

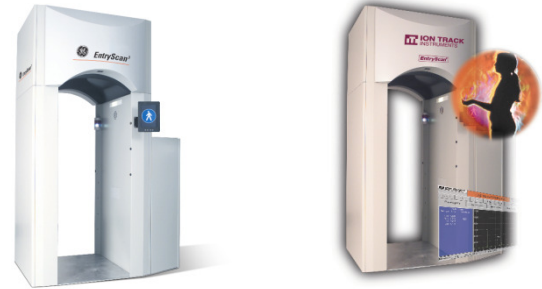


EntryScan 3

Non-intrusive System for Detection and Identification of explosives and narcotic contraband

Art.-No. 170572

Ion Track Instruments' revolutionary new walk-through vapour and particle detection portal rapidly examines individuals for concealed contraband in a non-intrusive manner



Highlights

- Unique patented sample collection process utilizes the „human convection plume“ as collection medium
- Self-diagnosis and indicators facilitate routine maintenance
- Facility-friendly dimension
- Complete data logging capability
- Optional remote display
- Visible and audible indicators instruct subjects on explosives or narcotics screening
- Features patented ITMS[®] technology used in ITEMISER[®] and VaporTracer²

Applications

- Airport checkpoint security
- Customs checkpoints
- Embassies
- Government buildings
- High-Security events
- Military bases & Installations
- Nuclear Power plants
- Oil & Gas Storage
- Prisons, Jails & Correctional facilities
- Petrochemical facilities
- Public Utility Facilities

The EntryScan3 utilizes the same patented Ion Trap Mobility Spectrometer (ITMS[®]) technology found in ITI's ITEMISER[®] and VaporTracer[®]. Microscopic traces of C4, RDX, PETN, Semtex, ammonium nitrate, HMX, TNT and dynamite can be easily detected and identified. In addition, cocaine, heroin, marijuana, PCP, LSD and MDMA (ecstasy) can also be effortlessly detected and identified in a non-intrusive manner.

The EntryScan3 automatically signals each person-by means of a programmable visual indicator-to enter the portal. Once in the portal, vapours and particles from the person are collected from the natural flow of air generated by the individual's body heat. This collected air sample is rapidly analysed in the detection system for the presence of explosives or narcotics.

The collector mechanism consists of a highly efficient, single-stage pre-concentrator that traps vapour and particles from the sample and then desorbs them into the detection system, where they are selectively analysed by the ITMS detector. This new technology provides up to 100 times more sensitivity than previous detectors.

Upon completion of the detection cycle, the EntryScan3 signals the person to exit. If the individual should leave the portal before the cycle is completed, an alarm will sound.

The EntryScan3 presents simplified controls and indicators to enable easy operation and monitoring of the system. In addition, it contains self-diagnostics and indicators to facilitate routine maintenance. The onboard computer provides complete data logging capability and is able to be networked for remote display and data acquisition.

Specification

- Detector-Type:
ITMS® (Ion Trap Mobility-Spectrometer)
- Sensitivity:
Picogram levels for both narcotics and explosives
- Analysis time:
Adjustable as required. Normal processing time is 10 seconds per perso
- Calibration:
Automatic or manual
- Sample acquisition:
Vapour and particle via patented process using the human convection plume
- Warm-up time:
System designed for continuous use; cold start 45 minutes.
- Power supply:
115/230 VAC 50/60 Hz
- Integral computer:
Internal computer with hard disk, interactive touch screen, printer, external floppy disk drive, separate keyboard for entering comments and new substances.
- Signal processing:
Output to bar graph or plasmagram display; positive detection signals alarm and store all data for later analysis.

Detected and identified Substances:

Explosives:

Dynamite, Semtex, ammonium-nitrat, PETN, TNT, C4, RDX, HMX and many others.

Narcotics:

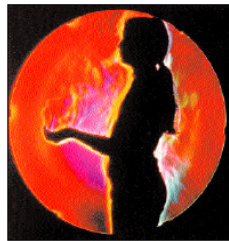
Cocaine, heroin, amphetamine, methamphetamine, morphine, PCP, LSD, THC, MDMA and many others.

Dimensions

Height: 259 cm
Width: 162 cm
Depth: 102 cm
Entrance width: 76 cm

Sample collection

Sample transfer and detection of trace materials from the human body has been the subject of more than 25 years of research by **Ion Track Instruments, Inc.** A major improvement has been made in the design of the EntryScan3 by the efficient utilization of the natural convectional airflow around the human body. This method of sample transfer was first suggested by the research staff at the Gas Dynamics Laboratory at Penn State University, using techniques developed for studying human contamination in surgical and semiconductor clean rooms.



Special "Schlieren" optics have been used to show that all vapours and particles emitted by every individual are entrained in the natural plume that flows upward around the body at a velocity of about 0,3 meter per second (see figure i). The EntryScan3 collects this plume above a subject's head on a specially developed pre-concentrator trap through which a stream of air, equal to the body plume, is drawn. All vapours and particles

entering the trap are captured from the air stream and subsequently desorbed into the ITEMISER® detector.

Data display

The bar graph (figure z) changes colour to indicate the strength of the alarm, or for a more detailed analysis an ion signature spectrum known as a plasmagram (figure 3) can easily be selected.

With the EntryScan3's integrated computer, alarms can be automatically saved to store the plasmagram, time and date. In addition, complete history logs of sampled data can be stored, recalled and printed at any time.



Fig. 2



Fig. 3



Specifications are subject to change without notice!