



Transportable X-Ray Unit and Trailer combination

A trailer-mounted transportable X-ray scanning unit is able to scan luggage and parcels at various venues or locations.

Operating Environment

- The storage temperature of the unit shall be between -20°C to 50°C
- The operating temperature shall be between 0°C to 40°C
- The relative humidity shall be 5% to 95% non-condensing

1. TRAILER

This unit conforms to or exceeds the following:

- Is able to carry the X-ray unit and any other ancillary equipment that may be required
- The unit is so designed that it can be towed by any medium-sized vehicle (car or light commercial vehicle)
- It is equipped with a 50mm ball-type trailer coupler and the electrical socket wired to SABS Standards.
- The trailer is equipped with an integrated over-ride brake with manual hand brake.
- The trailer conforms to relevant SABS standards and SA Road and Traffic Regulations.
- The jockey wheel allows the trailer to be wheeled comfortably by hand on a reasonably tarred or paved surface.
- A fixed anti-theft wheel lock is fitted.
- It is equipped with stabilising jacks to allow the weight of the unit to be sufficiently lifted off the wheels and tyres for prolonged storage and during scanning operations.
- The sub frame is fully hot-dip galvanised.

- The trailer is fitted with a suitable dust and moisture-proof, corrosion-resistant canopy / enclosure to house the x-ray unit and protect it from the elements.
- The canopy / enclosure allows the x-ray unit to be efficiently operable without having to remove it from the trailer unit.
- On-trailer scanning allows accommodation inside the trailer for one (1) operator as well as allows for a second person to man the feeding tray, with minimum effort and considering weather conditions.
- The design is of such a nature that the X-ray unit can be off-loaded and re-loaded with minimum effort, by two persons.
- The design ensures proper mass distribution and balance, allowing safe and trouble-free towing.
- A spare wheel, wheel spanner, jack and handle, and emergency triangle are stowed on the trailer.

1.1 Electrical

- A weather-proof power inlet is provided.
- The distribution board / control panel allows power to be connected to the X-ray machine and controls over-all lights in and around the unit.
- Provision is made for power input from the 3kV generator.
- The distribution board is equipped with surge protection including a power failure alarm.
- A 30m power cable is provided to allow power connection from an outside source.
- A 5m power cable is supplied to connect the battery charger to a power source during storage.

Technical Specifications

HAB-SCAN Mobile

Rapid Screening Systems SA

- A 220V 3kVA power generator is fitted to the trailer to enable the unit to operate without power supply from an outside source.
- Sufficient lighting is provided in and around the unit to allow for night-time operation.

2. X-RAY UNIT

The X-ray unit conforms to or exceeds the following specifications:

2.1 Physical Specifications

- It is of compact design.
- It is possible to wheel the unit through a standard doorway and be able to be deployed in a space-constrained environment.
- The unit can be comfortably wheeled over tarred or paved surfaces, without vibration causing damage to the X-ray tube, computer or other sensitive components.
- The tunnel is 360mm high and 550mm wide.
- The conveyor belt protrudes either side of the unit, no less than 600mm.
- The conveyor speed is ± 0.22 m/sec.
- The conveyor belt is capable of sustaining a load of 160kg per scan.
- The physical dimensions are ± 2500 mm in length, 1750mm in height and 735mm in width.
- The mass does not exceed 750kg.

2.2 General Specifications

- Crystal-Clear Imaging
- Multi-Energy Imaging – four colours, Industry standard
- Density-Threat Alert
- Variable-Edge Enhancement
- High / Low Penetration
- Variable Gamma
- Inverse Video
- Pseudo Colour
- Variable Density Zoom
- Organic / Inorganic Stripping
- Flat Panel LCD Monitor
- Enhance Performance X-Ray (EPX)
- Threat Image Projection (TIP)
- Network or remote workstation capability
- Secure Workstation
- VCR Output
- Automatic Image Archiving
- Forward and Reverse screening
- Capable of penetrating 25mm of steel
- Resolution: 40SWG typical
- The X-ray equipment displays a complete image of any item fitting into the tunnel. There shall be no corner cut-off.

- View previous bags
- Baggage counter
- Search Indicators
- Facility for remote viewing



2.3 X-ray Generator

The x-ray generator conforms to the following specifications:

- It is housed in a sealed oil bath with forced air to ensure adequate cooling
- Anode voltage is 160kV rated and operates at 140kV
- The generator has a tube current of 0.7mA
- The generator has a vertically upward orientation.

2.4 Computer Specifications

The following specifications are required:

Processor Speed:	Intel Pentium®
Monitor:	17" XVGA colour
Memory:	64MB minimum
Video Memory:	16GB minimum
Hard Disk Drive:	40GB minimum
CD-Rom Drive:	54x
Floppy Disk:	1.44MB

- Access provided to keyboard port and parallel port by means of a lockable access panel on the outside of the machine.
- A metal test piece is supplied with the unit and stored in an easily accessible compartment.
- The detection field is uniform.
- It has a sensitivity adjustment facility, easily accessible to the operator.
- It has a rechargeable battery to allow 60 minutes of operation without external power supply.
- It is equipped with a battery status indicator.
- It has a weather proof power connector to enable power to be connected for sustained operation.
- It has an audible and visual alarm signal.
- The alarm is instantaneous.
- The reset time after an alarm signal does not exceed 10 seconds.

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