Explosive and Narcotics Trace Detectors Specification Sheet

Trace and bulk detection for explosives, narcotics and dangerous liquids at a checkpoint.

Models in this sheet: VPM-2018 Handheld Explosive and Narcotics Trace Detector, Portable Trace Explosives Detector for Anti-Terrorism Screening, Handheld Liquid Detector for Sealed Containers, Double-Frequency Metallic Mine Detector, Desktop Liquid Dangerous Goods Detection System

Figures in this document are those published by the factory for each model. Where a value is shown as TBC it is not published, and we confirm it with the factory before order rather than estimate it. Specifications are subject to change without notice.

Dongguan Viboo — Dongguan, China
bill@mdetection.com · WhatsApp +86 186 6406 6083 · Skype patrickwang6
https://www.metaldetectore.com

1. VPM-2018 Handheld Explosive and Narcotics Trace Detector

The VPM-2018 uses Ion Mobility Spectrometry to identify trace explosives and narcotics from a wipe sample, down to 200 picograms for both TNT and cocaine. Explosives and drugs are detected on the same machine, including mixed samples, and the library covers TNT, PETN, C4, Semtex and TATP alongside cocaine, heroin, methamphetamine and fentanyl, with new samples addable as required.

Key benefits

• Explosives and drugs on one machine, including mixed detection

• Detection limit of 200 pg for TNT and 200 pg for cocaine

• Selectable analysis time from 2 to 32 seconds

• One-touch startup with automatic readiness

• Over 5 hours continuous operation and over 10 hours standby

Specification

Detection Principle	Ion Mobility Spectrometry (IMS)
Sample Collection	Solid particulate or liquid wipe sampling
Explosives Detected	TNT, HMX, Tetryl, Nitroglycerin, Ammonium Nitrate, Black Powder, DNT, PETN, Octogen, Picric Acid, GNA, C4, Semtex, TATP, Nitromethane, Comp B and others
Drugs Detected	Cocaine, heroin, THC, methamphetamine, ketamine, morphine, pethidine, MDMA, ephedrine, methadone, fentanyl, oxazepam and others
Sensitivity	nanogram to picogram range; TNT 200 pg, cocaine 200 pg
Preheating Time	10 minutes or less
Analysis Time	2 to 32 seconds, selectable
Alarm Format	Audio, visual and concealed
Display	4.3-inch colour LCD touchscreen, Chinese and English
Data Storage	not less than 300,000 detection records
Communication	Ethernet, USB and wireless
Input Voltage	AC 110 V / 220 V, DC 24 V at 50/60 Hz
Battery	18 V lithium, over 5 hours continuous, over 10 hours standby
Operating Temperature	-20°C to 55°C

2. Portable Trace Explosives Detector for Anti-Terrorism Screening

This portable trace detector uses fluorescent polymer sensing and gives a result in 2 seconds or less. It samples two ways, by direct suction or by heating a test strip, so a surface, a hand or an item of luggage can all be checked. The complete instrument, including battery and heating head, weighs 2 kg or less.

Key benefits

• Detection response time of 2 seconds or less

• Two sampling modes: direct suction and heated test strip

• 2 kg or less complete, including battery and heating head

• Preheating under 1 minute in heating mode and under 4 seconds by direct suction

• Sound, light and on-screen word alarm prompts

Specification

Sensing Technology	Fluorescent polymer
Detection Mode	Heating mode and direct suction mode
Detection Response Time	2 seconds or less

Preheating Time	1 minute or less (heating mode), 4 seconds or less (direct suction)
Cleaning Time	10 seconds or less
Alarm Mode	Sound, light and word alarm prompt
Instrument Host Size	296 x 88 x 65 mm or less
Instrument Heater Size	64 x 73 x 43 mm or less
Host with Heater Connected	326 x 88 x 65 mm or less
Total Weight	2 kg or less including battery and heating head
Battery Life	approximately 8 hours

3. Handheld Liquid Detector for Sealed Containers

This handheld detector identifies the chemical composition of a liquid still sealed in its bottle or can, covering more than 30 dangerous liquids including gasoline, kerosene, diesel, hydrochloric acid and sulfuric acid. It uses ultra-wideband pulse microwave reflection with thermal conductivity measurement, emits no radiation, and returns a result in about 8 seconds from a 200 g instrument.

Key benefits

• Identifies liquids without opening the bottle or can

• Covers more than 30 dangerous liquids including fuels and strong acids

• No radiation, harmless to the operator and the person being screened

• Result in about 8 seconds

• 200 g instrument at 216 x 50 x 79 mm

Specification

Detection Method	Ultra-wideband pulse microwave reflection plus thermal conductivity
Outer Size	216 x 50 x 79 mm
Dangerous Liquids Identified	more than 30 sorts, including gasoline, kerosene, diesel, hydrochloric acid, sulfuric acid, nitric acid, sodium hydroxide, potassium hydroxide, benzene, carbon disulfide and hexane
Analysis Time	approximately 8 seconds
Weight	200 g
Power	10 W, 110 to 240 V at 50/60 Hz
Radiation	None

4. Double-Frequency Metallic Mine Detector

Single-frequency mine detectors struggle in seawater and magnetic soil, which is exactly where they are often needed. This double-frequency detector is built to work across that full range of ground: laterite, clay, magnetic soil, beach and fresh or salt water, from -40°C to 55°C. Positioning accuracy is 4 cm or better to the mine edge, with mean detectivity of 97% or above.

Key benefits

• Works in seawater and magnetic soil where single-frequency detectors cannot

• Positioning accuracy of 4 cm or better to the mine edge

• Mean detectivity of 97% or above

• 24 hours or more continuous working on lithium battery

• Waterproof to 1 metre depth and rated -40°C to 55°C

Specification

Detecting Sensitivity	GLD111 anti-personnel mine 12 cm or more, GLD212 anti-tank mine 13 cm or more
Positioning Accuracy	4 cm or better, measured to the mine edge
Mean Detectivity	97% or above
Continuous Working Hours	24 hours or more on lithium battery
Temperature Range	-40°C to 55°C, excluding the battery
Watertightness	waterproof at 1 metre depth
Search Coil Diameter	250 mm
Staff Length	750 to 1450 mm
Host Weight	2.9 kg or less with lithium battery, 3.2 kg or less with 3 LR20 batteries
Sensitivity Settings	Three selectable

5. Desktop Liquid Dangerous Goods Detection System

Most liquid screeners tell you a liquid is dangerous. This desktop system names the component, the hazard type and the leakage treatment method, which is what a checkpoint supervisor actually needs to act. Two independent channels handle non-metallic and metallic containers at the same time and alarm separately, with no radiation and no dangerous source in the system at all.

Key benefits

• Component identification giving the main component name, hazard and leakage treatment

• Independent dual channels for non-metallic and metallic containers, working simultaneously

• No radiation and no dangerous source in the system

• Non-contact, non-destructive sampling

• Built-in printer issuing an alarm voucher as a test certificate

Specification

Detection Channels	Two independent, non-metallic and metallic container
Sampling	Non-contact, non-destructive
Radiation	None, no dangerous source
Sensitivity	detects 1 mol/L sodium hydroxide solution
Component Identification	Names main component, hazard method and leakage treatment
Databases	Separate safe and dangerous liquid databases, user-upgradable on site
Printing	Built-in printer for real-time alarm voucher
Networking	Real-time upload to a back-end management platform
Power	Mains plus built-in battery