

## IMR 1440FL / COFL

The exhaust gas analyzer IM1440F/COF is designed to measure exhaust gases of Forklift Trucks that are powered by Diesel or Gas Engines. According to US regulations it can measure soot on diesel engines and CO on gas powered forklift trucks. Some states regulations may require NOx, therefore this analyzer can be equipped with a NOx sensor as well. The IM1440COF is equipped with two CO sensors. One sensor works in the low range and one sensor in the high range.

This new model can also measure the exhaust gas pressure before the soot filter. The measurement of the flue gas temperature, oxygen, carbon dioxide and LAMBDA are helpful for diagnostic reasons and the adjustment of the engines.

A flexible probe, which fits in most exhaust pipes, is inserted into the exhaust pipe and a clamp holds it in place. Measuring exhaust gases is not only important to help control pollutants like CO, but it also helps optimizing fuel efficiency and therefore saving costs.



### MEASURE PARAMETERS

- |                           |                        |
|---------------------------|------------------------|
| • Oxygen                  | O2 in Vol. %           |
| • Carbon Monoxide         | CO in Vol. %           |
| • Nitric Oxide (Optional) | NOx in ppm             |
| • Flue Gas Temperature    | TG in °C of °F         |
| • Exhaust Gas Temperature | P in hPa               |
| • Soot                    | Filter Paper 0.0 – 9.9 |

### MEASURE PARAMETERS

- |                  |               |
|------------------|---------------|
| • Carbon Dioxide | CO2 in Vol. % |
| • Lambda         |               |

### FEATURES

- Rugged case with additional compartments
- Menu navigation (soot, CO measurement or pressure measurement)
- Condensation trap with integrated filter
- 4-line, backlit LCD Display for simultaneous display of 8 values
- Rechargeable battery with status indicator; up to 6 hours
- Volume controlled soot measurement with soot paper and soot scale
- Exhaust gas pressure
- High speed thermal printer with an easy paper loading system
- Low CO switch valve with purge pump to protect the low CO-Sensor (IMR1440COFL)
- Diagnostic program
- Gas sampling probe with a flexible sheath
- Manual
- Power cord

### OPTIONAL

- RS232
- Memory for 200 measurements
- NO-Sensors

## TECHNICAL DATA

| Parameter                          | Principle       | Resolution  | Accuracy | Range             | 1440FL   | 1440COFL |
|------------------------------------|-----------------|-------------|----------|-------------------|----------|----------|
| <b>O2</b> Oxygen                   | Electrochemical | 0.1 Vol. %  | ±0.2%    | 0 – 20.9 Vol. %   | ✓        | ✓        |
| <b>CO</b> Carbon Monoxide          | Electrochemical | 0.001Vol. % | Z        | 0 – 10.000 Vol. % | ✓        | ✓        |
| <b>CO</b> Carbon Monoxide          | Electrochemical | 0.001Vol. % | Z        | 0 – 0.200Vol. %   |          | ✓        |
| <b>NO<sub>x</sub></b> Nitric Oxide | Electrochemical | 1 ppm       | Z        | 0 – 5000 ppm      | Optional | Optional |
| <b>TG</b> Flue Temperature         | Thermocouple K  | 1 K         | ±2%      | -20/1200°C        | ✓        | ✓        |
| <b>P</b> Exhaust Pressure          | Solid State     | 0.1 hPa     | ±2%      | 0 – 3500 hPa      | ✓        | ✓        |
| <b>CO2</b> Carbon Dioxide          | Calculation     | 0.1 Vol. %  | ±0.2%    | 0 – CO2 max       | ✓        | ✓        |
| <b>SZ</b> Soot                     | Filter paper    |             |          |                   | ✓        | ✓        |

**Fuels:** Diesel, Natural Gas, Propane, Biogas Gasoline

**Gas sampling probe:** Flexible sheath, length 250mm, hose 3,5m

**Power Supply:** 120VAC/60Hz 230VAC/0Hz, Rechargeable Battery

**Dimensions:** IMR1440FL/COFL: 245 x 185 x 290mm

**Weight:** IMR1440FL/COFL: 5.8Kg

**Operating Temperature:** 0-40°C; 10-90% RH non condensing

|                    |               |                         |               |
|--------------------|---------------|-------------------------|---------------|
| <b>IMR1440FL</b>   | Part N: 14411 | <b>IMR1440FL-KIT*</b>   | Part N: 14412 |
| <b>IMR1440COFL</b> | Part N: 14491 | <b>IMR1440COFL-KIT*</b> | Part N: 14491 |

Other measuring ranges / sensors / fuels upon request

\*Includes RPM Meter, RLD10 and Soot Meter

Z = 0- 20% of measuring range 1% of the maximum value

=21 – 100% of the measuring range 5% of the displayed value

## ACCESSORIES

### RPM METER

- Tachometer: 180-10,000 RPM
- DC: 200mV to 1000V
- AC: 200V to 750V



### RLD10

- Adjustable tick rate
- Long 18" (45cm) flexible gooseneck
- Detects gas leaks on gas fire forklift trucks



### SOOT METER

- Measures the soot number from 0.0 to 9.9
- More reliable than a paper scale



### IMR DATA – DATA Transfer Software

