

COMBUSTION GAS ANALYZER IMR 3000

IMR 3000

Gas analyzer for the continuous and simultaneous measurement of O₂, CO (H₂ compensated), SO₂, NO, NO₂, H₂S, air temperature, flue gas temperature, pressure/ draft and soot.

Calculated variables are CO₂, Lambda (excess air) and qA (losses).

Simultaneous display of all measuring variables on the CRT. The thermal printer allows the documentation of the measured variables.

The following printouts are standard: measurement, average values, line graphics.

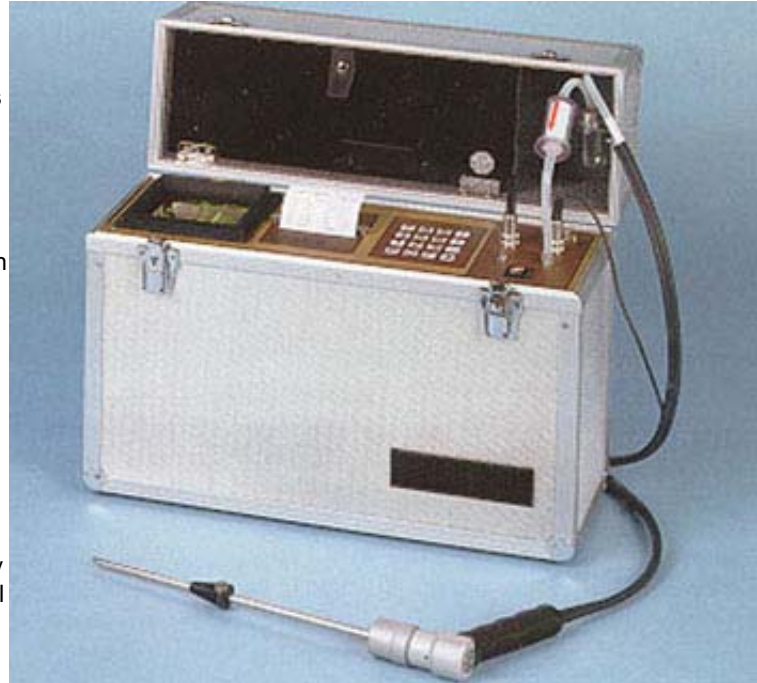
All printouts with date, time and fuel. The printer is suitable for graphics and can be used as Multi Channel Line Recorder.

Memory for 10485 measurements.

Operating instructions are clearly displayed on the monitor and the instrument is easy to handle.

Values, e.g. fuel parameters are programmable by the user. A special self check program monitors all functions.

Error messages or a request for service are displayed on the monitor.



Option: 8-channel analog output terminal (0-10 V, 4-20 mA) or video output terminal.



Display:

5" monitor for the simultaneous display of all measured values.

Languages: German, English, French
Operating instructions are clearly displayed.
Ppm, mg/Nm³;; mg/ Nm³ ref. to O₂.

Printer:

Thermal printer prints graphics.

The following printouts are available: measurements, average values, line-graphics

The time intervals between printouts can be varied between 1 and 99 minutes each.

Printer paper:

Thermal paper, paper width 80 mm, paper length about 30 m.

Multi Channel Line Recorder:

The printer can be used as Multi Channel Line Recorder.

Up to three channels can be shown at one time. Channels are selectable. All values, which are stored, can be printed. It is possible to record all parameters and select up to three lines for printing.

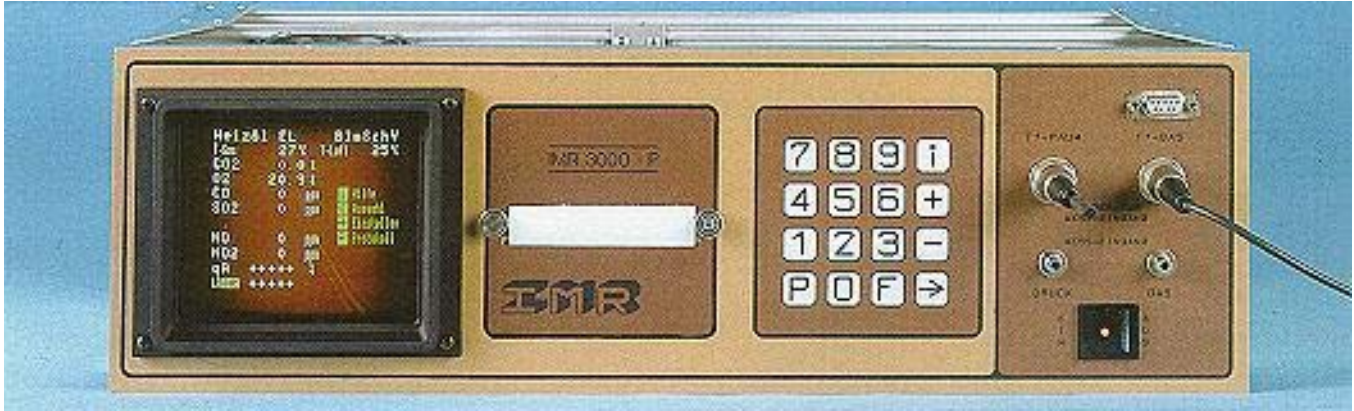
Memory:

For all measuring values, for 10485 measurements. The sampling rate can be varied between 1 and 255 seconds. The stored values can be printed as line-graphs or can be output via the serial interface (RS 232 C).



