

## ppbRAE 3000 +

### Portable Handheld VOC Monitor

The compact ppbRAE 3000 + is a comprehensive VOC gas monitor and datalogger for hazardous environments. The ppbRAE 3000 + is one of the most advanced handheld VOC monitors available for parts-per-billion detection. This third-generation patented PID device monitors VOCs using a photoionization detector with a 9.8 eV, 10.6 eV UV-discharge lamp.



Workers can easily measure VOCs and wirelessly transmit readings up to 2 miles/3 km away.

The built-in wireless modem allows real-time data connectivity with the command center located up to two miles/3 km away (with optional RAELink3 portable modem) from the detector.

- Accurate VOC measurement in all operating conditions
- Easy access to lamp and sensor in seconds without tools
- Patented sensor and lamp autocleaning reduces maintenance
- Monitors real-time readings and location of people
- Low Cost of Ownership: 3-year 10.6 eV lamp Warranty
- BLE module and dedicated APP for enhanced datalogging function



## FEATURES & BENEFITS

### Proven PID Technology

- 3-second response time
- Extended range from 1 ppb to 10,000 ppm with highly acute linearity
- Humidity compensation with integral humidity and temperature sensors
- Reflex PID Technology™

### Integrated

- Highly connectivity capability through multiple wireless module options
- Integrated Correction Factors list of 220 compounds—more than any other PID
- Includes flashlight for dark conditions
- Large graphic display presents gas type, Correction Factor and concentration

### Durable

- Easy access to battery, lamp and sensor in seconds without tools
- Rugged housing withstands use in harsh environments
- IP-67 waterproof design for easy cleaning and decontamination

## APPLICATIONS

- Oil & Gas
- HazMat
- Industrial Safety
- Civil Defense
- Environmental & Indoor Air Quality



Instrument Specifications	
Size	10" L x 3.0" W x 2.5" H (25.5 x 7.6 x 6.4 cm)
Weight	26 oz (738 g)
Sensors	Photoionization sensor with standard 10.6 eV or optional 9.8 eV lamp
Battery	<ul style="list-style-type: none"> <li>Rechargeable, external field-replaceable Lithium-Ion battery pack</li> <li>Alkaline battery adapter</li> </ul>
Running time	16 hours of operation (12 hours with alkaline battery)
Display Graphic	4 lines, 28 x 43 mm, with LED backlight for enhanced display readability
Keypad	1 operation and 2 programming keys, 1 flashlight on/off
Direct Readout	Instantaneous reading <ul style="list-style-type: none"> <li>VOCs as ppm by volume or mg/m<sup>3</sup> (3 in upper case for cubic)</li> <li>STEL, TWA and PEAK</li> <li>Battery and shutdown voltage</li> <li>Date, time, temperature</li> </ul>
Alarms	95 dB (at 12"/30 cm) buzzer and flashing red LED to indicate exceeded preset limits <ul style="list-style-type: none"> <li>High: 3 beeps and flashes per second</li> <li>Low: 2 beeps and flashes per second</li> <li>STEL and TWA: 1 beep and flash per second</li> <li>Alarms latching with manual override or automatic reset</li> <li>Additional alarm for low battery and pump stall</li> </ul>
EMI/RFI	Highly resistant to EMI/RFI Compliant with EMC Directive 89/336/EEC
IP Rating	<ul style="list-style-type: none"> <li>IP-67 unit off and without flexible probe</li> <li>IP-65 unit running</li> </ul>
Datalogging	Standard 6 months at one-minute intervals
Calibration	Two-point or three-point calibration for zero and span. Reflex PID Technology™ Calibration memory for 8 calibration gases
Sampling Pump	<ul style="list-style-type: none"> <li>Internal, integrated flow rate at 500 cc/mn</li> <li>Sample from 100' (30m) horizontally and vertically</li> </ul>
Low Flow Alarm	<ul style="list-style-type: none"> <li>Auto pump shutoff at low-flow condition</li> </ul>
Communication & Data Download	<ul style="list-style-type: none"> <li>Download data and upload instrument set-up from PC through charging cradle or using BLE module and dedicated APP</li> <li>Wireless data transmission through built-in RF modem</li> </ul>
Wireless Network	Mesh RAE Systems Dedicated Wireless Network
Wireless Range (Typical)	Up to 15 ft (5m) for BLE EchoView Host: LOS > 660 ft (200 m) ProRAE Guardian & RAEMesh Reader: LOS > 660 ft (200 m) ProRAE Guardian & RAELink3 Mesh: LOS > 330 ft (100 m)
Safety Certifications	<ul style="list-style-type: none"> <li><b>US and Canada:</b> UL, cUL, Classified as Intrinsically Safe for use in Class I, Division 1 Groups A, B, C, D</li> <li><b>Europe:</b> ATEX Ex II 2GEx ia IIC/IIB T4</li> <li>IECEX: Ex ia IIC/IIB T4</li> </ul>
Temperature	-4° to 113° F (-20° to 50° C)
Humidity	0% to 95% relative humidity (non-condensing)
Attachments	Durable black rubber boot with straps

Instrument Specifications	
Warranty	3-year warranty for 10.6 eV lamp, 1 year for pump, battery, and instrument
Wireless Frequency	ISM license-free band. IEEE 802.15.4 Sub 1GHz IEEE 802.11 bands b/g 2.4 GHz
Wireless Approvals	FCC Part 15, CE R&TTE, Others <sup>1</sup>
Radio Module	Supports Bluetooth or RM900 or BLE

<sup>1</sup> Contact RAE Systems for country-specific wireless approvals and certificates. Specifications are subject to change.

Sensor Specifications			
Gas Monitor	Range	Resolution	Response Time T90
VOCs	0 to 9999 ppb	1 ppb	< 3 s
	10 to 99 ppm	0.01 ppm	< 3 s
	100 to 999 ppm	0.1 ppm	< 3 s
	1000 to 9999 ppm	1 ppm	< 3 s

#### MONITOR ONLY INCLUDES:

- ppbRAE 3000 + Monitor
- Wireless communication module built in, as specified
- Charging/download adapter
- Organic vapor zeroing kit
- Tedlar® bag for calibration
- Flex-I-Probe™
- External filter
- Rubber boot with straps
- Alkaline battery adapter
- Lamp-cleaning and tool kit
- Soft leather case

#### MONITOR WITH ACCESSORIES KIT:

- Hard transport case with pre-cut foam padding
- Charging/download cradle
- 5 Porous metal filters and O-rings
- Gas outlet port adapter and tubing

#### OPTIONAL CALIBRATION KIT ADDS:

- 10 ppm isobutylene calibration gas, 34L
- Calibration regulator and flow controller

#### OPTIONAL GUARANTEED COST-OF-OWNERSHIP PROGRAM:

- 4-year repair and replacement warranty
- Annual maintenance service

#### For more information

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