

# MiniRAE 2000

## Portable Handheld VOC Monitor



The rugged MiniRAE 2000 is the smallest pumped handheld total Volatile Organic Compound (VOC) monitor on the market. Its Photo-Ionization 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.

### Standard Features

- **Superior PID sensor:** the patented 3D sensor provides 3 second response to 10,000 ppm and sets a new standard for resistance to moisture and dirt.
  - **Self-Cleaning Lamp & Sensor:** Our patented self-cleaning lamp and sensor minimize the need for cleaning and calibration.
  - **The MiniRAE 2000 lamp and sensor comes 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's 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 in the MiniRAE 2000's library its alarms points are automatically loaded into the meter.
  - **3 Year 10.eV Lamp warranty/Lifetime instrument warranty.**
  - **Drop-in Battery:** when work schedules require putting in more hours than the 10 hours supplied by the standard NiMH, the drop in alkaline pack with every MiniRAE 2000 allows you to finish the job.
- **User friendly** screens make it easy to use for simple applications and flexible enough for sophisticated options.
  - **Rugged Rubber Boot:** the standard rubber boot helps assure that the MiniRAE 2000 survives the bumps and knock of tough field use.
  - **Strong, built-in sample pump** draws up to 100' (30m) horizontally or vertically
  - **Tough flexible inlet probe**
  - **Large keys** operable with 3 layers of gloves
  - **Easy-to-read display** with backlight
  - **Store up to 267 hours of data** at one minute interval for download to PC with the optional datalogging.

### Applications

- Environmental
  - Soil and water headspace analysis
  - Leaking underground storage tanks (LUST)
  - Perimeter fence line monitoring
  - Fugitive emissions (EPA Method 21)
  - Vapor recovery breakthrough
  - Landfill monitoring
- HazMat/Homeland Security
  - Initial PPE (personal protective equipment) assessment
  - Leak detection
  - Perimeter establishment and maintenance
  - Spill delineation
  - Decontamination
  - Remediation
- Industrial Hygiene, Plant Health & Safety
  - Confined space entry
  - Indoor Air Quality (IAQ)
  - Worker exposure studies

## Specifications

### Sensor Specifications

Gas Monitor	Range	Resolution	Response Time
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 5.08 cm)
<b>Weight</b>	19.5 oz with battery (553)
<b>Sensors</b>	Photo-Ionization 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 NiMH battery pack.</li><li>• Alkaline battery holder (for 4 AA) supplied</li></ul>
<b>Operating Hours</b>	10 hours continuous operation
<b>Display</b>	Large LCD, back light activated manually, with alarms or darkness
<b>Keypads</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>Alarm</b>	<ul style="list-style-type: none"><li>• 90 dB buzzer and flashing red LED to indicate exceeded preset limits</li><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></ul>
<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>Communication</b>	Download data and upload instrument setup from PC through RS-232 link to serial port
<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>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>Hazardous Area Approval</b>	<ul style="list-style-type: none"><li>• US: UL and CuL, Classified for use in Class I, Division 1, Groups A, B, C and D Hazardous Locations</li><li>• ATEX: EEx ia IIC T4</li></ul>
<b>Temperature</b>	14° to 104°F (-10° to 40°C)
<b>Humidity</b>	0% to 95% relative humidity (non-condensing)
<b>Warranty</b>	Lifetime on non-consuming components (per RAE Standard Warranty), 3 years for 10.6 eV PID lamp, 1 year pump, 1 year battery

## MiniRAE 2000 Accessories

### Monitor Only Includes:

- Monitor as specified
- RAE UV lamp, as specified
- 5" Inlet probe
- Water trap filter
- Rubber boot with belt clip
- Alkaline battery adapter
- Lamp cleaning kit
- Tool kit
- Nickel-Metal-Hydride (NiMH) battery
- 120/230 V AC/DC Charger (if specified)
- Operation and maintenance manual

### Monitor with accessories kit also includes:

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

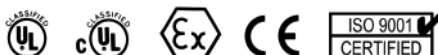
### Optional calibration kit also includes:

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

### Datalogging monitors also include:

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

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