

# EMISSIONS MONITORING SYSTEM

## HANDHELD MULTIGAS ANALYZER



**BEST  
PERFORMANCE  
BEST PRICE**

**LOW WEIGHT:  
LESS THAN 800 gr.**

**NOW WITH 7 SENSORS**  
New Sensors:  
CO<sub>2</sub> 0 - 20 % (IR-Bench)  
H<sub>2</sub>S 0 - 500 ppm (EC Sensor)

# COSA 707

THE MOST POWERFUL HANDHELD  
MULTIGAS ANALYZER FOR INDUSTRIAL  
COMBUSTIONS, EMISSION AND  
PROCESS MONITORING MEASUREMENTS  
USING UP TO 5 ELECTROCHEMICAL SENSORS

- O<sub>2</sub>
- CO<sub>2</sub>  
NDIR
- CO
- CO  
low
- NO
- NO  
low
- NO<sub>2</sub>
- NO<sub>x</sub>
- SO<sub>2</sub>
- H<sub>2</sub>S



**NOW WITH 7 SENSORS**  
 New Sensors:  
 CO<sub>2</sub> 0-20% (IR-Bench)  
 H<sub>2</sub>S 0-500 ppm (EC Sensor)

# COSA 707

THE MULTI TALENTED HANDHELD FLUE GAS ANALYZER USING UP TO 5 ELECTROCHEMICAL SENSORS

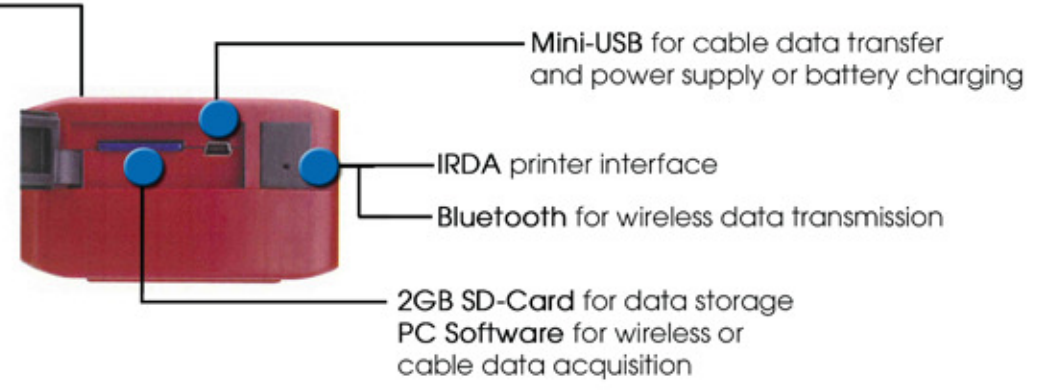
Suitable for emission monitoring of combustions & industrial processes

**MAIN FEATURES:**

- Modern, slimline enclosure with fixing magnets
- Super bright, color 3.5" TFT-display with LED backlight
- Mini-USB for cable data transfer
- IRDA interface for high speed infrared printer
- Integrated condensate trap with PTFE filter and LED backlight
- Menu guided software and function keys
- Robust stainless steel gas connectors
- Rechargeable Lithium-Ion battery for min. 15 hrs, or NiMH for min. 6 hrs operation
- Less than 800 gr. weight (for instrument only)

Measurement of:	
O <sub>2</sub>	0 ... 21,00 %
CO <sub>2</sub> IR bench	0 ... 20,00 %
CO <sub>2</sub> calculated value	0 ... 20,00 %
CO low	0 ... 300 ppm
CO/H <sub>2</sub> compensated	0 ..10.000 ppm
NO low	0 ... 300 ppm
NO	0 ... 5.000 ppm
NO <sub>2</sub>	0 ... 1.000 ppm
NO <sub>x</sub>	0 ... 5.000 ppm
SO <sub>2</sub>	0 ... 5.000 ppm
H <sub>2</sub> S	0 ... 500 ppm
CO high	0 ... 2,0 %
CO very high	0 ... 10,00 %
Combustion air temperature	up to 100 °C
Stack gas temperature	up to 1.100 °C *
Stack draft measurement	± 100 hPa
Differential pressure	± 100 hPa
Differential temperature	up to 1.100 °C *

\* with adequate probes

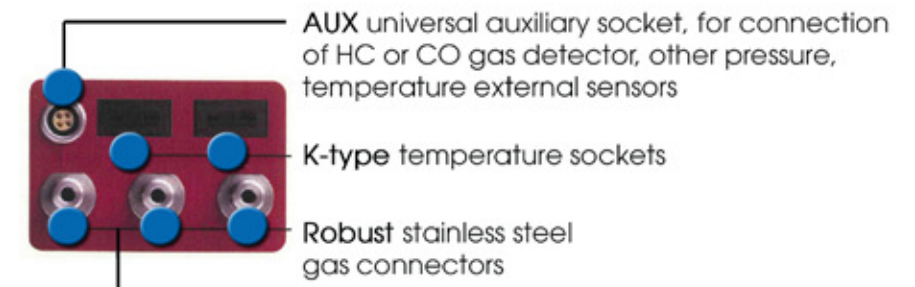


3.5" TFT Display  
 Super bright, colour 3.5" TFT display with backlight and zoom function

CO-sensor protection by fresh air purging pump

Menu guided software and function keys

User friendly, dirt and moisture resistant keypad



Condensate Trap  
 Effective, backlit condensate trap with reusable Teflon filter for protection against dirt and soiling



