



100% Calibration



Super-Efficiency



Shock-Proof



Safety First



Wireless Communication



All Inclusive



Cool but Dry



Lotus Effect

ecom-EN2 The All-rounder Flue Gas Analyzer Family

The ecom-EN2 is an all-rounder in flue gas analysis - on the one side small and compact, on the other side on the top of technology, upgradeable with many options and simply an instrument fun to work with.



ecom-EN2

Product Features

- Up to 4 gas sensors (Longlife)
- ± 100 hPa differential pressure measurement
- Integral thermal quick-printer
- Soot measurement via soot pump (option)
- Backlit display
- Electronic condensate monitoring
- Professional gas preparation by mini Peltier cooler equipment with automatic condensation evacuation (option)
- 3-chamber tubing, coaxial sampling probe
- Special tubing with Teflon sleeve e.g. for NO_x and SO_2 measurements (option)
- T-Room sensor with magnet for easy fixation on metal surfaces
- Emission, temperature and draught measurement without plug connection change
- Integral module for data storage on MM card (card optional)
- Wireless Bluetooth or Wi-Fi data transfer module (option)
- ecom PC software free of charge
- Comprehensive accessory program

Measured values

- O_2 (0-21%)
- CO (0-4000 ppm)
- Gas temperature (0-500°C)
- Air temperature (0-99°C)
- Pressure (± 100 hPa)
- Differential pressure (± 100 hPa)

Options:

- CO extended range (0-10.000 ppm)
- CO% measurement (0-63.000 ppm)
- NO measurement (0-5000 ppm)
- NO_2 measurement (0-1000 ppm)
- SO_2 measurement (0-5000 ppm)
- Differential temperature

Calculated Values

CO_2 , $\text{CO}_{(\text{undiluted})}$, NO_x , losses, efficiency (0-120%), dew point, mg/kWh, mg/m³, adjustable O_2 ref.

Display

- LC display, 79 x 53 mm, 240 x 160 dots
- Graphic-capable
- Backlit for optimal reading also in the dark

Sampling Probe

- Coaxial probe 220 mm
- 3-chamber tubing 2.6 m
- Fixation cone with teflon heat-protective part

Measurement Gas Preparation

- Quick gas transport (measurement values available promptly)
- Condensate trap with fine dust filter
- Electronic level monitoring
- Electric Peltier cooler with automatic condensate evacuation (option)

Operation Safety Features

- Temperature trend indication for core stream search
- CO switch off without measurement interruption by exceeding of preset limit value



NEW: Wireless data transfer via WiFi



NEW: ecom-R remote monitor with data storing / printing capabilities by distance

- Automatic fresh air purging by CO exceeding
- Automatic fresh air purging after measurement
- Integral flow meter for optical control of pump performance
- Electronic condensate monitoring
- Longlife sensors

Printer

- Thermal quick-printer 58 mm
- Matrix printer for long-lasting and non-fading documentation of measurement results (option)

Data Processing

- Remote data view & saving / printer start via ecom-R (option)
- Data logging function
- Data storage on optional MM card (card optional)
- Bluetooth or Wi-Fi interface at choice (option)
- Storage and illustration of disturbance diagnosis data provided via cable connection by ecom-AK read-out head
- Data exchange with ecom PC software

Connections

- Multifunctional interface
- USB interface for data transfer

Power Supply

- Battery/Mains power
- Including external charger

Transport

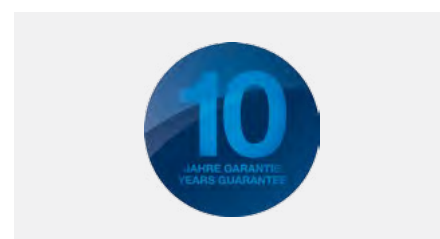
- Aluminium-framed transport case with length-adjustable shoulder carrying strap
- Under-case for extra storage (optional)

Dimensions / Weight

- Approx. 400 x 260 x 175 mm (L x H x W)
- Approx. 6 kg (complete)

For the perfect measurement of NO_x , SO_2 and other water-soluble gases:

- 100% calibration (climatic chamber)
- lotus effect (special PTFE tubing for gas transport)
- super efficiency (quick gas conveyance through performing pump)
- dry cooling (perfect gas preparation via mini Peltier cooler)



