

**EXHAUST GAS ANALYSIS FOR FORKLIFTS
IMR 1440FL****IMR 1440FL**

- ❖ Designed to measure flue gases on
 - Forklifts
 - Cars/Trucks
 - Generators
 - Heavy Machinery
- ❖ In accordance with US regulations
- ❖ Measures Soot, CO and O₂
- ❖ Can be equipped with NO_x, SO₂ or HC if required
- ❖ Utilizes two CO sensors for high and low concentrations (COFL only)
- ❖ Developed to meet customer needs
- ❖ High quality exhaust gas analyzer using the latest sensor technology
- ❖ Easy to use and measures all the important parameters to adjust and optimize the combustion process
- ❖ Integrated Printer: each printout includes all information on the display

IMR 1440FL**STANDARD FEATURES**

- ❖ Portable and very compact combustion gas analyzer housed in a rugged aluminum case
- ❖ Simultaneous measurement of
 - O₂ Oxygen
 - TG Exhaust-gas temperature
 - CO Carbon Monoxide (high)
 - CO Carbon Monoxide (low) (COFL only)
 - CO-bypass valve with purging pump to protect low CO sensor (COFL only)
- ❖ Additional Features
 - Soot – Volume controlled
 - Includes soot paper and scale
 - Exhaust Pressure
- ❖ Calculation of following parameters according ASME-equations
 - Combustion efficiency
 - Losses
 - Excess Air
 - CO₂ - Carbon Dioxide
- ❖ 4 Fuels are programmed – 5 fuels are programmable
- ❖ Automatic zero calibration

- ❖ Integrated self-check program
- ❖ Simultaneous display of eight parameters on the illuminated display
- ❖ Printer with programmable print out cycles
- ❖ Unit selection:
 - ppm - mg - mg (ref O₂) – mg/kWh
- ❖ Gas sampling probe S: – length 270mm (10 5/8”), hose 3.5m (11’ 5”)
- ❖ Probe useable in temperatures up to 2192°F / 1200°C
- ❖ Rechargeable battery with integrated charger
- ❖ Selectable power supply 120V or 230V

OPTIONAL FEATURES

- ❖ Gas sampling probes with different lengths
- ❖ 12V DC power jack
- ❖ USB interface for real-time uploading of measurements to PC
- ❖ Memory for 200 measurements
- ❖ NO_x measurement
- ❖ HC/CH₄ measurement
- ❖ SO₂ measurement
- ❖ Ambient Air measurement

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Parameter	Principle	Resolution	Range
O ₂ – Oxygen	Electro-Chemical	0.1 % vol.	0-20-9% vol.
CO – Carbon Monoxide	Electro-Chemical	0.001 % vol.	0-10.000% vol.
*CO – Carbon Monoxide	Electro-Chemical	1 ppm	0-2000
CO ₂ – Carbon Dioxide	Calculated	0.1 % vol.	0-CO ₂ max
TG – Temperature Gas	NiCr-Ni Thermocouple K	1°C / 1°F	-20-1200°C 0-2192°F
P – Exhaust Pressure	Solid State	hPa	0-350 hPa
SZ – Soot Measurement	Filter Paper Method		
Combustion Efficiency	Calculated	1 %	0-100 %
Heat Losses	Calculated	1 %	0.0-99.9 %
Excess Air	Calculated	1 %	1.0-9.0 %

Optional Possible Sensors

NO _x	Electro-Chemical	1 ppm	0-2000 ppm
SO ₂	Electro-Chemical	1 ppm	0-4000 ppm
HC	Pellistor	0.1 % vol.	0-100 % lel

Optional Possible Features

TA – Temperature Air	NiCr-Ni Thermocouple K	1°C / 1°F	-20-120°C 0-248°F
Memory	200 Measurements		
USB	Upload to PC in real-time		
12V DC Charging			

Other measurement ranges are available upon request

Tolerance ± 2%

*CO low only with 1440COFL

Equipped with 4 sensors max



IMR 1440FL/COFL

Model Selection

	O2, CO, CO2, Flue Temperature, Efficiency, Losses, Excess Air, Soot Measurement, Soot Gas Probe, Soot Filter & Comparison Scale, Pressure	RPM Meter, CD100A, Digital Soot Meter
	Item #	Item # with kit
IMR 1440FL	14401	14401-K
IMR 1440COFL	14406	14406-K

Different gas probe lengths available: Select from 750mm, 1500mm

ASM

Dimensions: 16.7"x11.4"x7.3"

Weight: 13lb

Metric

Dimensions: 425x290x185mm

Weight: 5.8kg

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

Optional Equipment

RPM Meter

Tachometer: 180-10,000 RPM

DC: 200mV to 1000V

AC: 200V to 750V



CD100A

Adjustable tick rate

Gooseneck Probe 18" (45cm)

Detects combustible gases



Soot Meter

Measures precise soot number from 0.0 to 9.9

More accurate than a paper scale



IMR Data Software

Upload stored measurements or

upload data in real time



Dealer: