

## ecom-D Compact freehand measurement

Thermal printer module or WiFi-connection? Condensate trap or electric gas cooler? Hand-held or compact analysis out of the suitcase? The ecom-D offers a large variety of choice.



100% Calibration



Super-Efficiency



Shock-Proof



Safety First



Wireless Communication



All Inclusive



Cool but Dry



Lotus Effect



**ecom-D**

**Product Features**

- Up to 4 gas sensors (Longlife)
- ± 100 hPa differential pressure measurement
- Thermal quick-printer (optional module)
- Soot measurement via soot pump (option)
- Backlit display
- Condensate monitoring
- Professional gas preparation by mini gas cooler equipment (option)
- 3-chamber tubing, coaxial sampling probe
- Special tubing with Teflon sleeve e.g. for NO<sub>x</sub> and SO<sub>2</sub> measurements (option)
- T-Room sensor with magnet for easy fixation on metal surfaces
- 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 (remote display, special probes, manual soot pump set...)

**Measured values**

- O<sub>2</sub> (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<sub>2</sub> measurement (0-1000 ppm)
- SO<sub>2</sub> measurement (0-5000 ppm)
- H<sub>2</sub>S measurement (on request)
- Differential temperature

**Calculated Values**

CO<sub>2</sub>, CO (undiluted), NO<sub>x</sub>, losses, efficiency (0-120%), dew point, mg/kWh, mg/m<sup>3</sup>, adjustable O<sub>2</sub> ref.

**Display**

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

**Sampling Probe**

- Sampling probe pistol grip style 250 mm
- Fixation cone
- 3-chamber tubing 2.6 m

**Measurement Gas Preparation**

- Quick gas transport (measurement values available promptly)
- Condensate trap with filter function
- Electric gas cooler (option)

**Operation Safety Features**

- Temperature trend indication for core stream search
- CO switch off without measurement interruption by exceeding of pre-set limit value
- Automatic fresh air purging by CO exceeding
- Automatic fresh air purging after measurement
- Optical condensate monitoring with filter function
- Electronic condensate monitoring (option)
- Longlife sensors



**NEW:** Wireless data transfer via WiFi



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

**Printer**

- Thermal quick-printer 58 mm (optional module)

**Data Processing**

- Data logging function
- Data storage on optional MM card (card optional)
- Storage and illustration of disturbance diagnosis data provided via cable connection by ecom-AK read-out head
- Data exchange with ecom PC software EN 50379-2 and 1st BimSchV approved
- Bluetooth or Wi-Fi interface at choice (option)
- Remote data view & saving/printer start via ecom-R (option)

**Connections**

- Charging connection at analyser
- Multifunctional interface
- USB interface for data transfer

**Power Supply**

- Battery (Li-Ion) / Mains power
- Including external charger

**Transport**

- Hard-shell transport case made out of plastics (accessory)
- Plastics transport case with foam inlets (accessory)

**Weight**

- Starting by approx. 2 kg (basic version w/o. printer/gas cooler) – depending on selected features

**For the perfect measurement of NO<sub>x</sub>, SO<sub>2</sub> and other water-soluble gases:**

- 100% calibration (climatic chamber)
- lotus effect (special PTFE tubing for gas transport)
- dry cooling (perfect gas preparation via mini Peltier cooler)



