ppbRAE Plus
VOC Detector Monitor

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 5-second response time and sets a new standard for resistance to moisture and dirt while the super-bright 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
RAE Systems' patented self-cleaning lamp and sensor minimizes the need for maintenance and calibration.

The ppbRAE Plus lamp and sensor can be taken apart in seconds for easy maintenance without 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+), the **ppbRAE Plus** 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 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 down-loading to a 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 fenceline monitoring
• Low-level leak detection

ATEX   cULus CLASSIFIED   CE   ISO 9001 CERTIFIED

RAE SYSTEMS

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

Size	8.2"L x 3.0"W x 2.0"H (21.8 x 7.62 x 5.0 cm)
Weight	19.5 oz with battery pack (553g) w/o rubber boot
Sensor	Patented, planar, dual-channel, photoionization sensor with super-bright 10.6 eV lamp
Battery	• Rechargeable, external, field replaceable Nickel-Metal-Hydride (NiMH) battery pack • Alkaline battery holder (for 4 AA batteries)
Operating Period	10 hours continuous operation
Display	Large LCD, backlight activated manually, with alarms or by darkness
Keypads	1 operation and 2 programming keys
Direct Readout	• VOCs as ppb or ppm by volume • High and low values • STEL and TWA (in hygiene mode) • Battery and shutdown voltage
Alarms	90dB buzzer and flashing red LED to indicate exceeded preset limits • High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Alarms with automatic reset or latching with manual override • Optional plug-in pen-size vibration alarm • User-adjustable alarm limits
Calibration	Two-point field calibration of zero and standard reference gas. Calibration memory of 8 calibration gases, alarm limits, span values and calibration date
Datalogging	Optional 267 hours (at one-minute intervals) with date/time. Header information includes monitor serial number, user ID, site ID, date and time
Sampling Pump	• Internal, integrated flow rate 400 cc/min • Sample from 100' (30m) horizontally or vertically
Low Flow Alarm	Auto shut-off pump at low-flow condition
Communication	Download data and upload instrument set-up from PC through RS-232 link to serial port
Temperature	14° to 104°F (-10° to 40°C)
Humidity	0% to 95% relative humidity (non-condensing)
EM/RFI	Highly resistant to EMI/RFI. Compliant with EMC Directive 89/336/EEC
IP-rating	IP-55: protected against dust, protected against low-pressure jets of water from all directions
Hazardous Area Approval	• US and Canada: UL and cUL, Classified for use in Class I, Division 1, Groups A, B, C and D hazardous locations • Europe: ATEX II IG EEx ia IIC T4
Attachments	Durable black rubber boot w/belt clip & wrist strap
Warranty	Lifetime on non-consumable components (per RAE Systems Standard Warranty), 1 year for 10.6.V PID lamp, 1 year for pump and battery

*Ongoing projects to enhance our products mean that these specifications are subject to change

Monitor-only includes:
• RAE Systems 10.6 eV UV lamp
• 5" 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
• Tedlar® bag for calibration
• Nickel-Metal-Hydride battery
• 120/230 V AC/DC wall adapter (if specified)
• Operation and maintenance manual

Flex-I-Probe w/exclusive disposable zeroing tube

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

ppbRAE Plus

DISTRIBUTED BY:

RAE SYSTEMS