

# LIQUISCAN™

Liquid Threats Detector



## LIQUISCAN™ Stops Them First

LIQUISCAN™ is a ruggedized liquid explosives narcotics and Toxic Industrial Chemicals (TIC's) detector providing vapor detection in less than 7 seconds.

LIQUISCAN™ provides security professionals with the latest detection capabilities uniquely developed to address global terrorism with specific operational requirements such as extreme temperatures, wind, rain, sand, drop and shock. These enhanced capabilities enable to address an expanded customer base to include airports, ports and border control, law enforcement and critical infrastructure – in other words, security personnel who require a robust, lightweight and a highly reliable system.

### Feature Highlights

- HF-QCM nanotechnology sensors
- Lightweight (660 gr. with battery included)
- No radioactive source
- High-throughput sampling
- Fast warm-up time
- Self-calibration
- Fast decontamination
- Easy-to-operate
- Low cost-of-ownership

### Market Applications

- Aviation Security
- Customs & Border Control
- Air Cargo Screening
- Sea Ports
- Rail & Mass Transit
- Police & Law Enforcement
- Critical Infrastructure
- Military & Defense
- Hotels & Shopping Malls

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## HF-QCM Nanotechnology Sensors

The patented High-Frequency Quartz Crystal Microbalance sensors detect and identify a wide range of substances with great accuracy and speed. The sensors are successfully integrated in the LIQUISCAN™ with a unique design of a sensor matrix coated with selective polymers.

The detection and identification of target materials is based on the piezoelectric effect where changes in mass affect the resonating frequency of the HF-QCM sensors by the adsorption of foreign molecules on their selective coatings. The changes in frequency are accurately detected and measured.

## Vapor Sample Collection

The LIQUISCAN™ enables vapor sampling and was designed with portability and flexibility in mind. It offers to analyze the sample in the point-of-screening in real-time; with a secure attachment to the operator's hand. Applications include liquids, powders and gels found in bottles, vehicles, luggage, freight, maritime containers and aircargo.

## User-Friendly Interface

Sample analysis and results require minimal interpretation, so operators may concentrate on obtaining an efficient sample. The LIQUISCAN™ onboard processor automatically handles all data logging, including time, date, and sample analysis for each alarm. A complete history of saved data and alarm files can be viewed, analyzed, downloaded and printed at any time.

## Operational Advantages

- The HF-QCM sensors are green and safe; and do not contain any radioactive source
- HF-QCM enables enhanced liquid explosives, narcotics and OTIC's detection
- Expandable threat libraries are available to accommodate unique user requirements
- Self-calibration and automatic cleaning mechanism enables a short cleardown time after an alarm
- Proven and reliable operation in dusty, humid, and high-traffic areas

## Ease-of-Use

- Rapid detection and identification in less than 7 seconds
- Touch screen menus on a graphical user interface can be easy to learn and operate
- Software upgrades can be easy to install
- Local language options available
- Three default user levels (Operator, Supervisor and Service Manager) for greater access control

## Cost Effective

- Helps reduce capital investments by providing a portable solution for liquid screening
- Patented vapor sampling technology help to reduce consumables costs
- Automatic self-diagnostics software to reduce maintenance downtime



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## Technical Specifications

Sensor Technologies	High-Frequency Quartz Crystal Microbalance Sensors (HF-QCM) No gas carrier. No radioactive source
Sample Collection	Vapor sample collection with consumable vapor tips
Vapor Samples Collection	Vapor sample collection with a portable and battery operated Vapor Sampler; supplied with two types of Sampling Probes and a DC charger
Explosives Detected	Hydrogen Peroxide, Nitromethane, Astrolite, Nitroglycerine, EGDN and Water Gel. Additional explosives upon expandable threat library
Narcotics Detected	Liquid Cocaine, Heroin, Methamphetamines and Synthetic Narcotics. Additional narcotics upon expandable threat library
Toxic Industrial Chemicals (TIC's)	Hydrazine, Acetone, Acetonitrile, Ethanol, Ammonia and others. Additional TIC's upon expandable threat library
Sensitivity	Particle: low nanogram (ng) range Vapor: low parts per million (ppm) range
False Alarm	Less than 2%
Warm-Up Time	Less than 60 seconds
Analysis Time	Less than 7 seconds
Alarm Type	Audio and visual, with substance identification
Display	3.5" Color TFT touchscreen LCD display
Multi-Language Support	English, French, Spanish, Italian, Portuguese, German, Polish, Russian, Chinese, Korean, Japanese, Arabic and others
Data Storage	Unlimited data logging, including time, date, sample analysis, and system status
Data Transfer	Mini USB Port, Bluetooth®, Wi-Fi and RS-232
Printer	Optional evidence printout via remote printer
Input Voltage	96-265VAC, 50-60Hz with 110/220V DC charger
Battery	Rechargeable Lithium-Ion battery with 6 hours of field operations
Input Voltage	12V
Input Voltage	110/220V
Weight	660 gr. Including battery
Dimensions	(L x W x D): 19.87" x 13.93" x 4.68" (221 x 71 x 86 cm)
Operating Temperature Range	14°F to 131°F (-10°C to + 55°C), less than 95% relative humidity, non-condensing
Hardened Specifications	Wind, rain, shock and 1 meter (3') drop resistance, ability to operate in wind conditions
Carrying Case	Supplied with a Mil Spec STANAG 4280 / Defense Standard 81-41 watertight, crushproof and dustproof case for easy and safe transportation.
Trolley	Optional adjustable workstation with locking wheels
Certification	CE Mark and EMC Certification ISO 9001:2015 Manufacturing Standards

## ADVANCED SENSOR TECHNOLOGIES

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