



## UNIGAS 2000

Hand-held combustion gas analyzer  
with 3 sensors

Unigas 2000+ is a professional flue gas analyser for 3 gases: O<sub>2</sub>, CO & NO with electrochemical sensors, plus CO<sub>2</sub> and NO<sub>x</sub> calculated.

## Description

UniGas 2000 is a professional flue gas analyser for 3 gases: O<sub>2</sub>, CO & NO with electrochemical sensors, plus CO<sub>2</sub> and NO<sub>x</sub> calculated.

This gas analyser provides data for up to 10 fuels for calculating combustion values. It is equipped with audible alarms on gases measurement.

Flue gas sampling probes with different lengths and shapes are available to meet every specific requirement. The sampling probe is connected to the instrument with a single or dual hose, a water trap and a suspended particle filter.

The instrument is delivered with a built-in rugged impact printer. The analyser and its internal printer are powered by the same internal battery. Charger is supplied as standard.

Smoke index measurement is performed by using the optional external hand pump (ref: F7828000). The results can be stored in the internal memory and printed on the report.

A procedure can be selected to monitor the CO in ambient air using the internal sensors. An internal program allows CO max measurement in atmospheric boiler room test with 15 values logging.

## Specifications

Measured parameter	Range	Resolution	UniGas 2000
O <sub>2</sub>	From 0 to 25 % vol.	0.1 %	EC
CO	From 0 to 8000 ppm	1 ppm	EC
CO <sub>2</sub>	From 0 to 99.9 %	0.1 %	Calc
NO	From 0 to 4000 ppm	1 ppm	EC
NO <sub>x</sub>	From 0 to 4000 ppm	1 ppm	Calc
Efficiency	From 1 to 99.9 %	0.1 %	Calc
Excess air	From 1 to infinite	0.01 %	Calc
Pressure / Draft	From -10 to 120 hPa	0.01 hPa	✓
Tair/Tgas	-10...100°C/ 0...600°C	0.1°C	Pt100 / Tc K Calc

## Further features

Zero calibration	Automatic calibration procedure at instrument power-on. Fresh air inlet with electrovalve and separate pneumatic circuit
Self-diagnosis	Sensor efficiency test with diagnostic page
Gas level alarms	Programmable from PC with GasConfig software
Sampling pump	1.4 l/min - -100 mbar
Smoke measurement	Using the external manual pump
Printer	24 columns with 58 mm paper roll Autonomy: 40 reports with full battery

## General specifications

Size	115 x 90 x 330 mm
Weight	1.1 kg with battery and printer
Power supply	110/230 Vac - 50 / 60 Hz
Battery	Type: Rechargeable Li-ION Battery life: 6 hours continuous use Charging time: 8 h at 90%
Communication ports	RS 232 USB in option
Internal test memory	Up to 250 complete analysis data points structured by boiler

## Environmental specifications

Operating reference range	From -5°C to +45°C (up to 50°C for short time)
Storage temperature limits	From -20 to +50°C (3 months max. at temperatures exceeding the operational limits)

# Models and accessories

## Instrument:

**Ordering code structure: 7822 - A - BB - C - DDDDD - E - FF - G / X**

*Please select the required options from tables A, B... below to define the right device reference.*

### **7822 UniGas 2000**

Standard delivery includes:

- Base unit with 2 sensors (O<sub>2</sub> + CO)
- Li-ION battery + charger module
- Internal impact printer
- IR port for thermal printer
- Draft and differential pressure measurement
- Configuration software GasConfig
- Data management software DBGas2004 Lite version
- USB adapter
- Factory test report
- Instruction manual
- Warranty: 1 year

#### **Table A - Sensor n°1**

1	O <sub>2</sub> (0 - 25 %)
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#### **Table B - Sensor n°2 and n°3 (2H is mandatory)**

2H	CO (0 - 8,000 ppm) H <sub>2</sub> compensated + Dilution system
4	NO (0 - 4,000 ppm / res. 1 ppm) & NO <sub>x</sub> calculation ( <i>sensor n°3 only</i> )

#### **Table C - Sample probes - including water trap and line filter (1 choice only)**

0	None
1	180 mm sampling dual hose probe BB610051 (Gas + Draft) - max 800°C
2	300 mm sampling dual hose probe BB610046 (Gas + Draft) - max 800°C

#### **Table D - Options (P is mandatory)**

P	Built-in impact printer
1	Pressure decay program firmware + gas network leak test kit
2	Internal sensor for gas leak detector (sniffer)
6	DBGas 2004 standard software

- |   |  |
|---|--|
| 8 | Pt100 remote air temperature sensor (2 m cable) + positioning cone |
| 9 | Differential pressure connection kit (2 x EE300088)                |

#### **Table E - Mains adapter / Charger (1 choice only)**

- |   |                                       |
|---|---------------------------------------|
| 1 | 115 V - 50 / 60 Hz - USA plug         |
| 3 | 230 V - 50 / 60 Hz - UK plug          |
| 4 | 230 V - 50 / 60 Hz - European plug    |
| 5 | 100 V - 50 / 60 Hz - USA / Japan plug |

#### **Table F - Accessories**

- |   |   |
|---|---|
| 0 | None  |
| 3 | Vinyl carrying case with shoulder strap                       |
| 4 | ABS rigid carrying case                                       |
| 6 | Manual pump for smoke index measurements + 40 filters + table |

#### **Table G - Calibration certificate**

- |   |  |
|---|--|
| 1 | Factory certificate (gas + pressure + temperature) |
|---|--|

#### **Table X - Customization**

- |      |   |
|------|---|
| INTL | English language - manual in English - English Keyboard |
| USA  | English language - manual in English - English Keyboard |
| FR   | French language - manual in French - French Keyboard    |
| HOL  | Dutch language - manual in English - English Keyboard   |
| POL  | Polish language - manual in English - English Keyboard  |
| SPA  | Spanish language - manual in English - English Keyboard |
| UK   | English language - manual in English - English Keyboard |

## Accessories:

### Probes and sensors:

- |          |  |
|----------|--|
| BB610051 | 180 mm sampling dual hose probe BB610051 (Gas + Draft) - max 800°C |
| BB610046 | 300 mm sampling dual hose probe BB610046 (Gas + Draft) - max 800°C |

BB830018	Pt100 remote air temperature sensor, with 2 m cable and positioning cone
BB830025	External probe for natural boiler draft (200 Pa)
F2132100	130 mm air TC K-type probe
F2137100	130 mm contact TC K-type probe
F2139000	Pipe Velcro TC K-type probe
F2139100	Tc K-type clamp temperature probe
F2139200	Pt100 clamp temperature probe
BB610057	3 m extension for dual hose probe and Tc
BB610103	6 m extension for dual hose probe and Tc

#### Test tools and miscellaneous:

EE300088	Single hose pressure probe and burner hose kit
EE300248	Kit for detecting leaks in gas networks (pump + hose + adapters)
F7828000	Manual pump for smoke index measurements + 40 filters + table

#### Software and connectors:

BB260166	DBGas 2004 standard software
EE700476	USB adaptator cable

#### Transport cases and protections:

BB880028	ABS rigid carrying case
BB880043	Vinyl carrying case with shoulder strap
EE880047	Rubber holster with magnetic support

#### Consumable parts:

EE340006	Printer paper roll - <i>Minimum order of 10 pcs</i>
EE490002	Printer ribbon - <i>Minimum order of 3 pcs</i>
EE650011	Filter for soot (40 pieces per pack)
EE650074	Filter cartridge for EE650076 / EE 650082 water trap + filter - <i>Minimum order of 10 pcs</i>