Wireless Six-Gas Monitor
With Benzene-Specific Measurement

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RAE Systems MultiRAE Benzene

The MultiRAE Benzene is the first gas monitor that includes up to 6-gas detection and real-time wireless capability, plus benzene-specific snapshot measurement. The MultiRAE Benzene monitor combines the ability to make quick benzene-specific assessment measurements with the advantages of a versatile multi-gas monitor that supports intelligent interchangeable sensor options.

FEATURES

- **Versatile multi-gas and Benzene-specific[2] modes**

- **Wireless access to real-time instrument readings and alarm status from any location[3]**

- **Unmistakable five-way local and remote wireless notification of alarm conditions, including Man Down Alarm[3]**

- **Intelligent sensors store calibration data, so they can be swapped in the field[4]**

- **Continuous datalogging (up to 6 months for 5 sensors) and snapshot datalogging capabilities**

APPLICATIONS

- **Confined space entry pre-screening**

- **Plant shutdown (downstream)**

- **Personal protection**

- **Leak detection**

Monitor-Only Configuration Includes:

- MultiRAE Benzene monitor with sensors, battery and wireless options as specified, and protective rubber boot and filter(s) installed
- Continuous datalogging (6 months for 5 sensors @ 1-minute)
- Travel charger/PC communications adapter
- Toolkit with Hex tool and Phillips screwdriver
- PC communication cable
- AC adapter
- Calibration adapter
- Alkaline battery adapter
- Quick Start Guides
- CD with documentation
- ProRAE Studio II Instrument Configuration & Data Management Software
- Calibration and test certificate
- Warranty/registration card
- 10 charcoal VOC filters for CO sensor
- Built-in pump
- Belt clip installed
- 3 spare external filters
- PID sensor cap removal tool
- 1 Cartridge for Benzene specific measurement (6 measurements)
- Remote Sample Draw Kit
  - 10" (26 cm) aluminum sample probe with replaceable filters,
  - 3 hydrophobic barrier filters,
  - 10' (3 m) self-coiling Teflon® tubing w/Luer-style quick-connect fitting

Instrument ships in a hard transport case with custom foam

Optional Calibration Kit Adds:

- 4-gas mix (34L; 50% LEL, 18% O_2, 10 ppm H_2S, 50 ppm CO) with regulator
- 5 ppm Benzene gas (34L) with regulator
- AutoRAE 2 Automatic Calibration Station

CALL GEOTECH TODAY (800) 833-7958

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SPECIFICATIONS

Instrument Specifications

Size	7.6" H x 3.8" W x 2.6" D (193 x 96.5 x 66 mm) without RAE SepTube Cartridge
Weight	31oz. (880g) without RAE SepTube Cartridge
Sensors	More than 20 intelligent interchangeable field-replaceable sensors, including PID sensor for VOCs, electrochemical sensors for toxic gases, and oxygen and LEL sensor
Battery Options, Runtime5 and Recharge Time	- Rechargeable Li-ion (~12-hr. runtime, < 6-hr. recharge time) - Extended-duration Li-ion (~18-hr. runtime, < 9-hr. recharge time) - Alkaline adapter with 4 x AA batteries (~6-hr. runtime)
Display	Monochrome graphical LCD display (128 x 160) with backlighting. Automatic screen "flip" feature.
Display Readout	- Real-time reading of gas concentrations; non-specific PID measurement ; Man Down Alarm on/off; visual compliance indicator; battery status; datalogging on/off; wireless on/off and reception quality. - STEL, TWA, peak, and minimum values - Benzene-specific snapshot measurement[2]
Keypad Buttons	3 operation and programming keys (Mode, Y/+, and N/−)
Sampling	Built-in pump. Average flow rate: 250 cc/min. Auto shutoff in low-flow conditions
Calibration	Automatic with AutoRAE 2 Test and Calibration System or manual
Alarms	- Wireless remote alarm notification; audible (95 dB @ 30 cm), vibration, visible (flashing bright red LEDs), and on-screen indication of alarm conditions - Man Down Alarm with pre-alarm and real-time remote wireless notification[3]
Datalogging	Continuous datalogging (6 months for 5 sensors at 1-minute intervals) - User-configurable datalogging intervals (from 1 to 3,600 seconds) - Snapshot datalogging
Communication and Data Download	- Data download, instrument set-up and upgrades on PC via desktop charging and PC communications cradle, travel charger, or AutoRAE 2 Automatic Test and Calibration System. - Wireless data and alarm status transmission via built-in RF modem (optional)
Wireless Network	ProRAE Guardian Real-Time Wireless Safety System or EchoView Host-based Closed-Loop System
Wireless Range (Typical)	MultiRAE to RAELink3 [Z1] Mesh modem ~330 feet (100 meters) MultiRAE to EchoView Host, RAEMesh Reader or RAEPoint ~660 feet (200 meters)
Operating Temp.	-4° to 122° F (-20° to 50° C)
Humidity	0% to 95% relative humidity (non-condensing)
Dust and Water Resistance	IP-65 ingress protection rating

