



# MiniRAE 2000

## Portable Handheld VOC Monitor

The rugged **MiniRAE 2000** is the smallest pumped handheld volatile organic compound (VOC) monitor on the market. Its Photoionization Detector's (PID) extended range of 0-10,000 ppm makes it an ideal instrument for applications from environmental site surveying to HazMat/Homeland Security.

### Key Features

**Proven PID technology** The patented 3D sensor provides a 3-second response up to 10,000 ppm and sets a new standard for resistance to moisture and dirt.

**Self-cleaning lamp and sensor** Our patented self-cleaning lamp and sensor minimize the need for maintenance and calibration.

**The MiniRAE 2000 lamp and sensor can be taken apart in seconds for easy maintenance without any tools!**

**Measure more chemicals than with any other PID** With over 100 Correction Factors built into the **MiniRAE 2000** memory and the largest printed list of Correction

Factors in the world (300+), RAE Systems offers the ability to accurately measure more ionizable chemicals than any other

PID. When a gas is selected from the MiniRAE 2000's library, the alarm points are automatically loaded into the meter.

**User friendly** screens make it easy to use for simple applications and flexible enough for sophisticated operations.

**Drop-in battery** When work schedules require putting in more than the 10 hours supplied by the standard NiMH battery, the drop-in alkaline pack supplied with every MiniRAE 2000 lets you finish the job.

**Rugged Rubber Boot** The standard rubber boot helps assure that the MiniRAE 2000 survives the bumps and knocks of tough field use.

**Strong, built-in sample pump** draws up to 100 feet (30m) horizontally or vertically.

**Tough flexible inlet probe**

**Large keys** operable with 3 layers of gloves.

**Easy-to-read display** with backlight.

**Stores up to 267 hours of data** at one minute intervals for downloading to PC (with the datalogging option).

**3-year 10.6 eV lamp warranty**

### Applications

#### HazMat/Homeland Security

- Initial PPE (personal protective equipment) assessment
- Leak detection
- Perimeter establishment and maintenance
- Spill delineation
- Decontamination
- Remediation

#### Industrial Hygiene/Safety

- Confined Space Entry (CSE)
- Indoor Air Quality (IAQ)
- Worker exposure studies

#### Environmental

- Soil and water headspace analysis
- Leaking underground storage tanks
- Perimeter fence line monitoring
- Fugitive emissions (EPA Method 21)
- Vapor recovery breakthrough
- Landfill monitoring



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## Specifications\*

### Default Sensor Settings\*\*

Gas Monitor (ppm)	Range (ppm)	Resolution Time (T90)	Response
VOCs	0 - 999 ppm	0.1 ppm	< 3 sec
	100 - 10,000 ppm	1 ppm	< 3 sec

### Detector Specifications

<b>Size</b>	8.2"L x 3.0"W x 2.0"H (21.8 x 7.62 x 5.0 cm)
<b>Weight</b>	20 oz with battery pack (553g) w/o rubber boot
<b>Sensor</b>	Photoionization sensor with standard 10.6 eV or optional 9.8eV or 11.7 eV UV lamp
<b>Battery</b>	<ul style="list-style-type: none"> <li>Rechargeable, external, field replaceable Nickel-Metal-Hydrate (NiMH) battery pack</li> <li>Alkaline battery holder (for 4 AA batteries)</li> </ul>
<b>Operating Period</b>	10 hours continuous operation
<b>Display</b>	Large LCD, backlight activated manually, with alarms or darkness
<b>Keypad</b>	1 operation and 2 programming keys
<b>Direct Readout</b>	<ul style="list-style-type: none"> <li>VOCs as ppm by volume</li> <li>High and low values</li> <li>STEL and TWA (in hygiene mode)</li> <li>Battery and shut down voltage</li> </ul>
<b>Alarms</b>	90 dB 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 automatic reset or latching with manual override</li> <li>Optional plug-in pen size vibration alarm</li> <li>User adjustable alarm limits</li> </ul>
<b>Calibration</b>	Two point field calibration of zero and standard reference gas. Calibration memory of 8 calibration gases, alarm limits, span values and calibration date
<b>Datalogging</b>	Optional 267 hours (at one minute intervals) with date/time. Header information includes monitor serial number, user ID, site ID, date and time
<b>Sampling Pump</b>	<ul style="list-style-type: none"> <li>Internal, integrated flow rate 400 cc/min</li> <li>Sample from 100' (30m) horizontally or vertically</li> </ul>
<b>Low Flow Alarm</b>	Auto shut-off pump at low flow condition
<b>Communication</b>	Download data and upload instrument set-up from PC through RS-232 link to serial port
<b>Temperature</b>	14° to 104°F (-10° to 40°C)
<b>Humidity</b>	0% to 95% relative humidity (non-condensing)
<b>EM/RFI</b>	Highly resistant to EMI /RFI. Compliant with EMC Directive 89/336/EEC
<b>IP-rating</b>	IP-55: protected against dust, protected against low pressure jets of water from all directions
<b>Hazardous Area Approval</b>	<ul style="list-style-type: none"> <li>US and Canada: UL and cUL, Classified for use in Class I, Division 1, Groups A, B, C and D hazardous locations</li> <li>Europe: ATEX II IG EEx ia IIC T4</li> </ul>
<b>Attachment</b>	Durable bright yellow rubber boot w/belt clip & wrist strap
<b>Warranty</b>	Lifetime on non-consumable components (per RAE Systems Standard Warranty), 3 years for 10.6.V PID lamp, 1 year for pump and battery

\* On going projects to enhance our products means that these specifications are subject to change

\*\* Performance based on isobutylene calibration

### MiniRAE 2000 and Accessories

#### Monitor only includes:

- 10.6eV, 9.8eV or 11.7eV as specified
- RAE Systems UV lamp: 10.6eV, 9.8eV or 11.7eV as specified
- 5-inch Flex-I-Probe
- External filter
- Rubber boot with belt clip
- Alkaline battery adapter
- Tool kit
- Lamp cleaning kit
- Nickel-Metal-Hydrate battery
- 120/230 V AC/DC wall adapter (if specified)
- Operation and maintenance manual

#### Monitor with accessories kit adds:

- Hard transport case with pre-cut foam
- 5 porous metal filters and O-rings
- Organic vapor zeroing adapter
- Gas outlet port and tubing

#### Optional calibration kit adds:

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

#### Datalogging monitor adds:

- ProRAE Suite software package for Windows 98, NT, 2000 and XP
- Computer interface cable

#### Optional Guaranteed Cost of Ownership Program:

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

DISTRIBUTED BY:

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