EN 50379-2 and 1st BimSchV approved

Item no.	Description
103801	<b>ecom-D Easy</b> With O <sub>2</sub> & CO (H <sub>2</sub> -comp.) Longlife sensors; fitted in aluminium housing with high-value pistol grip sampling probe SU (250 mm) D= 10 mm; thermocouple, cone and high-value 3-chamber tubing (2.60 m); high-value T-Gas plug; T-Room sensor with cable, fixation cone & magnet; power pack, automatic CO switch-off and purging (without measurement interruption); optical condensate monitoring; operation manual on USB drive; calibration certificate – issued after 100% calibration in climatic chamber; PC software for data management downloadable free of charge from www.rbr.de
103802	<b>ecom-D Easy with thermal quick-printer module</b> With O <sub>2</sub> & CO (H <sub>2</sub> -comp.) Longlife sensors; fitted in aluminium housing with high-value pistol grip sampling probe SU (250 mm) D= 10 mm; thermocouple, cone and high-value 3-chamber tubing (2.60 m); high-value T-Gas plug; T-Room sensor with cable, fixation cone & magnet; power pack, automatic CO switch-off and purging (without measurement interruption); optical condensate monitoring; thermal quick-printer module; operation manual on USB drive; calibration certificate – issued after 100% calibration in climatic chamber; PC software for data management downloadable free of charge from www.rbr.de
103803	<b>ecom-D Expert with mini gas cooler, thermal quick-printer module and high-value hardtop transport case (lockable, with inner instrument holding device – see below)</b> With O <sub>2</sub> , CO (H <sub>2</sub> -comp.), NO, NO <sub>2</sub> Longlife sensors; fitted in aluminium housing with high-value pistol grip sampling probe SU (300 mm) D= 10 mm; thermocouple, cone and high-value 3-chamber NO <sub>x</sub> tubing (3.50 m); high-value T-Gas plug; T-Room sensor with cable, fixation cone & magnet; power pack, automatic CO switch-off and purging (without measurement interruption); electronic condensate monitoring in mini gas cooler; thermal quick-printer module; operation manual on USB drive; calibration certificate – issued after 100% calibration in climatic chamber; delivered in hard-shell transport case; PC software for data management downloadable free of charge from www.rbr.de
103804	<b>ecom-D Engine with mini gas cooler, thermal quick-printer module and high-value hardtop transport case (lockable, with inner instrument holding device – see details below)</b> With O <sub>2</sub> , CO (H <sub>2</sub> -comp.), NO, NO <sub>2</sub> Longlife sensors; fitted in aluminium housing with high-value pistol grip sampling probe SU (360 mm) D= 8 mm; thermocouple, cone with mini heat protection shield and high-value 2-chamber NO <sub>x</sub> tubing (3.50 m); T-Room stick; high-value T-Gas plug; power pack, automatic CO switch-off and purging (without measurement interruption); electronic condensate monitoring in mini gas cooler; thermal quick-printer module; MM card; USB data cable; operation manual on USB drive; calibration certificate – issued after 100% calibration in climatic chamber; delivered in hard-shell transport case; PC software for data management downloadable free of charge from www.rbr.de
103994	<b>NO measurement (0-5000 ppm).</b> At choice with our without NO <sub>x</sub> calculation.
104112	<b>NO<sub>2</sub> measurement (0-1000 ppm)</b> Note: NO <sub>x</sub> measurement requires each a NO and a NO <sub>2</sub> sensor.
103767	<b>SO<sub>2</sub> measurement (0-5000 ppm) Special sampling tubing,</b> for accurate NO <sub>x</sub> and SO <sub>2</sub> measurement. Slim inner diameter – high flow speed; length 3.5 m. a 5 m NO <sub>x</sub> tubing (max. length) to fit into hard-shell transport case is available on request.
103902	<b>CO% measurement (0-63.000 ppm)</b> <b>CO enhanced ppm measurement range (0-10.000 ppm)</b>
104141	<b>Hardtop plastics transport case with inner holding device for ecom-D compact analyser (all versions)</b> 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 325 175 mm (L x D X H)
104142	<b>Plastics transport case, black with blue folding locks and foam inserts</b> Basic version for ecom-D storage/transport. dimensions: approx.. 530 x 400 120 mm (L x D X H). Not suitable for sampling tubing > 3.5 m and NO <sub>x</sub> hoses.
104111	<b>Tubing for differential pressure measurement (1.5 m)</b>
104115	<b>ecom-R</b> remote control and monitoring unit - For data view, data remote recording & printout via Bluetooth data transfer (to be ordered separately). LCD display, dim. ca. 70 x 38 mm, backlight, 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	<b>MM card, 2 GB</b> - pre-formatted for use with ecom analysers
55818	<b>Data cable, USB</b> – for connection analyser to PC
104120	<b>Bluetooth module,</b> for wireless data transfer to PC
104122	<b>Wi-Fi module,</b> for wireless data transfer to PC resp. mobile end units – more info on www.rbr.de/mobile
101769	<b>8-channel analogue output box</b> for external logging/recording units (V / mA), incl. mains power pack, cable to analyser, RS 232 cable and software (download from www.rbr.de)
102888	<b>T-Room stick</b> - H 28 x Ø 11 mm
102156	<b>T-Room sensor (PT 2000) with cable 3 m</b> – Range -20 to 100°C; resolution 0,1°C; measurement uncertainty ±1°C
10166	<b>T-Room probe</b> – Length 260 mm with 3 m cable
12019	<b>Contact sensor, room temperature (PT 2000),</b> 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
104119	<b>Heating Check and 4 Pa measurement</b> incl. accessories (capillary hoses, probes for ventilation & surface losses temperature Measurement, incl. magnet fixation)
50538	<b>Soot pump set</b> - Consisting of soot pump, soot comparison scale, tube of piston grease, socket wrench and 200 soot papers
100965	<b>Universal CO multi-hole probe</b> – telescopic, 80–280 mm
100943	<b>Universal O<sub>2</sub> multi-hole probe</b> – telescopic (80-280 mm) with three easily exchangeable sealing plugs for measurement openings from Ø 5 to 25 mm.
100815	<b>Gas washing bottle for solid combustibles measurement</b> - 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 <sub>x</sub> resp. SO <sub>2</sub> measurement)
100813	<b>Mini filtering plate</b> consisting of water trap, filtering wool cartridge, silica beads cartridge and activated carbon cartridge. Gets hooked at transport case. Incl. connection hoses.
20011620	<b>Filtering case</b> consisting of water trap, large filtering wool cartridge, large silica beads cartridge, large activated carbon cartridge. Incl. connection hoses.
103575	<b>Metal filter as probe cap, made out of sintered metal.</b> Suitable for probe tips Ø 8 mm and 10 mm (incl. tensing mechanism and lamping rings to fit the various diameters). External diameter approx. 15 mm, total length approx. 100 mm.

perfect NO<sub>x</sub>  
+ SO<sub>2</sub>  
measurement

# ecom-D



ecom-D – Easy (optional with Wi-Fi)



ecom-D with thermal quick-printer module



ecom-D with gas cooler and thermal quick printer (optimal for NO<sub>x</sub>/SO<sub>x</sub> measurement)



Releasing aid for easy detaching of stable magnet positioning



Free hand thanks to Wi-Fi data transfer  
Data transmission and process on smartphone or Laptop/PC (Apps + software free of charge)



Hardtop plastics transport case for ecom-D: The analyser can be operated while in the transport case



Plastics transport case: for ecom-D transport