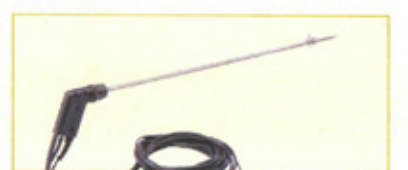
ABS transport case including infrared high speed printer



Shoulder strap



Gas flow velocity measurement with m/s, absolute pressure sensor and different pitot tubes



Probes and hoses  
 MRU offers a wide range of standard (up to 650 °C) and industrial probes (up to 1.100 °C) with various lengths



## Technical Specifications

<b>OPTIMA 7 GAS ANALYZER</b>	Handheld analyzer with up to 5 electrochemical sensors	
<b>Fuel types</b>	natural gas, liquid gas, oil heavy, oil light, pellets, wood, bio diesel, expandable fuel type list	
<b>Measurement components:</b>	<i>range</i>	<i>accuracy</i>
<b>Oxygen O<sub>2</sub></b>	0 ... 21,0 Vol-%	± 0,2 Vol-% abs.
<b>Carbon dioxide CO<sub>2</sub> IR bench</b>	0 ... 20 Vol-%	± 0,4 Vol-% abs.
<b>Carbon monoxide CO (Hz-comp)</b>	0 ... 4.000 ppm * overload up to 10.000 ppm	± 10 ppm or** 5 % reading up to 4.000 ppm or** 10 % reading up to 10.000 ppm
<b>Carbon monoxide CO<sub>low</sub> (special software and calibration)</b>	0 ... 300 ppm (with 0,1 ppm resolution)	± 2,0 ppm or** 5 % reading
<b>Carbon monoxide CO<sub>high</sub></b>	0 ... 4.000 ppm * overload up to 20.000 ppm	± 100 ppm or** 5 % reading up to 4.000 ppm or** 5 % reading up to 20.000 ppm
<b>Carbon monoxide CO<sub>very high</sub></b>	0 ... 4,00 % * overload up to 10,00 %	± 0,02% or** 5 % reading up to 4,00 % or** 10 % reading up to 10,00 %
<b>Nitric monoxide NO</b>	0 ... 1.000 ppm * overload up to 5.000 ppm	± 5 ppm or** 5 % reading up to 1.000 ppm or** 10 % reading up to 5.000 ppm
<b>Nitric monoxide NO<sub>low</sub> (special software and calibration)</b>	0 ... 300 ppm (with 0,1 ppm resolution)	± 2,0 ppm or** 5 % reading
<b>Nitric dioxide NO<sub>2</sub></b>	0 ... 200 ppm * overload up to 1.000 ppm	± 5 ppm or** 5 % reading up to 200 ppm or** 10 % reading up to 1.000 ppm
<b>Sulfur dioxide SO<sub>2</sub></b>	0 ... 2.000 ppm * overload up to 5.000 ppm	± 10 ppm or** 5 % reading up to 2.000 ppm or** 10 % reading up to 5.000 ppm
<b>Hydrogen sulfide H<sub>2</sub>S</b>	0 ... 50 ppm * overload up to 500 ppm	± 5 ppm or** 5 % reading up to 100 ppm or** 10 % reading up to 500 ppm
<b>Stack gas temperature T.Gas</b>	0 ... 650 °C (stainless steel tube) 0 ... 1.100 °C (Inconel steel tube)	± 2 °C ... < 200 °C or**1 % reading up to 200 °C ± 2 °C ... < 200 °C or**1 % reading up to 200 °C
<b>Differential temperature</b>	up to 650 °C or up to 1.100 °C (with suitable temperature sampling tube)	
<b>Combustion air temperature T.Air</b>	0 ... 100 °C	± 1 °C
<b>Draft / Differential pressure</b>	- 100 ... + 100 hPa	± 0,02 hPa
<b>Calculated values:</b> (fuel type depending)		
<b>Carbon dioxide CO<sub>2</sub></b>	0 ... 20 %	± 0,3 Vol-% abs.
<b>Heat losses q<sub>A</sub></b>	0 ... 99,9 %	
<b>Efficiency <math>\eta</math></b>	0 ... 120 %	
<b>Air Ratio <math>\lambda</math></b>	1, ... 9,99 %	
<b>Excess Air</b>	0 ... 99,9 %	
<b>Combustion calculations</b>	based on the large fuel type list like: CO <sub>2</sub> , excess air, heat losses, combustion efficiency, flue gas dew point, CO / CO <sub>2</sub> ratio	
<b>Emission calculations</b>	mg/Nm <sup>3</sup> , NO <sub>x</sub> as mg/m <sup>3</sup> NO <sub>2</sub> true measurement of NO <sub>x</sub> = NO + NO <sub>2</sub> , including O <sub>2</sub> referencing (normalisation) to user settable value	
<b>CO-sensor purge (option)</b>	using 2nd pump, for sensor protection	
<b>General specifications:</b>		
<b>Operation temperature</b>	+ 5 ... + 45 °C, max. 95 % RH, none condensing	
<b>Storage temperature</b>	0 ... + 50 °C	
<b>Ambient conditions</b>	not in aggressive, corrosive or high dust ambience, not for use in hazardous areas	
<b>Power supply</b>	High energy Lithium-Ion battery 15 h operation or NiMH battery, min. 6 h operation	
<b>Mains</b>	wall-plug grid power supply, 100 - 240 Vac / 50 ... 60 Hz	
<b>Protection class</b>	IP 20	
<b>Weight</b>	approx. 750 g (with 2 sensors)	* for SHORT-TERM measurements only!
<b>Dimensions</b>	( W x H x D ) 110 x 225 x 52 mm	** which ever is larger!

DATA SUBJECT TO CHANGE WITHOUT NOTICE



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