





**Vehicle Occupancy Scanner** 



# What is a Vehicle Occupancy Scanner?

The Vehicle Occupancy Scanner is a flexible and effective solution for X-Ray screening passenger occupied vehicles with minimal effect on the continuous flow of traffic. It can provide an approximate though put of up to 150 vehicles per hour whilst scanning the vehicle and occupants for explosives and contraband.

## **Applications**

- Airports
- Border check points
- Government facilities
- Hotels
- Military bases

- Seaports
- Sporting events
- Temporary check points
- VIP facilities.

## Key Components

- Drive- thru technology: Occupied vehicle scanning capability: passengers can stay in their cars during scanning process, driving them under their own power through the inspection portal;
- Small footprint: The deployment of the system requires a relatively small ground surface without special requirements for additional infrastructure;
- Operator control: PC & Screen can be installed up to 100 metres away from the inspection portal;
- Optional weatherproof module for the operator with an electrical generator can be supplied to provide autonomous operation;
- High throughput: An approximate though put of up to 150 vehicles per hour in free-flow traffic mode, recommended speed of the vehicle is 10 -15 km/h;
- High penetration: The X-Ray system will penetrate up to 25mm of steel;
- High quality X-ray images: Image contrast sensitivity 2% and o.8mm copper wire detection capability;
- Dual energy imaging: The system has automatic 3 colour coding for materials separation, providing
  distinguishing between organic, non-organic and metal materials. This feature assists the operator to identify
  contraband items;
- Radiation safety: The radiation level to the vehicle driver and passengers is extremely low and is compliant with the ANSI 43.17;
- CCTV safety: The inspection portal is equipped with immediate local area video surveillance, to avoid operation when pedestrians are close to the system;
- Optional: Automatic Number Plate Recognition With an additional camera the ANPR system is able to identify and store the licence number plate of each scanned vehicle;
- Optional Driver Recording Camera: Records the front of the vehicle and the driver;
- **Optional** Additional operator /supervisor workstation
- **Optional** Under Vehicle Video Surveillance System: Westminster can also provide an Under Vehicle Video Surveillance System.

# Operating Environmental Conditions

- Ambient temperature range: -10°C to +40°C;
- Atmosphere pressure range: 84.0 to 106.7 kPa (630... 800 mm Hg);
- Relative air humidity range: 45% up to 80% at t = +25°C.
- Ambient temperature range: -20°C to +40°C;
- Atmosphere pressure range: 84.0 to 106.7 kPa (630... 800 mm Hg); Relative air humidity range: Max 90% at temperature plus 25°C.

## General Features

- Inner dimension of tunnel: W3.om x H3.om
- Maximum height below the gantry: 3.0m from ground level
- Maximum scanning height: 2.7m from ground level
- Maximum size of vehicle: W2.5m x H2.8m x L≥ 5m
- Minimum scanning height: 0.14m from ground level
- Scanning speed: ~10 km/h
- Throughput capacity: Approximately 150 vehicles per hour.
- Operator workstation: PC-based workstation with the 24"
- LCD display, installed in customer's provided location.

# Operation Requirements

### **Optional - Operator Location**

• Container based module with heating, lighting, air conditioning, operator's desk, diesel generator for autonomous operation with diesel oil reserve for 24 hours continuous operation.

#### X-Ray Assembly

- Operating anode voltage: 200 kV;
- Radiation protection: Less than 1 μSv/h at 10 cm distance, higher level of protection available on request.

#### X-Ray Image Detector

- Type: Modular L-shaped dual energy linear detector
- Detector pixel size: 2.5mm;
- Pixel depth: 20 bits;
- Number of pixels: 2,688.

### **Image Quality**

- Contrast sensitivity: 2%;
- Penetration steel: 25mm;
- Wire resolution (copper wire): 1.0mm.

Note: measured at the 10 km/h speed of inspected vehicle.

#### **Power Requirements**

• Voltage: 230V±10%, 50/60 Hz, other voltages available on request; Power Consumption: up to 2 kVA.

#### **Software Features**

- Ability to add and store marks and comments on the image to identify suspected objects;
- Automatic contrast enhancement;
- Automatic real-time display of the inspected vehicle;
- Black / white inversion;
- Brightness and contrast adjustment of acquired image;
- Colour material coding: organic, non-organic and metal objects;
- Database of the inspected vehicles;
- Date and time stamp on the image;
- Export to various image formats including BMP, JPEG, etc;
- High-density and low-density objects display feature;
- Linear measurements on the image to check the object size;
- Password-protected login of the operator;
- Printing of the images including pictures, comments and accompanying documents on separate sheets;
- Scanning accompanying documents i.e. customs declarations, driving licences and storing it with the vehicle image;
- Sharpness enhancement;
- Zoom in and pan functions, up to 8x.

