

# 2020ppbPRO™

Photovac is **MORE**  
than instruments.



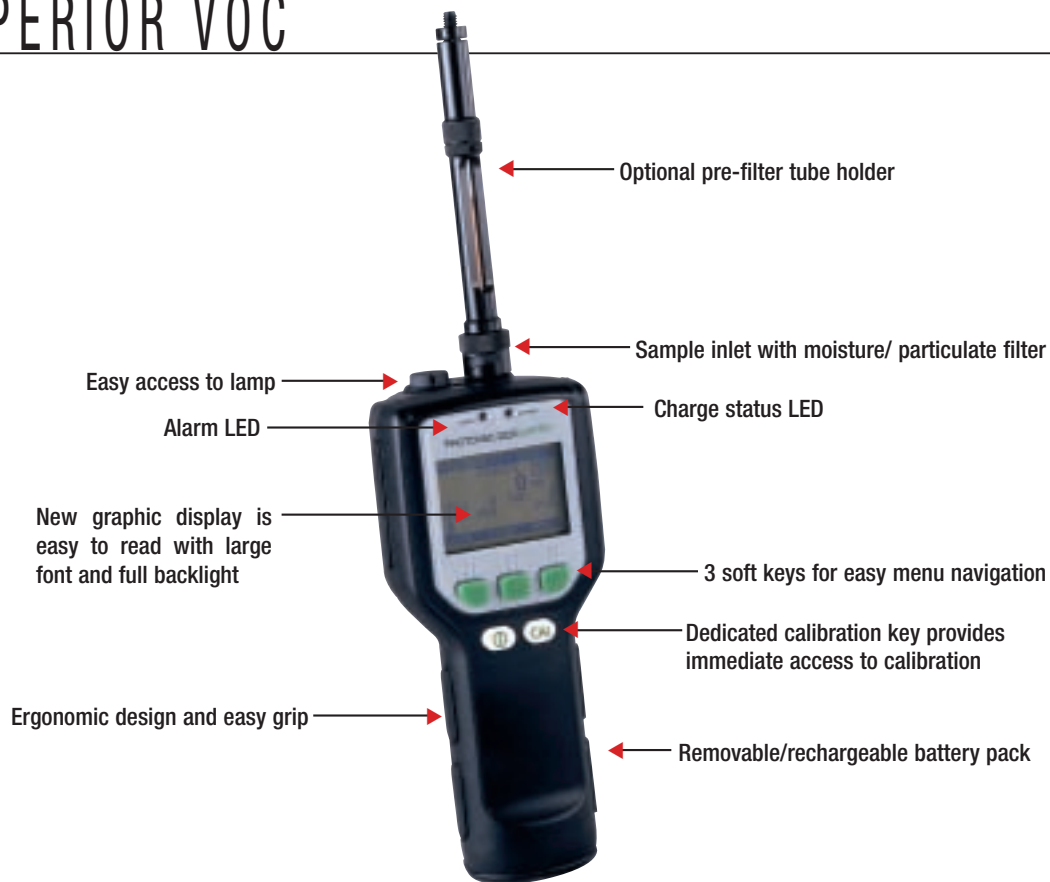
Photovac delivers  
**PROVEN** solutions.



**PHOTOVAC, Inc.**

# SUPERIOR VOC

Detection



## Rapid VOC detection in air, water and soil in the harshest environments

### Stable, linear Photovac PID

The 2020ppbPRO uses photoionization, the technology of choice for detecting low level VOCs. The 2020ppbPRO is equipped standard with a new high performance 10.6 eV lamp, and has an optional 11.7 eV lamp for ionizing chlorinated compounds. The UV lamp is easy to remove for cleaning or replacement.

### Ergonomic design for the real world

A new ergonomic design with textured grip and large keys makes the 2020ppbPRO easy to carry and use, even while wearing triple-layer gloves. The large backlit display is easy to read with large fonts. All information is clearly displayed on a single 8-line display.

### Effortless data handling

Expanded internal datalogging allows the operator to record up to 200 hours of 1 minute interval sampling points that can then be downloaded to a PC using Photovac's ProComm software.

### Dedicated calibration key

The dedicated calibration key provides immediate access to the calibration procedure. Clear prompts walk the user through the procedure assuring the user of accurate and complete calibration.

### Formaldehyde detection

Using the Dräger developed Formaldehyde pre-filter tube, the 2020ppbPRO can be used for single gas detection and provide precise measurement of Formaldehyde in the air.

### Dräger tubes for zero calibration

Zero calibration is facilitated through the use of an activated charcoal pre-filter tube developed for Photovac by Dräger Safety AG. This multi-use tube helps ensure that trace volatiles in room air or impurities in portable cylinders of clean air are removed.

### Easy to use

Flexible operation to meet monitoring requirements  
User selectable interval time (1 to 900 seconds)  
Display readings in ppb, ppm, or mg/M3

### Intrinsically safe

The 2020ppbPRO is classified as Intrinsically Safe to North American and ATEX standards for use in potentially explosive environments.

### Lamp condition assessment

Following calibration the 2020ppbPRO provides the user with an assessment of the condition of the UV lamp. The assessment includes: "good", "medium", "bad", and "replace". The user can take immediate remedial action ranging from simply cleaning the lamp to replacing it with a new lamp.

