

**COMBUSTION GAS ANALYZER  
IMR 2800A-IR AUTOMOTIVE****IMR 2800A-IR**

- ❖ Designed to measure flue gases on
  - Boilers
  - Burners
  - Engines
- ❖ Developed to meet the customers need
- ❖ High quality combustion 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
- ❖ Applications: Boilers, Burners, Engines, Turbines, Cars, Trucks, Plants, Chemical Industries, Steel Plants, Refineries, etc.

*IMR 2800***STANDARD FEATURES**

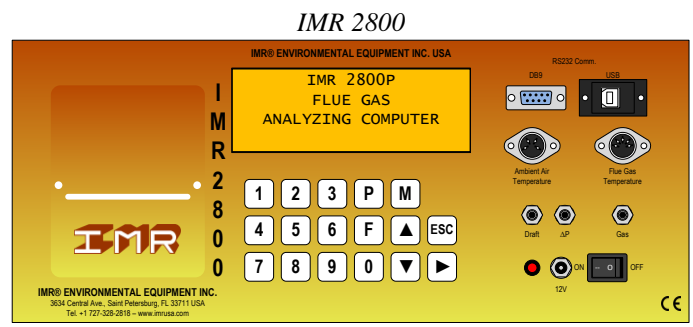
- ❖ Portable and very compact combustion gas analyzer housed in a rugged aluminum case
- ❖ Simultaneous measurement of
  - CO<sub>2</sub> Carbon Dioxide (NDIR)
  - O<sub>2</sub> Oxygen
  - CO Carbon Monoxide
  - NO Nitric Oxide
  - SO<sub>2</sub> Sulfur Dioxide
  - NO<sub>2</sub> Nitrogen Dioxide
  - HC/CH<sub>4</sub> Hydrocarbon (NDIR)
  - TG Flue-gas temperature
  - TA Ambient temperature
- ❖ Calculation of following parameters according ASME-equations
  - Losses/qA
  - Excess Air/Lambda
  - NO<sub>x</sub> Nitrogen Oxides
- ❖ 23 Fuels are programmed – 4 fuels are programmable
- ❖ USB & RS232 interface for real-time uploading of measurements to PC
- ❖ Memory for measurements
- ❖ Automatic zero calibration

- ❖ Integrated self-check program
- ❖ Simultaneous display of eight parameters on the illuminated display
- ❖ Standard deviation and average value calculation
- ❖ Printer with programmable print out cycles
- ❖ Unit selection:  
ppm - mg - mg (ref O<sub>2</sub>) – mg/kWh
- ❖ Gas sampling probe E: – length 250mm (0.8ft.), hose 2.5m (8ft.)
- ❖ Standard probe useable in temperatures up to 2192°F / 1200°C
- ❖ Rechargeable battery with integrated charger
- ❖ 12V DC power jack
- ❖ Selectable power supply 120V or 230V

**OPTIONAL FEATURES**

- ❖ Gas sampling probes with different lengths
- ❖ High temperature probe usable in temperatures up to 2912°F / 1600°C
- ❖ Soot measurement
- ❖ Draft measurement  
Optional: Differential draft & Velocity measured in m/s
- ❖ HCl, N<sub>2</sub>O, Cl<sub>2</sub>, H<sub>2</sub>, NH<sub>3</sub>, or H<sub>2</sub>S measurement

IMR 2800P Series



**IMR 2800A-IR**

Parameter	Principle	Resolution	Range
CO <sub>2</sub> – Carbon Dioxide	NDIR	0.01 % vol.	0-20/50% vol.
O <sub>2</sub> – Oxygen	Electro-Chemical	0.01 % vol.	0-20.95% vol.
*CO – Carbon Monoxide	Electro-Chemical	1 ppm	0-10000ppm
*CO – Carbon Monoxide	Electro-Chemical	0.01 % vol.	0-10% vol.
*CO – Carbon Monoxide	NDIR	0.01 % vol.	0-20/50% vol.
NO – Nitric Oxide	Electro-Chemical	1 ppm	0-2000 ppm
SO <sub>2</sub> – Sulfur Dioxide	Electro-Chemical	1 ppm	0-4000 ppm
NO <sub>2</sub> – Nitrogen Dioxide	Electro-Chemical	1 ppm	0-100 ppm
HC/CH <sub>4</sub> – Hydrocarbon	NDIR	0.01 % vol.	0-100 % lel
TA – Temperature Gas	NiCr-Ni Thermocouple	1°C / 1°F	-20-1200°C 0-2192°F
TA - Temperature Ambient	Semiconductor	1°C / 1°F	-4-120°C 0-248°F
NO <sub>x</sub> – Nitrogen Oxides	Calculated	1 ppm	0-NO <sub>x</sub> max
Heat Losses/qA	Calculated	1 %	0.0-99.9 %
Excess Air/Lambda	Calculated	1 %	1.0-9.0 %
USB	Upload to PC in real-time		

**Optional Sensors**

CL <sub>2</sub> – Chlorine	Electro-Chemical	1 ppm	0-5000 ppm
H <sub>2</sub> – Hydrogen	Electro-Chemical	1 ppm	0-10000 ppm
H <sub>2</sub> S – Hydrogen Sulfide	Electro-Chemical	1 ppm	0-200 ppm
HC/CH <sub>4</sub> – Hydrocarbon	NDIR	1 ppm	0-10000ppm
HCl – Hydrogen Chloride	Electro-Chemical	1 ppm	0-4000 ppm
N <sub>2</sub> O – Nitrous Oxide	NDIR	0.01 % vol.	0-1% vol
NH <sub>3</sub> – Ammonia	Electro-Chemical	1 ppm	0-1000/5000 ppm

**Optional Features**

Soot Measurement	Filter Paper Method		
Draft	Solid State	0.01 hPa	0-40 hPa
Velocity with Pitot tube	Solid State	0.01 m/s	0-80m/s

Other measurement ranges are available upon request  
 \*Select one CO sensor type and range

Tolerance ± 2%  
 Equipped with 8 sensors max



IMR 2800P Series

Model Selection

	O2, CO, CO2, NO, SO2, NO2, HC/LEL, Flue Temp., Ambient Temp., Losses, Excess Air, USB, Memory, 12V DC charging	Soot Measurement, Soot Gas Probe, Soot Filter & Comparison Scale, Draft
	Item #	Item #
IMR 2800A-IR	28100	28100-S

Customized sensor configuration available on request.

Different gas probe lengths available: Select from 250mm, 750mm\*, 1500mm\*  
\*additional cost

ASM  
Dimensions: 15"x6.5"x12.4"  
Weight: 17lb

Metric  
Dimensions: 375x165x300mm  
Weight: 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



Pitot Tube

Measure flow in m/s



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: