

## COMBUSTION GAS ANALYZER IMR 1000

### IMR 1000

The IMR1000 is a hand held pocket size stack gas analyzer for combustion tests on boilers, burners, etc. The IMR1000-1/Q ÜF€€€2 have up to two sensors with a 2-line LCD while the IMR1000-3/Q ÜF€€€4 have a 4-line LCD and come with up to 3 sensors.

- Up to 3 sensors
- Small and rugged
- Easy to operate
- Light weight
- Memory
- Infrared Interface for printer
- Protective boot with integral magnet
- Large backlit display
- Reliable Technology
- Easy to service
- Displayed parameter can be chosen

#### Measured parameters:

- Oxygen O<sub>2</sub>
- Carbon Monoxide CO
- Carbon Monoxide CO (ambient)
- Nitric Oxide NO
- Flue-Gas Temperature

IMR1000-1/Q ÜF€€€2



IMR1000-3/Q ÜF€€€4



#### Calculated values:

- Combustion Efficiency
- Excess Air
- Carbon Dioxide
- CO corrected to 0% O<sub>2</sub>

### STANDARD

<ul style="list-style-type: none"> <li>☑ <b>Enclosure:</b> Rugged plastic case with protective boot and magnet</li> <li>☑ <b>Fuels:</b> Natural Gas, Propane, Butane, LPG, Light Oil</li> <li>☑ <b>Measuring units:</b> ppm, mg/m<sup>3</sup></li> <li>☑ <b>Service program:</b> Check of all values</li> </ul>	<ul style="list-style-type: none"> <li>☑ <b>Zero point calibration:</b> Max. 60 seconds</li> <li>☑ <b>Battery:</b> &gt; 8 hrs</li> <li>☑ <b>Languages:</b> English, German, French, etc.</li> <li>☑ <b>Condensation trap:</b> Integrated filter</li> <li>☑ <b>Operating Conditions</b> 32-104°F / 0-40°C; 10-90% rel. humidity, non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>☑ <b>Gas sampling probe:</b> Thermocouple Type K; Ø 0.25"/ 6mm; Length 9"/220mm; Hose 9"/3m</li> <li>☑ <b>Power Supply:</b> 4 x AA</li> <li>☑ <b>Weight</b> 2.2lbs / 1kg</li> <li>☑ <b>Dimensions</b> 7.9x1.8x3.5" / 200x45x90mm</li> </ul>
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# IMR1000 Specifications

Features	IMR1000-1/TO T3222/4	IMR1000-3	IMR1000-4
Worklight		✓	✓
Low battery indicator		✓	✓
Individual print-out reports		✓	✓
Rotary selector	✓	✓	✓
Memory positions (various tests)	20	179	179
Infrared printer port	✓	✓	✓
Backlit display	2 Lines	4 Lines	4 Lines
Boot with integral magnet	✓	✓	✓
User programmable headers	✓	✓	✓
Time & date stamp	✓	✓	✓
1 yr warranty	✓	✓	✓

Temp Measurement			
Flue Temp Range (T1 3/4)	32 ~ 1112°F / 0 ~ 600°		20 ~ 2400°F / -29 ~ 1315°C
Inlet Temp Range (T2 3/4)	-		
Inlet Temp Range (Ambient)	32 ~ 1112°F / 0 ~ 600°C	32 ~ 112°F / 0 ~ 50°C	
Net Temp (ΔT)**	32 ~ 112°F / 0 ~ 50°C	20 ~ 2400°F / -29 ~ 1315°C	
Resolution	1°F/°C	0.1°F/°C	
Flue (T1, Inlet T2, & Net ΔT) Accuracy	±[0.3% rdg +5°F(3°C)]	±[0.3% rdg +3.6°F(2°C)]	
Inlet Temp Ambient Accuracy	±[0.3% rdg +1°F(1°C)]	±[0.3% rdg +1.8°F(1°C)]	

Gas Measurement			
Oxygen	0 ~ 21%	0 ~ 21%	0 ~ 21%
O2 Resolution/Accuracy	0.1% / ±0.2%*	0.1% / ±0.2%*	0.1% / ±0.2%*
Carbon Monoxide (2/3/4 Qprf)	0 ~ 1000 ppm	0 ~ 4000 ppm	0 ~ 4000 ppm
CO Resolution/Accuracy (IMR1000-2/3/4 Only)	1 ppm/±10 ppm < 100 ppm* ±5% reading	1 ppm/±10 ppm < 100 ppm* ±5% reading	1 ppm/±10 ppm < 100 ppm* ±5% reading
Carbon Dioxide**	0 ~ 30%	0 ~ 30%	0 ~ 30%
CO2 Resolution/Accuracy	1.0%/±0.3% reading	1.0%/±0.3% reading	1.0%/±0.3% reading
Efficiency**	0 ~ 99.9%	0 ~ 99.9%	0 ~ 99.9%
Efficiency Resolution/Accuracy	0.1%/±1.0% reading	0.1%/±1.0% reading	0.1%/±1.0% reading
Excess Air**	0 ~ 250%	0 ~ 250%	0 ~ 250%
Excess Air Resolution/Accuracy	0.1%/±0.2% reading	0.1%/±0.2% reading	0.1%/±0.2% reading
CO/CO2**	-	0 ~ 0.999%	0 ~ 0.999%
CO/CO2 Resolution/Accuracy	-	0.0001%/±5% reading	0.0001%/±5% reading
Nitric Oxide	-	-	1 ppm/±2 ppm < 30 ppm*
Nitric Oxide Resolution/Accuracy	-	-	±5 ppm > 30 ppm

Pressure (Differential)			
	Range ±0.2mBar 0.08" wg	0.001mBar/±0.005mBar ±0.002" wg	0.001mBar/±0.005mBar ±0.002" wg
	Range ±1mBar 0.4" wg	0.001mBar/±0.03mBar ±0.01" wg	0.001mBar/±0.03mBar ±0.01" wg
	Range ±80mBar 32" wg	0.01mBar/±3% reading	0.01mBar/±3% reading

Dimensions	
Weight	2.2lbs. with boot
Handset	7.9 x 1.8 x 3.5"
Probe	11.8 x 0.25 x 9.4" stainless steel shaft, type K thermocouple (9' hose)
Operating temp	0 to 40°C/10% to 90% Relative Humidity non-condensing
Battery	x4 "AA" cells / 12 hour life typical with Alkaline "AA" cells
Warranty	1 year limited warranty

Pre-Programmed Fuels
Natural Gas, Propane, Butane, LPG, Light Oil

\*Measures \*\*Calculates



**OPTIONAL**

AC adapter with rechargeable batteries
Infrared printer
Soft carrying case
Hard carrying case

<b>1000-1</b>	O2, condensation trap, gas sampling probe, batteries, manual
<b>1000-2</b>	O2, CO, condensation trap, gas sampling probe, batteries, manual
<b>1000-3</b>	O2, CO, draft, condensation trap, gas sampling probe, batteries, manual
<b>1000-4</b>	O2, CO, NO, draft, condensation trap, gas sampling probe, batteries, manual

IMR Environmental Equipment, Inc. reserves the right to adopt technical modifications without prior notice.