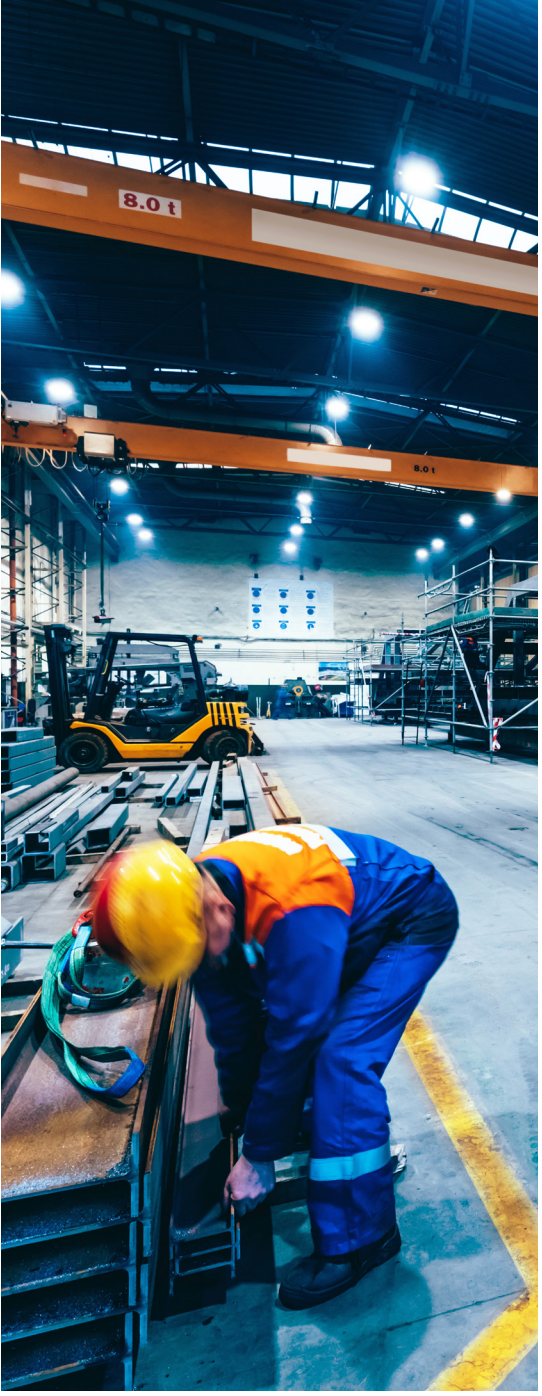


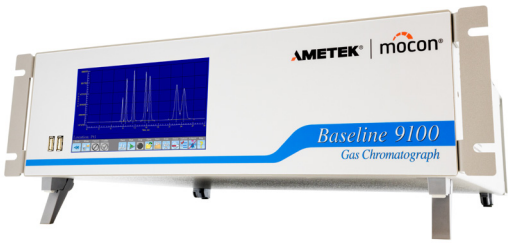
TOXIC GAS MONITORING
INDOOR AIR QUALITY & LEAK DETECTION

Part-Per-Billion Detection Utilizing Gas Chromatographs and Hydrocarbon Analyzers

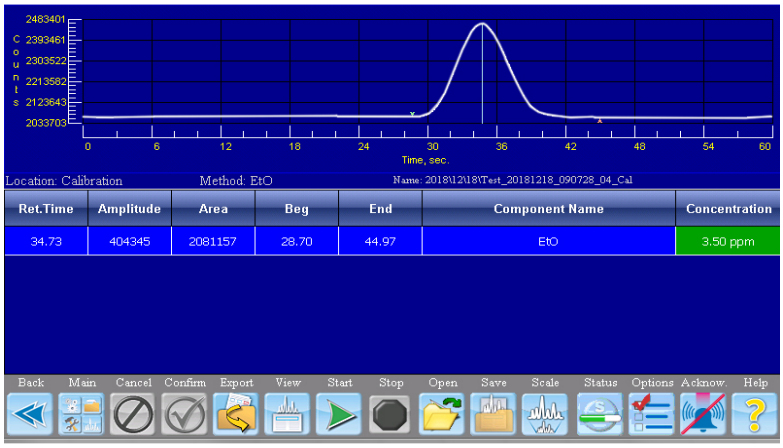
AMETEK® | mocon®

Indoor Air Quality

AMETEK MOCON has been a leading provider of gas detection equipment monitoring levels of toxic gases well below OSHA action limits for decades. The Baseline 9100 GC product line offers selective compound measurement, without interferences, to analyze multiple sample points throughout a facility and provide time weighted averages for each location. This low-level selective measurement can give personnel enough time to react to increasing health risks.



