

VRAE

Handheld Five-Gas Surveyer



The VRAE is a powerful, pumped, one- to five-gas monitor that protects workers from combustible gases and vapors, toxic gases and oxygen deficiency/enrichment. This versatile instrument can measure concentrations of combustibles either as percentage by volume or as percentage of lower explosive limit (LEL). The VRAE's rechargeable Nickel-Metal-Hydride battery, powerful internal pump and rugged frame make it ideal for confined space entry, leak detection, and site surveys.

KEY FEATURES

Convenient and Easy to Use

- Wide variety of interchangeable sensors, including combustible, CO, H₂S, SO₂, NO, NO₂, Cl₂, NH₃, HCN, and PH₃
- Familiar, intuitive user interface
- Large keys usable even with 3 layers of gloves
- Large backlit LCD display
- Internal pump for quick response and simple remote sampling
- Field-replaceable rechargeable battery with 10 hours of continuous operation

Durable

• Rugged weather-proof case

APPLICATIONS

- Refineries and petrochemical plants
- Pulp and paper mills
- Utility cable vaults, transformer stations
- Waste-water treatment plants
- Landfill operations
- Fire service

- Powerful and versatile
- Easy to use
- Durable and intrinsically safe



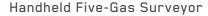














SPECIFICATIONS

Monitor Specifications

Size	7.75"L x 2.75"W x 1.5"H (19.6 cm x 7.0 cm x 3.8 cm)	
Weight	19 oz (540 g) with battery	
Sensors	Catalytic sensor for combustible gas Thermal conductivity sensor for percentage volume combustible gas Electrochemical sensors for oxygen and toxic gases	
Battery	Rechargeable, snap-in, field replaceable 4.8V/1250 mAh, Ni-MH battery pack, 4 AA battery adapter	
Operating Hours	10 hours continuous operation	
Display	2-line, 16-digit LCD with LED back light automatically turns on in dim light or alarm condition	
Keypads	1 operation and 2 programming keys	
Direct Readout	Instantaneous reading (up to 5 values) Oxygen as percentage by volume Combustible gas as percentage by volume or percentage of lower explosive limit (LEL)	
Alarms	90 dB buzzer and flashing red LED to indicate exceeded preset alarms: • High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Alarms latching with manual override or automatic reset • Additional diagnostic alarm and display message for low battery and pump stall	
Datalogging	Optional 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	
Calibration	Two-point field calibration of zero and span gas	
Sampling Pump	Internal pump, flow rate 400 cc/minute Automatic shut off at low flow condition	
Hazardous Area Approval	US: UL, cUL, classified as intrinsically safe for use in Class I, Division 1 Groups A, B, C, D, Hazardous Locations T3C rating	
Temperature	-4° F to 113° F (-20° C to 45° C)	
Humidity	0% to 95% relative humidity (non-condensing)	
Attachment	Durable rubber boot and wrist strap	
Warranty	Lifetime on non-consuming components (per RAE Systems standard warranty) 2 years for O_2 , LEL, CO and H_2S sensors, 1 year for all other sensors, 1 year pump, 1 year battery	

Specifications are subject to change

Sensor Specifications

Gas Monitor	Range	Resolution
Combustible	0 to 100% LEL	1%
	0 to 100% VOL	1%
Oxygen	0 to 30.0%	0.1%
Carbon Monoxide	0 to 500 ppm	1 ppm
Hydrogen Sulfide	0 to 100 ppm	1 ppm
Sulfur Dioxide	0 to 20.0 ppm	0.1 ppm
Nitric Oxide	0 to 250 ppm	1 ppm
Nitrogen Dioxide	0 to 20.0 ppm	0.1 ppm
Chlorine	0 to 10.0 ppm	0.1 ppm
Hydrogen Cyanide	0 to 100 ppm	1 ppm
Ammonia	0 to 50 ppm	1 ppm
Phosphine	0 to 5.0 ppm	0.1 ppm

Specifications are subject to change

MONITOR ONLY INCLUDES:

- Monitor as specified
- · Sensors as specified
- Filter and O-ring pack
- 5" Inlet probe
- Gas outlet port adapter
- Operation and maintenance manual
- Rubber boot with belt clip
- Alkaline battery adapter
- Rechargeable units additionally include:
 - Nickel-Metal-Hydride (NiMH) battery
 - 120 or 230 V AC/DC wall adapter (if specified)

MONITOR WITH ACCESSORIES KIT ALSO INCLUDES:

• Hard transport case with pre-cut foam padding

OPTIONAL CALIBRATION KIT ALSO INCLUDES:

- Four-gas mix in a 34L cylinder (50% LEL, 20.9% O_2 , 25 ppm H_2S , 50 ppm CO)
- · Calibration regulator (male) and tubing
- 15' (5 m) Tygon® tubing
- Tool kit

DATALOGGING MONITORS ALSO INCLUDE:

- Software ProRAE Suite Package for Windows® 98, 2000, NT and XP
- Computer interface cable

