



WESTMINSTER
INTERNATIONAL LTD

Fire



Security



Safety



International Fire, Security & Safety

WG Mobile X-Ray Screening Vehicle

The WG Mobile X-Ray Screening system is a rapidly deployable mobile X-Ray vehicle that uses a special version of the WG IS100X X-Ray Baggage Scanner with fold up conveyors, and is capable of detecting organic and inorganic items such as weapons, explosives and narcotics.



It is built into a Ford 450E van and includes a diesel power generator that supports all the utilities on board the vehicle, including the X-Ray machine and the air conditioning in the operator's compartment.

The X-Ray Scanner has a 100.6cm width x 100.6cm height tunnel that will easily accommodate the inspection of luggage and large parcels.

The WG IS100X uses a high-resolution x-ray detector array that increases detection sensitivity, improves image resolution and optimises image presentation.

Applications

- ▶ Airports;
- ▶ Border crossings;
- ▶ Commercial buildings;
- ▶ Embassies;
- ▶ Events;
- ▶ Government buildings;
- ▶ Military installations;
- ▶ Prisons;
- ▶ Seaports;
- ▶ Security checkpoints;
- ▶ VIP security.



Features

- ▶ Colour and black & white imaging;
- ▶ Variable contrast level control;
- ▶ Pseudo colour and reverse monochrome;
- ▶ Automatic Edge Enhancement imaging;
- ▶ Programmable penetration levels;
- ▶ Automatic Z-number measurement;
- ▶ Dual 19 in (48cm) Colour monitor;
- ▶ Organic & inorganic imaging;
- ▶ Geometric image distortion correction;
- ▶ User selectable zoom in 2X to 32X;
- ▶ The detachable control console allows the operator to comfortably operate and control all imaging functions and motion systems.

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X-Ray System Specifications

General

- ▶ Tunnel Opening: Width 100.6cm x Height 100.6cm;
- ▶ Conveyor height: 760cm;
- ▶ Conveyor maximum load: 200 kgs;
- ▶ Conveyor Speed: 13.5 metres per minute;

Imaging

- ▶ Dual 19" SVGA high resolution, low radiation, flicker free monitors;
- ▶ Resolution: 40 AWG in air;
- ▶ Spatial resolution: 1 mm both horizontal and vertical;
- ▶ Penetration: 29mm steel guaranteed, 31 mm typical;
- ▶ Contrast Sensitivity: At least 24 levels visible as measured by a step wedge, 4,096 grey scale levels;
- ▶ Black & white;
- ▶ Reverse monochrome;
- ▶ Pseudo colour;
- ▶ Programmable Zoom 2X to 32X;
- ▶ No pixel distortion: Up to 8 times zoom;
- ▶ Image manipulation: One monitor at a time;
- ▶ Atomic Number measurement: Accuracy within 0.5 counts;
- ▶ Edge sharpening;
- ▶ Programmable penetration levels;
- ▶ Colour to grey scale imaging;
- ▶ Geometrical distortion correction;
- ▶ Colour, Organic & Inorganic imaging;
- ▶ Print Image: Any printer configurable by Win 2000;
- ▶ Automatic Image Archiving: Up to 20,000 images in a rotating buffer;
- ▶ Manually save image: In windows format to view on personal computers or laptop;
- ▶ UPS Uninterrupted power supply: Shuts down computer 2 minutes after power failure.

Computer

- ▶ Intel Pentium PC based system;
- ▶ Microsoft NT 2000 Operating System;
- ▶ Combines the latest electronic technologies to provide state of the art image clarity and resolution;
- ▶ Intel Pentium 3.0 GHz or faster;
- ▶ 512 Mb RAM;
- ▶ 40 GB Hard Disk or greater;
- ▶ Network: with other inspection systems using high speed Ethernet TCP/IP data communication;
- ▶ Images from each scanner can be sent through the network to a central server where they can be viewed, stored, and printed.

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X-Ray Generator

- ▶ Voltage: 160 kVp tube, operating at 150kVp;
- ▶ Tube Current: 0.7 mA;
- ▶ Cooling: Sealed oil bath;
- ▶ Duty Cycle: 100%;
- ▶ Beam Direction: Vertically upward;
- ▶ X-Ray Detector: 2,340 Photo diodes "L" Shaped Array.

Safety / Standards

- ▶ Film safety is guaranteed for high speed films up to ISO 1600;
- ▶ Dose per inspection: 0.1 mR typical;
- ▶ Typical radiation leakage is less than 0.1mR/hr;
- ▶ Complies with published international health and Safety standards including the U.S. F.D.A. Centre for Devices and Radiation Health standards for cabinet x-ray devices (Federal Standard 21-CFR 1020.40);
- ▶ Complies with published international operational standards including the U.S. Federal Aviation Administration standards, "Use of X-Ray Systems" (Federal Standards 14 CFR 108.17 and 14 CFR 129.26).

Operation

- ▶ The X-Ray Scanner operator is located in an air conditioned partitioned section of the rear of the vehicle;
- ▶ Operators must log on in order to operate the x-ray machine;
- ▶ If Networked: Operator photograph is automatically displayed on supervisor and system screen at all times while operator is logged on.

Image Analysis

- ▶ Operator can see standard image on one monitor and modified image on the other;
- ▶ The system displays on first monitor colour / organic / and inorganic images;
- ▶ The system displays on second monitor B/W, reverse, and pseudo colour images;
- ▶ Images are displayed on the monitors with a reduced geometrical distortion;
- ▶ Operator can annotate images in real time, images are saved with annotations;
- ▶ Automatic Density alert (Red colour display, Adjustable threshold);
- ▶ High & Low energy detectors are used to identify specific materials / organic / inorganic / calculate atomic weight;
- ▶ Up to 32X to 8X zoom without pixel distortion;
- ▶ 5 steps for high penetration and 6 steps for low penetration modes;
- ▶ Archive 20,000 images automatically;
- ▶ Retrieve last 100 images with single push of image retrieval button;
- ▶ Image retrieval based on bag number, time and date;
- ▶ Standard image manipulation on all retrieved images;
- ▶ Select images and record on a CD, USB key;
- ▶ Select and print any image that is displayed on the screen;
- ▶ Print on any standard printer.

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Options

- ▶ Threat Image Projection (TIP);
- ▶ Flat Panel LCD Monitor.

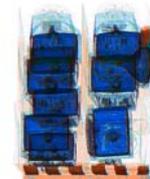
Example of Images



Potential threat images
liquid explosive device in
water bottle



Black & White Image



Pseudo color: Organic
/Inorganic

Training

- ▶ Computer Based Training (CBT) incorporated into system, an operator can train on the machine when not in use; Improving operator detection, operation and overall knowledge.

Vehicle Specifications

- ▶ Chassis: Ford E-450 heavy duty commercial;
- ▶ Engine: 6.8 litre/285 hp V-10 cylinder EFI gasoline (diesel optional);
- ▶ Gearbox: 4 speed automatic over-drive transmission;
- ▶ Suspension: Heavy duty;
- ▶ Wheels: 2 x Front, 4 x Rear;
- ▶ Vehicle electrical system: Single maintenance free battery (630 CCA) 130 amp, 12 volt alternator;
- ▶ Operators console: Custom console top fastened to walls;
- ▶ Chair: One swivel chair with restraint;
- ▶ Climate Control: Combination heater/air conditioner, mounted on the roof of the cab;
- ▶ Diesel generator: Capacity to run all systems on the vehicle, including climate control and X-Ray units.

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