EN 50379-2 and 1st BimSchV approved

| Item no. | Description |
|----------|--|
| 1080000 | ecom-EN2, super-efficient flue gas analyser with O₂ and CO (H ₂ -compensated) Longlife sensors. Fitted in aluminium-framed transport case, complete with sampling probe 220 mm incl. thermocouple with fixation cone, 3-chamber tubing (2.6 m), T-Room sensor with cable incl. fixing cone with magnet, integral thermal quick-printer, power supply charger, automatic CO switch off and fresh air purge (without measurement interruption) electronic condensate monitoring, consumables kit, operation manual on USB drive, calibration certificate –issued after 100% calibration into calibration chamber.PC software for data management downloadable free of charge from www.rbr.de |
| 1080100 | ecom-EN2, super-efficient flue gas analyser , as above but with electronic Peltier cooler and automatic condensation evacuation |
| 100161 | NO measurement (0 - 5.000 ppm) |
| 100162 | NO₂ measurement (0 - 1.000 ppm) |
| 100163 | SO₂ measurement (0-5000 ppm) |
| 100267 | Special 3-chamber sampling tubing , recommended for NO _x and SO ₂ measurement. Slim inner diameter – high flow speed. Length 3.5 m. Under-case recommended for storage. |
| 100164 | CO% measurement (0 – 0-63.000 ppm) |
| 50102221 | CO enhanced ppm measurement range (0-10.000 ppm) |
| 100233 | Tubing for differential pressure measurement (1.5 m) |
| 56421 | Under-case - additional storage space for soot pump, temperature sensors, gas leak detector, pressure meter, working tools, etc. – Basic height, dim. approx. 400 x 90 x 175 mm (L x H x W) |
| 56508 | Under-case - additional storage space for soot pump, temperature sensors, gas leak detector, pressure meter, working tools, etc. – Double height, dim. approx. 400 x 150 x 175 mm (L x H x W) |
| 102350 | ecom-R remote control and monitoring unit - For data view, data remote recording & printout via Bluetooth.LCD display, dim. ca. 70 x 38 mm, backlit, graphic-capable. With rear magnet for fixation on metal surfaces. Powered by 2 one-way batteries 1.5 V AA Mignon, incl. protection pouch. Dim.: approx. 145 x 80 x 45 (W x H x D). Also upgradeable on existing analysers. |
| 102469 | MM card, 2 GB - pre-formatted for use with ecom analysers |
| 56532 | Data cable, USB – for connection analyser to PC |
| 100946 | Set MM card + data cable USB (at price-attractive rate) |
| 100745 | Bluetooth module , for wireless data transfer to PC |
| 103448 | Wi-Fi module , for wireless data transfer to PC resp. mobile end units – more info on www.rbr.de |
| 101769 | 8-channel analogue output box for external logging/recording units (V / mA), incl. mains power pack, cable to analyser, RS 232 cable and software (download from www.rbr.de) |
| 10166 | T-Room probe – Length 260 mm with 3 m cable |
| 12019 | Contact sensor, room temperature (PT 2000) , for differential temperature measurement. Range: -20 to 100°C; resolution: 0,1°C measurement uncertainty: ± 1°C; pipe diameter up to: 100 mm; cable length: 3 m |
| 12021 | Contact sensor , gas temperature (Ni/CrNi), for differential temperature measurement. Range: -20 to 100°C; resolution: 0,1°C measurement uncertainty: ± 1°C; pipe diameter up to: 100 mm; cable length: 3 m |
| 50538 | Soot pump set - Consisting of soot pump, soot comparison scale, tube of piston grease, socket wrench and 200 soot papers |
| 100235 | Fixation for soot pump – integrated in case cover |
| 100965 | Universal CO multi-hole probe – telescopic, 80–280 mm |
| 100943 | Universal O₂ multi-hole probe – telescopic (80-280 mm) with three easily exchangeable sealing plugs for measurement openings from ø 5 to 25 mm. |
| 30000460 | Car charger cable – for instrument charging via cigarette lighter |
| 100920 | Dynamic pressure measurement – Range: 0-50 m / sec; accuracy: ± 0.2 m/s or ± 1% of measurement value; resolution: 0.1 m/s. Data valid only by use of Prandl / Pitot tube (not included) |
| 30004115 | Dynamic pressure measurement probe, length 250 mm – Range: up to 3 m / sec; accuracy: ± 2.5% of measuring range final value. With tubing/cable approx. 2.5 m and fixation cone. |
| 100930 | Dynamic pressure measurement probe, length 1000 mm – Range: up to 3 m / sec; accuracy: ± 2.5% of measuring range final value. With tubing/cable approx. 2.5 m and fixation cone. |
| 100814 | Gas washing bottle for solid combustibles measurement - For pre-filtering of the dust-soiled gas, gas surface widening thru bubble formation and dilution of sensor-damaging organic compounds (mini Peltier cooler compulsory; non-suitable for NO _x resp. SO ₂ measurement) |
| 100813 | Mini filtering plate for ecom-EN2 consisting of water trap, filtering wool cartridge, silica beads cartridge and activated carbon cartridge. Gets hooked at instrument case (item can be stowed in under-case). Incl. connection hoses. |
| 20011620 | Filtering case consisting of water trap, large filtering wool cartridge, large silica beads cartridge, large activated carbon cartridge. Incl. connection hoses. |

perfect NO_x
+ SO₂
measurement