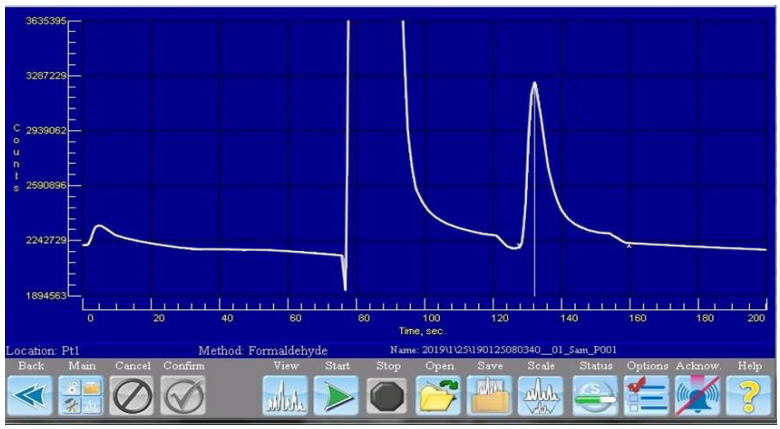
Ethylene Oxide in Air



DETECTOR:	Photoionization (PID) High Sensitivity PID (HS-PID)
CARRIER GAS:	UHP Nitrogen
SAMPLE :	Ambient Air
MDQ/LDL:	PID: < 50ppb HS-PID: < 0.1ppb

The Baseline® 9100 Ethylene Oxide analyzer provides an automated, direct measurement of EtO in ambient air. It is both specific and sensitive to low levels of ethylene oxide. Ethylene oxide has several uses, including medical device sterilization, fumigation, as well as producing other chemicals to generate a wide range of products. Workplace exposure is typically monitored in areas of uncontrolled emissions or venting in industrial/medical settings in addition to decontamination, packaging and preparation, and sterile product storage areas.

Formaldehyde in Air

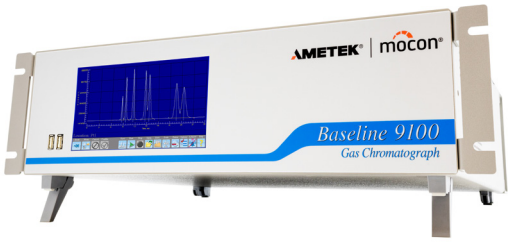


DETECTOR:	Flame Ionization (FID)
CARRIER GAS:	UHP Hydrogen
SAMPLE:	Ambient Air
MDQ/LDL:	< 100ppb

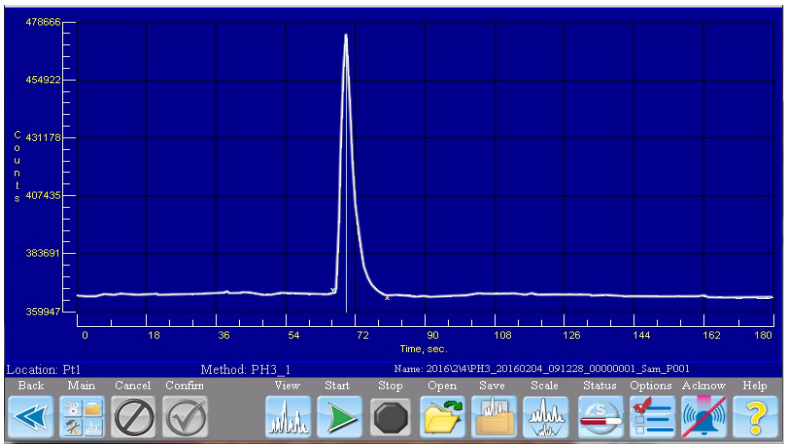
The Baseline 9100 provides low level measurement of formaldehyde in ambient air. This instrument is commonly utilized in industrial facilities and paint booths to monitor workplace exposure limits. The sample is first separated into individual components, then sent to a methanizer where formaldehyde is converted to methane then detected and quantified by the FID.