Hazardous Location Approvals	CSA: Class I, Division 1, Groups A, B, C and D, T4
	        Class II, Division 1; Groups E, F, G; T85°C
	ATEX: Ex II 1G Ex ia IIC T4 Ga
	        II 2G Ex ia d IIC T4 Gb with IR Sensor installed
	        I M1 Ex ia I Ma
	IECEx: Ex ia IIC T4 Ga
	        Ex ia d IIC T4 Gb with IR Sensor installed
	        I M1 Ex ia I Ma

EMC/RFI	EMC directive: 2004/108/EC
Performance Tests	LEL CSA C22.2 No. 152; ISA-12.13.01
Languages	Arabic, Chinese, Czech, Danish, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, and Turkish
Warranty	- Two years on non-consumable components and catalytic LEL, CO, H_2S, and O_2 sensors - One year on all other sensors, pump, battery, and other consumable parts - 6 months on PID sensor
Wireless Frequency	ISM license-free band. IEEE 802.15.4 Sub 1GHz
Wireless Approvals	FCC Part 15, CE R&TTE, Others[5]
Radio Module	Supports RM900A

Sensor Specifications

PID Sensors	Range	Resolution
VOC 9.8eV	0 to 2,000 ppm	0.1 ppm
Benzene-specific snapshot[2]	0 to 200 ppm	0.1 ppm
Combustible Sensors		
Catalytic LEL	0 to 100% LEL	1% LEL
Electrochemical Sensors		
Ammonia (NH_3)	0 to 100 ppm	1 ppm
Carbon Monoxide (CO) Carbon Monoxide (CO), Ext. Range Carbon Monoxide (CO), H_2-comp. Carbon Monoxide (CO) + Hydrogen Sulfide (H_2S) Combo	0 to 500 ppm 0 to 2,000 ppm 0 to 2,000 ppm 0 to 500 ppm 0 to 200 ppm	1 ppm 10 ppm 10 ppm 1 ppm 0.1 ppm
Chlorine (Cl_2)	0 to 50 ppm	0.1 ppm
Chlorine Dioxide (ClO_2)	0 to 1 ppm	0.03 ppm
Ethylene Oxide (EtO-A) Ethylene Oxide (EtO-B)	0 to 100 ppm 0 to 10 ppm	0.5 ppm 0.1 ppm
Formaldehyde (HCHO)	0 to 10 ppm	0.05 ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
Hydrogen Sulfide (H_2S)	0 to 100 ppm	0.1 ppm
Methyl Mercaptan (CH_3-SH)	0 to 10 ppm	0.1 ppm
Nitric Oxide (NO)	0 to 250 ppm	0.5 ppm
Nitrogen Dioxide (NO_2)	0 to 20 ppm	0.1 ppm
Oxygen (O_2)	0 to 30% Vol.	0.1% Vol.
Phosphine (PH_3)	0 to 20 ppm	0.1 ppm
Sulfur Dioxide (SO_2)	0 to 20 ppm	0.1 ppm

1. A two-gas combination sensor is required for a 6-gas configuration.
2. Requires Benzene RAE-Sep Tube Cartridge
3. Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.
4. RAE Systems recommends calibrating sensors on installation.
5. Contact RAE Systems for country-specific wireless approvals and certificates.

Specifications are subject to change.

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