

Environmental Equipment, Inc.

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# 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 IMR 1000-1/-2 have up to two sensors with a 2-line LCD while the IMR1000-3/-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 O2
- Carbon Monoxide CO
- Carbon Monoxide CO (ambient)
- Nitric Oxide NO
- Flue-Gas Temperature

## **STANDARD**

- Enclosure: Rugged plastic case with protective boot and magnet
- ✓ Fuels: Natural Gas, Propane, Butane, LPG, Light Oil
- Measuring units: ppm, mg/m3
- Service program: Check of all values

IMR1000-1/2





### Calculated values:

- Combustion Efficiency
- Excess Air
- Carbon Dioxide
- CO corrected to 0% O2
- Zero point calibration: Max. 60 seconds
- Battery: > 8 hrs
- ✓ Languages: English, German, French, etc.
- Condensation trap:
- Operating Conditions
   32-104°F / 0-40°C;
   10-90% rel. humidity, non-condensing
- ✓ Gas sampling probe: Thermocouple Type K;
   Ø 0.25"/ 6mm; Length 9"/220mm; Hose 9'/3m
- Power Supply:4 x AA
- Weight 2.2lbs / 1kg
- Dimensions
   7.9x1.8x3.5" /
   200x45x90mm

IMR1000-3/4



Operating temp

Battery

Warranty

# IMR1000 Specifications

Features		IMR1000-1/2	IMR	000-3	IMR1000-4
Worklight			L L	/	<ul> <li>✓</li> </ul>
Low battery indicator				/	<ul> <li>✓</li> </ul>
Individual print-out reports				/	<ul> <li>✓</li> </ul>
Rotary selector		~	v	/	<ul> <li>✓</li> </ul>
Memory positions (various tests)		20	1	79	179
Infrared printer port		~		/	<ul> <li>✓</li> </ul>
Backlit display		2 Lines	4	Lines	4 Lines
Boot with integral magnet		V	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>
User programmable headers		V			V
Time & date stamp		~		/	×
1 yr warranty		<b>v</b>		<b>v</b>	<ul> <li>✓</li> </ul>
Temp Measuren	nent		•		
	(T1 IMR1000-3/4)	32 ~ 1112°F / 0 ~ 600°C			20 ~ 2400°F / -29 ~ 131
	(T2 IMR1000-3/4)	-			• -
Inlet Temp Range (Ambient)		32 ~ 1112°F / 0 ~ 600°C	32 ~ 112°F / 0 ~ 50°C		
Net Temp $(\Delta T)^{**}$		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 $\Delta$ T) 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 Measureme	ent		-		
Oxygen		0 ~ 21%	0 ~ 21%		0 ~ 21%
O2 Resolution/Accuracy		0.1% / ±0.2%*	0.1% / ±0.2%*		0.1% / ±0.2%*
Carbon Monoxide (IMR1000-2/3/4)		0 ~ 1000 ppm	0 ~ 4000 ppm		0 ~ 4000 ppm
CO Resolution/Accuracy		1 ppm/±10 ppm < 100 ppm*	1 ppm/±10 ppm < 100 ppm*		1 ppm/±10 ppm < 100 ppm*
(IMR1000-2/3/4 Only)		±5% reading	±5% reading		±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 (Differ	rential)				
		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		·		Pre-Program	ned Fuels
Weight				Natural Gas, Propane, Butane, LPG, Light Oil	
Handset	7.9 x 1.8 x 3.5"				
		stainless steel shaft, type K therm	ocouple (9' hose)	*Measures **Calculate	s
Probe		stainless steel shaft, type K therm	ocouple (9' hose)	ivicasures GdiGUIALE	3

0 to 40°C/10% to 90% Relative Humidity non-condensing

1 year limited warranty

x4 "AA" cells / 12 hour life typical with Alkaline "AA" cells



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#### **OPTIONAL**

AC adapter with rechargeable batteries

Infrared printer

Soft carrying case

Hard carrying case

1000-1	O2, condensation trap, gas sampling probe, batteries, manual		
1000-2	O2, CO, condensation trap, gas sampling probe, batteries, manual		
1000-3	O2, CO, draft, condensation trap, gas sampling probe, batteries, manual		
1000-4	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.