

# Portable Multi-Gas Monitor

## RAE VRAE Five Gas Surveyor

The VRAE Five Gas Surveyor is a hand-held 1, 2, 3, 4, or 5 combustible, toxic and oxygen gas monitor with built-in sampling pump. Sensors include dual range 0-100% volume, 0-100% LEL, oxygen and up to 4 smart interchangeable toxic sensors.

### FEATURES

- **Interchangeable toxic gas sensors**  
Carbon monoxide, hydrogen sulfide, sulfur dioxide, nitric oxide, nitrogen dioxide, chlorine, ammonia, hydrogen cyanide, phosphine, and chlorine dioxide
- **Strong, built-in sample draw pump with pump stall feature**  
Eliminates need to charge and connect separate pump
- **Rugged, lightweight, compact design**
- **48 built-in LEL correction factors**
- **Ideal for low explosive level environments**
- **Audible and visual alarm with flashing LED**  
Varying tones for different alarm conditions
- **Smart battery charger**  
Unit is always ready to go
- **Field replaceable battery**  
Up to 10 hours continuous monitoring and includes back-up alkaline battery adapter
- **16,000 point data logging storage capacity for optional data download to PC**
- **Large, bright back light display with up to 5 gases and concentrations displayed**  
Alarm, dim light or manually activated
- **Ask about a rental unit – Call Today!**  
LEL, O<sub>2</sub> and other sensors available



### WHAT'S INCLUDED

- VRAE unit (Model 7800 or 7840)
- Combustible, oxygen and up to 3 toxic sensors (7800)
- Combustible, and up to 4 toxic sensors (7840).
- Rechargeable NiMH battery pack
- AC/DC charging adapter
- Backup alkaline battery adapter (accepts 4 AA alkaline)
- Inlet probe and water trap filter
- Operation and maintenance manual
- 2 year warranty for LEL/O<sub>2</sub> /CO/H<sub>2</sub>S VRAE monitor

### ENVIRONMENTAL APPLICATIONS

- Refineries and petrochemical plants – confined spaces
- Utilities – cable vaults, transformer stations, excavations
- Waste water treatment plants – confined space entry
- Marine and off shore oil wells – testing of confined spaces
- Landfill operation – monitoring wells and confined spaces

**CALL GEOTECH TODAY (800) 833-7958**

Geotech Environmental Equipment, Inc.  
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### SPECIFICATIONS

<b>MONITOR Size</b>	8.3" L x 3.0" W x 1.9" H (21 x 7.6 x 4.9 cm)	<b>Intrinsic Safety (pending)</b>	UL, cUL Class 1, Div. I, Group A, B, C, D EEx ia IIC T4 (Europe)
<b>Weight</b>	20 oz. with batteries (568mg).	<b>Alarm</b>	90 dB buzzer and flashing red LED to indicate exceeded preset limits
<b>Detector</b>	Catalytic sensor for combustible gas. Electrochemical sensors for oxygen and toxic gases	High	3 beeps and flashes per second
<b>Operating Hours</b>	10 hours continuous	Low	2 beeps and flashes per second
<b>Battery</b>	Rechargeable, snap-in field replaceable 4.8 V, 1.1 Ah, NiMH battery pack	STEL & TWA	1 beep and flash per second Alarm latching with manual override or automatic reset
<b>Battery Charging</b>	10 hrs through built-in or external battery charger		Additional diagnostic alarm and display message for low battery, sensor or calibration error
<b>Display</b>	2 line by 16 digit LCD with LED back light automatically in dim light or alarm	<b>Datalogging</b>	16,000 points (53 hours, 5 channels, at one minute intervals, download to PC with serial number of unit, user ID, site ID and calibration date)
<b>Key Pads</b>	1 operation key and 2 program keys	<b>Datalog Interval</b>	1 to 3,600 seconds, programmable
<b>Direct Readout</b>	Instantaneous (up to 5) values: oxygen as percentage of air by volume, combustible gas as percentage of lower explosion limit (LEL), toxic gases as parts per million. High and low values for all gases STEL and TWA values of toxic gases and VOCs Battery and shutdown voltage Elapsed time	<b>Sampling Pump</b>	Internal pump, flow rate 400 ml/min Automatic shut off at low flow condition
<b>Calibration</b>	Two point field calibration for zero and span gas	<b>Temperature</b>	-4° to 113°F (-20° to 40°C)
		<b>Humidity</b>	0% to 95% relative humidity (non-condensing)

### SENSORS

	Nominal Range	Extended Range	Resolution	Response Time (T90)
<b>Combustible</b>	0-100% LEL	–	1%	15 seconds
	0-100% VOL	–	1%	20 seconds
<b>Oxygen</b>	0-30%	–	0.1%	15 seconds
<b>Carbon Monoxide</b>	0-500 ppm	1500 ppm	1 ppm	40 seconds
<b>Hydrogen Sulfide</b>	0-100 ppm	500 ppm	1 ppm	35 seconds
<b>Sulfur Dioxide</b>	0-20 ppm	150 ppm	0.1 ppm	35 seconds
<b>Nitric Oxide</b>	0-250 ppm	1000 ppm	1 ppm	30 seconds
<b>Nitrogen Dioxide</b>	0-30 ppm	150 ppm	0.1 ppm	25 seconds
<b>Chlorine</b>	0-10 ppm	30 ppm	0.1 ppm	60 seconds
<b>Hydrogen Cyanide</b>	0-100 ppm	100 ppm	1 ppm	200 seconds
<b>Ammonia</b>	0-50 ppm	200 ppm	1 ppm	150 seconds
<b>Phosphine</b>	0-5 ppm	20 ppm	0.1 ppm	60 seconds
<b>Chlorine Dioxide</b>	0-10 ppm	30 ppm	0.1 ppm	60 seconds

### ACCESSORIES

- Calibration kits with gas cylinder, flow regulator and tubing
- Confined space entry kit
- Automotive charging adapter
- ProRAE suite software and interface cable
- Collapsible remote sampling probe
- Vibration alarm
- Additional sensors

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