

ecom-EN2-R

All-rounder with Soot Measurement Feature

Product Features

- Up to 4 gas sensors (Longlife)
- ± 100 hPa differential pressure measurement
- Integral thermal quick-printer
- 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 250 mm with electric heating for dry soot samples
- 3-chamber tubing 3 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)

Printer

- Thermal quick-printer 58 mm
- Matrix printer (option)



NEW: Wireless data transfer via WiFi



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

Operation Safety Features

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

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

Power Supply

- Battery/Mains power
- Including charger

Connections

- Multifunctional interface
- USB interface for data transfer

Transport

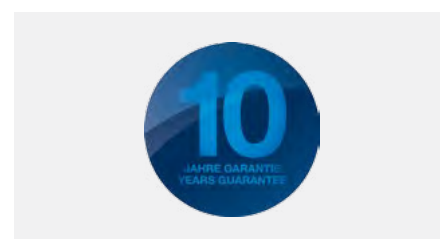
- Aluminium-framed transport case with length-adjustable shoulder carrying strap
- Under-case for extra storage (option)

Dimensions / Weight

- Approx. 400 x 275 x 205 mm (L x H x W)
- Approx. 7 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

ecom-EN2-R All-rounder with Soot Measurement Feature.

Item no.	Description
101248	ecom-EN2-R, super-efficient flue gas analyser with O₂ and CO (H₂-compensated) Longlife sensors and integral soot measurement Fitted in aluminium-framed transport case, complete with sampling probe 220 mm incl. thermocouple with fixation cone, 3-chamber tubing (3m), 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
101336	ecom-EN2-R, super-efficient flue gas analyser , as above but with electronic Peltier cooler and automatic condensation evacuation
100161	NO measurement (0 - 5.000 ppm) At choice with our without NO _x calculation.
100162	NO₂ measurement (0 - 1.000 ppm) Note: NO _x measurement requires each a NO and a NO ₂ sensor.
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)
100715	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)
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
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-R 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

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Further tubing resp. probe lengths as well as flexible probe tips are additional items in the delivery program. Further specifications/features also available on request.