Interface :

RS 232 C or optional RS 422

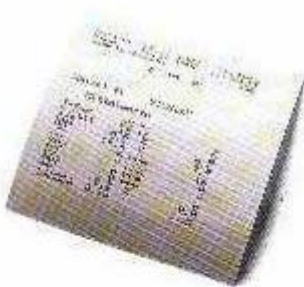


Clock:

Real-time clock/ calendar

Calibration:

Automatic zero calibration within three minutes. Calibration count down is displayed on the monitor. Readiness for measuring is indicated by display and sound signal after the calibration phase.



Self -check:

A self check program is run on each start up. The self check program checks all functions of the instrument and parameters of the sensors. Error messages are displayed on the monitor.

Service-program:

Information about operating hours, battery, sensors, defects of the system and about any request for service are displayed on the monitor.

Power supply:

Switching between 230 V/ 50 Hz, 110 V/ 60Hz, 12 Ah battery

Battery:

Operating period 6 hours, battery charge can be shown on monitor

Fuel:

18 fuels with all fuel reference parameters programmed, 4 fuels are programmable by user

Flue gas temperature:

In continuous process up to approx. 1832°F (1000°C).

In short-time service up to approx. 2192°F (1200°C).

Optional high-temperature gas sampling probe (RhPt-Rh) for temperatures up to max. 2732°F (1500°C).

Gas sampling probe:

Probe with heat insulated handle and integrated thermal element, including locking holding cone.

Standard tube length 10" (250 mm), special lengths 29.5" and 59.1" (750 mm and 1500 mm). Flexible hose length 8 ft (2.5 m), special lengths up to about 33 ft (10.0 m).

Case:

Aluminum case with carrying handle and locks

Dimensions:

Approx. 20.0 x 7.0 x 16.9 inch (510 x 180 x 430 mm)

Weight :

Approx.16 kg

Recommendation:

The IMR 3000 P should be connected to the gas drier IMR 500 P during long-time measurements or measuring dirty polluted flue gases.

**STANDARD INSTRUMENT:
IMR 3000 P**

SCOPE OF SUPPLY

- Gas analysis computer in a case
- Gas sampling probe type E, tube length 250 mm, flexible gas tube and connection line 2.5m
- Power cord
- User manual

MODEL	Part-No.
IMR 3000 P	30000





COMBUSTION GAS ANALYZER IMR 3000

TECHNICAL DATA

parameter	measurement principle	resolution	accuracy	Measurement ranges IMR 3000 P
O2 Oxygen	Electrochem. sensor	0.1 Vol. %	± 0.2 %	0-20.9 Vol. %
CO Carbon monoxide	Electrochem. sensor	1 ppm,mg,mg(O2)	Z	0-4000 ppm (2)
CO2 Carbon dioxide	Calculated	0.1 Vol. %	±0.2 %	0-CO2 max. (3)
SO2 Sulfur dioxide	Electrochem. sensor	1 ppm,mg,mg(O2)	Z	0-4000 ppm (2)
NO Nitric oxide	Electrochem. sensor	1 ppm,mg,mg(O2)	Z	0-2000 ppm (2)
NO2 Nitrogen dioxide	Electrochem. sensor	1 ppm,mg,mg(O2)	Z	0-100 ppm (2)
H2S Hydrogen sulfide	Electrochem. sensor	1 ppm,mg,mg(O2)	Z	O 0-200 ppm
HC Hydrocarbon		0.1 %	Z	O 0-100 % LEL
TA Air temp.	PTC resistance	1 K	± 0.5 K	-4°F/ +248°F (-20°C/ +120°C)
TG Flue gas temp.	Thermocouple: NiCr-Ni	1 K	± 2 %	-4°F/ +1472°F (-20°C/ +800°C)
	Thermocouple: PtRh-Pt	1 K	± 1 %	2192°F (1200°C) +302°F/ +2732°F (+150°C/ +1500°C)
hPa Chimney /draft	Solid state	0.004" H2O (0.01 hPa)	± 2 %	± 8" H2O (2) (± 20 hPa) (2)
Lambda / excess air	Calculated	0.01	± 2 %	1.0 - 9.0
qa Losses	Calculated	0.1 %	± 0.5 %	0 - 99.9
Soot Smoke-spot	Filter-paper method DIN 51402	The exact amount of gas controlled by electronic vacuum pump: 1.63 l/min. ± 0.07 l/min.		O
TUV-Prüf Nr. By RgG				137
Z = 0 - 20% of whole measurement range ± 1% of max. measurement 21 - 100% of whole measurement range ± 5% of displ. measurement X = standard O = option - = not available				(1) Selection of language on order. (2) Other measurement range on request. (3) Dependent of fuel.
Specification changes are made without prior notice.				