



# ppbRAE Plus

## Portable continuous ppb VOC Detector Monitor

The rugged **ppbRAE Plus** is the most sensitive handheld volatile organic compound (VOC) monitor in the world. Its photoionization detector (PID) provides true parts-per-billion (ppb) detection for applications from Indoor Air Quality (IAQ) to HazMat/Homeland Security.



### Key Features

**New extended range from 1 ppb to 2,000 ppm**

#### Proven PID technology

The patented dual channel 3D sensor provides a 3-second response time and sets a new standard for resistance to moisture and dirt while the superbright 10.6eV lamp provides extra sensitivity for low ppb measurements.

#### Exclusive zeroing tube

Assures repeatability at low level measurements with a disposable VOC zeroing tube.

#### Self-cleaning lamp and sensor

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

**The ppbRAE Plus 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 **ppbRAE Plus** 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 **ppbRAE Plus** library, its 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 hours than the 10 hours supplied by the standard NiMH battery, the drop-in alkaline pack supplied with every **ppbRAE Plus** lets you finish the job.

### Rugged Rubber Boot

The standard rubber boot helps assure that the **ppbRAE Plus** 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

One minute intervals for downloading to PC (with the datalogging option)

## Applications

### HazMat/Homeland Security

- Searching for Toxic Industrial Chemicals (TICs) and Chemical Warfare Agents (CWAs)
- 5-second response enables quick assessment of patients in decon lines

### Indoor Air Quality (IAQ) surveys

- Outgassing of new building materials (carpet and fabrics)
- Searching for mold and mildew by measuring microbial VOCs (mVOCs)
- Identifying sources of odors

### Industrial Hygiene/Safety

- Worker exposure studies for very toxic chemicals

### Environmental

- Perimeter fence line monitoring
- Low-level leak detection

## Specifications \*

### Range, Resolution & Response Time

Gas Monitor	Range	Resolution	Response Time (T90)
VOCs	0 - 9999 ppb	1 ppb	< 5 sec
	10.0 - 99.9 ppm	0.1 ppm	< 5 sec
	100 - 2000 ppm	1 ppm	< 5 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>	19.5 oz with battery pack (553g) w/o rubber boot
<b>Sensor</b>	Patented, planar, dual channel, photoionization sensor with super bright 10.6 eV 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>Keypads</b>	1 operation and 2 programming keys
<b>Direct Readout</b>	<ul style="list-style-type: none"> <li>VOCs as ppb or 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 black rubber boot w/belt clip & wrist strap
<b>Warranty</b>	Lifetime on non-consumable components (per RAE Systems Standard Warranty), 1 year for 10.6.V PID lamp, 1 year for pump and battery

### ppbRAE Plus and Accessories

#### Monitor only includes:

- RAE Systems 10.6 eV UV lamp
- 5-inch Flex-I-Probe
- External filter
- Rubber boot with belt clip
- Alkaline battery adapter
- Tool kit
- Lamp cleaning kit
- VOC Zeroing Tubes (1 box)
- Tube adapter
- Teldar® bag for calibration
- Nickel-Metal-Hydrate battery
- 120/230 V AC/DC wall adapter (if specified)
- Operation and maintenance manual

Flex-I-Probe w/exclusive disposable zeroing tube



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#### Monitor with accessories kit adds:

- Hard transport case with pre-cut foam
- 5 porous metal filters and O-rings
- Gas outlet port fitting and tubing

#### Optional calibration kit adds:

- 10 ppm isobutylene calibration gas, 34L
- Regulator (0.5 LPM) and Teflon® tubing

#### 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

\*Ongoing projects to enhance our products means that these specifications are subject to changes



DISTRIBUTED BY:

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