

# Photoionization Detector (PID)

## *Honeywell MiniRAE 3000+ and ppbRAE 3000+*

The MiniRAE 3000+ and ppbRAE 3000+ are the most advanced handheld volatile organic compound (VOC) monitors on the market. Their photoionization detector's (PID) extended range of 0 to 15,000 ppm (1 ppb to 10,000 ppm – ppbRAE 3000+) make them ideal instruments for industrial hygiene, leak detection and HazMat.

### FEATURES & BENEFITS

- Third-generation patented PID technology
- Reflex PID Technology™
- VOC detection range from 0 to 15,000 ppm
- 3-second response time
- Humidity compensation with built-in humidity and temperature sensors
- Six-month datalogging
- Highly connectivity capability through multiple wireless module options
- Large graphic display with integrated flashlight
- Multi-language support with 10 languages encoded
- IP-67 waterproof design
- Highly accurate VOC measurements
- Low maintenance — easy access to lamp and sensor
- Low cost of ownership
- 3-year 10.6eV lamp warranty
- BLE module & dedicated APP for Enhanced Datalogging capability

### APPLICATIONS

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



MiniRAE 3000+

ppbRAE 3000+

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

**Geotech Environmental Equipment, Inc.**

2650 East 40th Avenue • Denver, Colorado 80205

(303) 320-4764 • (800) 833-7958 • FAX (303) 322-7242

email: sales@geotechenv.com website: www.geotechenv.com

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## Honeywell MiniRAE 3000+ and ppbRAE 3000+

### SPECIFICATIONS

#### Detector Specifications\*

<b>Size</b>	10" L x 3.0" W x 2.5" H (25.5 cm x 7.6 cm x 6.4 cm)
<b>Weight</b>	26 oz. (738 g)
<b>Sensors</b>	Photoionization sensor with standard 10.6 eV or optional 9.8 eV or 11.7 eV lamps
<b>Battery</b>	<ul style="list-style-type: none"> <li>Rechargeable, external field-replaceable Lithium-Ion battery pack</li> <li>Alkaline battery adapter</li> </ul>
<b>Operating Hours</b>	16 hours of operation (12 hours with alkaline battery)
<b>Display Graphic</b>	4 lines, 28 x 43 mm, with LED backlight for enhanced display readability
<b>Keypad</b>	1 operation and 2 programming keys, 1 flashlight on/off
<b>Direct Readout</b>	Instantaneous reading <ul style="list-style-type: none"> <li>VOCs as ppm by volume or mg/m<sup>3</sup></li> <li>High values</li> <li>STEL and TWA</li> <li>Battery and shutdown voltage</li> <li>Date, time, temperature</li> </ul>
<b>Alarms</b>	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 diagnostic alarm and display message for low battery and pump stall</li> </ul>
<b>EMC/RFI</b>	Compliant with EMC directive (2004/108/EC) EMI and ESD test: 100MHz to 1GHz 30V/m, no alarm Contact: ±4kV Air: ±8kV, no alarm
<b>IP Rating</b>	<ul style="list-style-type: none"> <li>IP67 unit off and without flexible probe</li> <li>IP65 unit running</li> </ul>
<b>Datalogging</b>	Standard 6 months at one-minute intervals
<b>Calibration</b>	Two-point or three-point calibration for zero and span. Reflex PID Technology™ Calibration memory for 8 calibration gases, alarm limits, span values and calibration dates
<b>Sampling Pump</b>	<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>
<b>Low Flow Alarm</b>	Auto pump shutoff at low-flow condition
<b>Communication &amp; Data Download</b>	<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>
<b>Wireless Network</b>	Mesh RAE Systems Dedicated Wireless Network
<b>Wireless Range (Typical)</b>	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)
<b>Safety Certifications</b>	<b>US and Canada:</b> CSA, Classified as Intrinsically Safe for use in Class I, Division 1 Groups A, B, C, D <b>Europe:</b> ATEX II 2G EEx ia IIC T4
<b>Temperature</b>	-4° to 113°F (-20° to 50°C)
<b>Humidity</b>	0% to 95% relative humidity (non-condensing)
<b>Attachments</b>	MiniRAE 3000+ – Durable bright yellow rubber boot with belt clip ppbRAE 3000+ – Durable black rubber boot with straps
<b>Warranty</b>	3-year for 10.6 eV lamp, 1 year for pump, battery, sensor, and instrument
<b>Wireless Frequency</b>	ISM license-free band. IEEE 802.15.4 Sub 1GHz
<b>Wireless Approvals</b>	FCC Part 15, CE R&TTE, Others†
<b>Radio Module</b>	Supports BLE or Bluetooth or RM900

† Contact Geotech for country-specific wireless approvals and certificates.

#### Sensor Specifications for VOCs\*

Gas Monitor	Range	Resolution	Response Time T90
<b>MiniRAE 3000+</b>	0 to 999.9 ppm	0.1 ppm	< 3 s
	1000 to 15,000 ppm	1 ppm	< 3 s
<b>ppbRAE 3000+</b>	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

#### MiniRAE 3000+ Monitor only includes:

- Model PGM-7320 MiniRAE 3000+ Monitor
- Wireless communication module built-in, as specified
- Datalogging with ProRAE Studio II package
- Charging/download adapter
- RAE UV lamp, as specified
- Flex-I-Probe™
- External filter
- Soft leather case
- Rubber boot with belt clip and straps
- Alkaline battery adapter
- Lamp-cleaning kit
- Tool kit
- Lithium-ion (li-Ion) battery with universal AC/DC charger and international plug kit
- Operation CD-ROM
- Operation & Maintenance Manual

#### ppbRAE 3000+ Monitor only includes:

- ppbRAE 3000+ Monitor, with RAE Systems UV lamp, as specified
- Datalogging with ProRAE Studio II package
- Charging/download adapter
- VOC Zeroing Tubes (1 box)
- Tube adapter
- Tedlar® bag for calibration
- Soft leather case
- Flex-I-Probe™
- External filter
- Rubber boot with straps
- Alkaline battery adapter
- Lamp-cleaning and tool kit
- Operation CD-ROM
- Operation & Maintenance Manual

#### Monitor with accessories kit adds:

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

#### Optional calibration kit adds:

- ppm isobutylene calibration gas, 34L 100 ppm for MiniRAE 3000+, 10 ppm for ppbRAE 3000+
- Calibration regulator and flow controller

#### Optional Guaranteed Cost of Ownership Program:

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

\*Specifications are subject to change.

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