄, Response time: < 2 seconds
- Backlit bargraph
- Display approx. 20 x 7 mm
- 1-14 bars (10 bars = approx. 1000 ppm CH₄)
- Warm-up time: approx. 3 minutes
- Sensor temperature compensation (-5°C to 40°C)

Dimensions housing (W x H x D) approx. 155 x 35 x 22 mm

Swan-neck: approx. 355 mm

Weight: approx. 200 g

ACCESSORIES



Transport bag

Transport bag incl. comfort carrying strap.



Thermal printer

ecom-P thermal printer with infrared interface for wireless data transmission.



Filter plate

Multi-level processing: water separation in condensate trap; pre filtering via fine particulate filter; silica gel drying; removal of sensor-damaging, organic compounds in the hydrocarbon filter.



CO multi-hole probe

For the CO measurement of the CO concentration according to KÜO (sweeping and monitoring system) - extendable from 80 to 280 mm.



Ring slot multi-hole probe

For measurement on concentric exhaust systems. Continuously extendable (80 to 280 mm) - with three easily replaceable sealing plugs for measuring openings from Ø 5 to 25 mm.



Contact sensor

Forerun and backrun temperature measurement.



T-Room-probe (PT 2000)

For measuring the room or intake air temperature - for example for concentric flue gas systems.



Soot pump set

Consisting of soot pump, soot comparison scale, piston lubricant oil, socket wrench and 200 soot test strips.



Probe extension

For probe type Ø 8 mm, with flexible tube center piece. Is placed on the probe seats for measurements at difficult to reach, angled measuring openings.

Other accessories on demand.

HEADQUARTER

ecom GmbH
Am Grossen Teich 2
58640 Iserlohn
GERMANY

www.ecom.de



ECOM AMERICA Ltd.
1628 Oakbrook Drive
30507 Gainesville, Georgia
USA

www.ecomusa.com

ecom SAS
5, rue de Lisbonne
67300 Schiltigheim
FRANCE

www.ecom.fr

ecom (Beijing) Co., Ltd.
Unit 05 room 301
3rd floor building 2
courtyard 9 Jiuxianqiao East Road
Chaoyang District, Beijing
CHINA

www.ecomchina.com.cn

Partner

Find your international partner on:

www.ecom.de/en/kontakt/