Leak Detection

The Baseline 9100 GC is used throughout the world for early warning leak detection on account of it's continuous, interference free, low level analysis of a facility's compounds of interest. The Baseline 9100 offers unattended operation, automatic calibration, and can be programmed to notify or alarm depending upon the magnitude of the event.



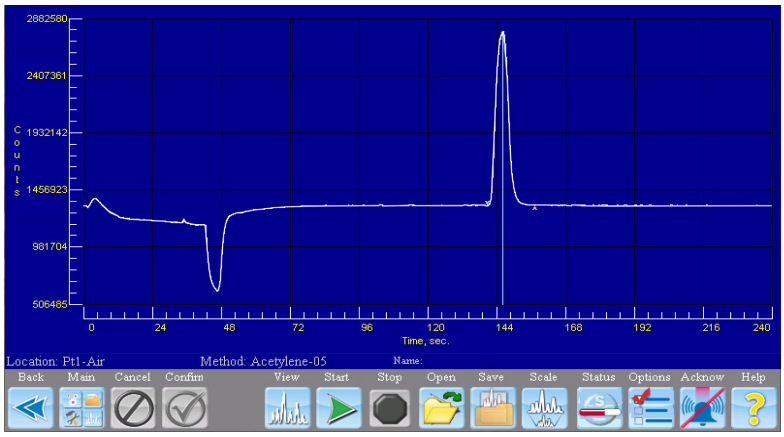
Phosphine in Air



DETECTOR:	Photoionization (PID) High Sensitivity PID (HS-PID)
CARRIER GAS:	Nitrogen
SAMPLE:	Ambient Air
MDQ/LDL:	PID: < 20ppb, HS-PID: < 2ppb

Phosphine and arsine are commonly used dopant gases, which can require the need for a gas specific detection system due to their extremely toxic nature. The Baseline 9100 monitors well below recommended short term exposure limits (STEL) and provides time weighted average (TWA) reporting along with three user programmable alarm levels for each sample location.

Acetylene in Air



DETECTOR:	Flame Ionization (FID)
CARRIER GAS:	UHP Hydrogen
SAMPLE:	Ambient Air
MDQ/LDL:	< 30ppb

Baseline 9100 GCs are specifically applicated to monitor low part-per-billion levels of toxic gases, at dozens of sample points with multi-level alarms, and provide daily TWA reports for each location. Depending upon the specific industry requirement, the Baseline 9100 can be customized by MOCON to detect many different toxic gases well below OSHA action levels while avoiding the potential false positive alarms that are common with total gas detectors.

Total Volatile Organic Compounds

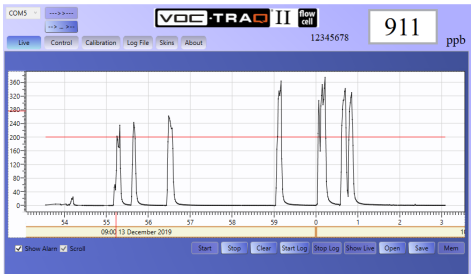
Volatile Organic Compounds (VOC's) are potentially dangerous compounds that vaporize under normal atmospheric conditions. VOC levels are much higher in indoor environments as they can be emitted by many manufactured products such as carpet, paint, and cleaning supplies. Outdoor sources can include landfills, industry, and hydrocarbon emissions.

TVOC Detection

Photoionization Detectors (PIDs) are the simplest and most efficient way to detect VOC levels. Although not as selective without the use of a gas chromatography column, a standalone PID provides real-time measurement of many volatile organic compounds in a portable or fixed format that anyone can use.

The VOC-TRAQ® Total Volatile Organic Compound (TVOC) detector is an inexpensive solution to monitor for non-explosive gas leaks actively using a Windows® based PC or by data logging over time by storing up to 36,000 sample readings. The VOC-TRAQ uses a piD-TECH® eVx photoionization sensor to monitor vaporized gases in the range you require.

DETECTOR:	piD-TECH eVx PID
LAMP ENERGY:	10.6eV
RANGES:	5 available, Low Level 0.5ppb up to High Level 10,000ppm (as isobutylene)



Custom Process GC Applications

The applications shown are just common examples of the hundreds of different analyses we have created for our customers. Contact us to discuss your detection needs. AMETEK MOCON will select the best detector for your application commonly utilizing Photoionization (PID), High-sensitivity Photoionization (HS-PID), Flame Ionization (FID), or Thermal Conductivity (TCD). Analytical arrangements typically involve a single valve, two column configuration, but may vary depending upon the application

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