**5th GENERATION Photoionization Monitor with the RUGGEDNESS and RELIABILITY you expect from Photovac**

# 2020ppbPRO

## Applications



- Low detection level for very toxic VOCs
- Out-gassing from building and/or construction materials
- VOC residuals analysis
- Lab hood and clean room monitoring
- Site characterization
- Ambient air monitoring
- Trace sources of VOC based odors
- Low level soil or water headspace screening
- Health and safety monitoring
- Maintenance and cleaning supplies
- Breath sampling
- Pesticides

# 2020ppbPRO

## Solutions



### Volatile Organic Compounds

Volatile organic compounds (VOCs) vaporize at room temperature and pressure. They are found in many indoor sources, including many common household products and building materials.

### Building and Construction Materials – Outgassing

Building materials can be a primary source of harmful gases and chemicals. In particular, formaldehyde, a preservative and adhesive ingredient, is a component of many building materials (e.g., particle board, sub-flooring, paneling, shelving, new carpet and padding and floor finishes cured with an acid-based process). These products can release formaldehyde from the moment of introduction and can continue to off-gas as they age and deteriorate over several years.

### Health and Safety Monitoring – Indoor Air Quality

Cleaning products, paints and varnishes, hair spray, fragrances, permanent press clothing additives, and various office devices can emit VOCs that adversely affect health. Organohalogen compounds that are used as flame retardants in consumer products can also contribute to health problems.

Industrial strength cleaning, degreasing, and disinfecting products can release harmful organic compounds when they are used or while in storage.

A PID is the instrument of choice for personal safety monitoring because it responds best to the more toxic VOCs. The 2020ppbPRO is small and lightweight so the instrument can be placed in a belt holster for personal monitoring. The audible and visual alarms for STEL, TWA, and real-time Peak levels provide the health and safety professional with an excellent way to alert workers to a potential risk to their well-being.

### Pesticides

Indoor pesticide use, effective on pests, can have negative effects on people. Pesticides that impact indoor air quality typically include insecticides, termiticides, rodenticides, fungicides and microbe disinfectants. Both the active and inert ingredients in the pesticides can be organic compounds; therefore they both could add to the levels of airborne organics affecting indoor air quality. The sensitivity and low detection level of the 2020ppbPRO are ideal for measuring such problems.

### Environmental Site Characterization

The 2020ppbPRO is ideal for site screening to determine the extent of low level VOC contamination present by providing the concentration and helping trace the source of the contamination. The 2020ppbPRO can monitor a broad range of compounds to very low levels with the new high performance 10.6 eV lamp as well as the optional 11.7 eV lamp.

In Interval Mode, the 2020ppbPRO automatically calculates and records PEAK, STEL, and TWA at a user selected interval. With datalogging capability supporting up to 200 hours of 1 minute sampling data, the 2020ppbPRO will handle short and long term monitoring requirements.

### Soil/Water Jar Headspace Screening

The 2020ppbPRO can detect a wide range of VOCs from 10ppb to 40ppm. Given its low detection capability, the 2020ppbPRO is an ideal screening tool for VOCs in soil or water static headspace.

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## 2020ppbPRO

### Detectable Compounds

**Aromatics** - Benzene, Toluene, Naphthalene

**Unsaturated Hydrocarbons** - Acetylene, Ethylene, 1,3-Butadiene

**Chlorinated Hydrocarbons** - Vinyl chloride, Chloroform, Trichloroethylene, Methylene chloride

**Ketones** - Acetone, Methyl ethyl ketone, Methyl isobutyl ketone

**Alcohols** - Methanol, Ethanol, Isopropanol, n-Butanol

**Organic Fuels** - Gasoline and jet fuels, which are mixtures of hundreds of different compounds including aromatics, are well detected.

Please note: This list provides examples of the classes of compounds detectable by the 2020ppbPRO. Please contact Photovac Technical Support for details on specific compound detection.

For further information on Photovac products, or to arrange a product demonstration, please contact a Photovac representative near you, email us at [salesadmin@photovac.com](mailto:salesadmin@photovac.com) or contact Photovac, Inc.

### Specifications

**Size**

9" (228.6 mm) long x 3" (76.2 mm) deep x 4.25" (107.9 mm) wide at display tapering to 2.6" (66.6 mm) at handle

**Weight**

1.9 pounds (0.86 kg)

**Detector**

Instant on photoionization detector with standard high performance 10.6 eV lamp, and optional 11.7 eV lamp

**Keypad**

Two dedicated keys (ON/OFF and CAL) and three menu keys

**Display**

128 x 64 graphic LCD, 6-line

**Datalogger Memory**

200 hours at 1 minute interval sampling

**Serial Output**

RS-232, 9600 baud, 8 data bits, no parity for connection to Windows-based PC

**Audio Output**

85 db on alarm

**Inlet Connection**

1/8"(3.175 mm) compression fitting

**Operating Temperature Range**

Operating temperature: 0°C to 50°C (32°F to 122°F)  
I/S Certified temperature: 0°C to 40°C (32°F to 104°F)

**Operating Humidity Range**

0 to 95% relative humidity (non-condensing)

**Operating Humidity Range with Optional Humidity Pre-filter Tube**

0 to 100% relative humidity (non-condensing)

**Operating Concentration Range**

10ppb to 40ppm isobutylene equivalent  
(10ppb resolution)

**Response Time**

Less than 3 seconds, to 90%

**Low Detection Limit**

10ppb Isobutylene

**Battery Capacity**

8 hours

**Intrinsic Safety**

Class I, Division 1, Groups A, B, C, & D  
ATEX II 2 G EEx ib IIC T4 (TA = 0°C to +40°C)



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