

AccuSense®

Chemical Analysis System

Detect - Identify - Quantify
Gas/Vapor Chemical Hazards



SEER TECHNOLOGY



AccuSense gives First Responders, Industrial Safety Managers, and LEPC members the power of a laboratory-grade, gaseous chemical detection system in a field-portable unit. It's like having an entire chemical lab with you in the field. It is the perfect portable field device for the detection, identification, and quantification of Toxic Industrial Chemicals (TICs).

The AccuSense can detect gas/vapor hazards in the low ppm to several times the IDLH concentrations continuously, without user intervention, making it the perfect instrument for uncontrolled, unknown, chemical releases as well as 24/7 continuous air monitoring applications.

The AccuSense system is new, 3rd generation detection technology that delivers lab-quality data in the field. This level of precision and accuracy is achieved with the innovative implementation of gas chromatography for chemical signature separation and the application of artificial intelligence technology to generate robust and accurate identification of these signatures. The final step to achieve lab-quality data in the field was the invention of Advanced Environmental Calibration (AEC). AEC monitors, measures and calibrates to environmental humidity, pressure and temperature, automatically and in real-time. AEC eliminates environmental chaos enabling precise and accurate, lab-quality data to support the possible decision in the field.

AccuSense Target applications

- ◆ **Building/Critical Infrastructure Security**
- ◆ **Hazardous Material Response**
- ◆ **24/7 Fence-line Monitoring**
- ◆ **Community LEPC Response/Real-time Remote Monitoring**
- ◆ **Industrial Chemical Plume Detection**
- ◆ **Interstate Rail, Sea-lanes, and Highway Chemical Safety**



The AccuSense system is a Data Platform of precise and accurate Toxic Industrial Chemical (TIC) data. The AccuSense data platform supports data from accessory devices such as PIDs, IMS and Radiation devices. Data from these devices is displayed on the SEERID GUI with AccuSense TIC data. The AccuSense Data Platform is customizable to your specific application and is vendor neutral. No attempt is made to manipulate or change accessory third party device data. This makes the AccuSense a perfect addition to existing deployed portable instruments in the field as well as fix point Industrial/building automation systems (BAS).

AccuSense Instrument Specifications

Technology:	Proprietary Gas Chromatography/ Gas Chromatography/ Thermal Detector
Sampling & Analysis:	Continuous Air Monitoring of chemicals with boiling points from - 50C to 100C
Gas Sample Introduction:	Volumetric Collection @ 180 ml/min. via internal sample pump system. Luer fitting for gas sample bag attachment or other devices.
Detected Threats:	Toxic Industrial Chemicals (TIC) Total Volatile Organic Chemicals (TVOC) w/ Photoionization detector connection option. Chemical Warfare Agents (CWA) and Radiation with IMS and RAD detector option.
Analysis Information:	Detect, Identify, Quantify, TIC signatures in customized SEERID chemical data base. Range specific, sub ppm to 3-4 times the IDLH Concentrations. TVOC's, CWA, and RAD analysis with optional connected detectors.

Dimensions (L x W X H):	43.2 x 11.4 x 27.9 cm - 17 x 4.5 x 11 in
Weight:	Field Portable = 10.4 kg /23 lbs. With secondary battery pack = 11.0 kg /34 lbs.
Operating Environment:	10-95% R.H.Humidity non condensing. 0 - 3.5 AH (Volume over Volume), Temperature/ - 20F to 104F Barometric Pressure/ .7 to 1.1 atmospheres
Decon:	Exterior - Wet wash with bleach and water Interior - System purge to evacuate contaminants
Alarm Display Notifications:	Green, Yellow, Red LED warning
Power Supply:	Rechargeable Li-ion battery & Line AC 85-250V
Battery Run Time:	8 hour internal, plus 8 hour removable. Continuous operation 110/230 VAC line power.
Instrument Start Up Time:	10-20 min. Start/Warm Up/Calibrating
Calibration:	Advanced Environmental Calibration (AEC) w/Environmental Calibration Bypass Mode
Carrier Gas:	Ambient

System Interface

System Software:	SEERID Decision Software
User Platform:	Hardened Portable Personal Computer MS Windows Dot.NET 3.5 SP2, WIN 10
Graphical User interface:	Color Display Graphical Matrix Indicating Identification and Concentration & Percent IDLH NIOSH Pocket Guide Unit Operational Information Analysis data recorded w/date and time stamp Note Pad Cycle Clock Graphical Chemical Signature AccuSense Resident HyperSignature Database
Connectivity:	900 MHz radio, Network TC/IP connection

Certification

 EN ISO 12100:2010
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