

# HCVM™ T

## HIGH ENERGY MOBILE X-RAY SERIES



### Feature Highlights

- Inspect loaded trucks, containers and vehicles at ports, airports and border crossings
- High throughput of up to 25 trucks per hour in scan mode and up to 100 trucks per hour in pass through mode
- Steel Penetration up to 320mm (12.6") @ 6MeV
- Small footprint
- Advanced technology, viZual™, provides a high performance imaging capability with organic/inorganic material discrimination and colorization in a single scan

The HCVM T series of X-ray screening systems is designed to optimise security checks at ports, airports and border crossings. It reduces the need for manual inspection of complete trucks (cabin included), containers and vehicles by verifying manifests and checking for threats such as explosives, narcotics, weapons of mass destruction (WMDs) and contraband.

The series systems use a range of accelerators from 4MeV to 6MeV, allowing steel penetration ranging from 310mm (12.2") to 320mm (12.6"). A high maximum throughput of 25 (typical 20) trucks per hour can be achieved in scan mode; and a maximum of 100 trucks per hour in pass through mode. Up to four system operators can be accommodated in the cabin.

High performance imaging equips operators with detailed radioscopic images of the container or vehicle to generate rapid and reliable results.

The optional addition of automatic radioactive material detection (ARD™), enables simultaneous X-ray inspection and analysis to detect the presence of radioactive gamma and/or neutron materials.

Based on a trailer chassis, the HCVM T systems can be towed from site to site by a standard tractor as required. Road clearance conforms with the majority of global road regulations.

It offers ease of operation and a small footprint with minimal external infrastructure requirements; and yet meets the most demanding, international security screening standards.

## General Specifications

<b>Detector type</b>	Levels available from 4 – 6MeV
<b>Nominal energy (MeV)</b>	The HCVM moves while the object does not, or it can be the opposite according to requirements

## System specifications

<b>Chassis</b>	SAMRO
<b>Weight</b>	28 tons
<b>Engine</b>	N/A
<b>Truck dimensions (LxWxH)</b>	13.60m [44.6'] [L-without tractor] x 2.5m [8.2'] x 4.0m [13.1']
<b>Scanning speed</b>	24 or 12m/min - 36m/min available in option • Passage of the trucks in stationary mode up to 7km/ 4mph
<b>Speed</b>	N/A
<b>Footprint (LxWxH)</b>	12.40m [40.7'] x 8.6m [28.2'] x 5.6m [18.4']
<b>Scanning height</b>	From 0.20m [.7'] to 4.75m [15.6']
<b>Maximum height below gantry</b>	4.80m [15.7']
<b>Installation time</b>	Less than 30mn (average 15mn)
<b>Inspection throughput</b>	Up to 25 trucks per hour (typical 20) in mobile mode and up to 150 (typical 120) in pass through mode*
<b>Minimum crew requirement</b>	1 image operator/driver and 1 traffic marshal
<b>Operating temperature</b>	-20°C to +43°C [-25°C to 50°C in option]
<b>Storage temperature</b>	-30°C to +55°C
<b>Relative humidity</b>	Up to 95%
<b>Electrical consumption</b>	24 kVA in average
<b>Maximum dimensions(LxWxH)</b>	4.75m [15.6'] x 3.50m [11.5'] x 28m [91.9']
<b>Cabin comfort</b>	A/C, refrigerator, radio, natural light, individual storage racks – Accommodate up to 4 operators in the cabin

## Computer system

<b>Image workstation (RIW)</b>	Two 22" flat LCD screen workstations
<b>Image analysis tools</b>	Contrast and edge enhancement, filters, marks and annotations, histogram equalisation, review of stored images and manifest data for comparison, image conversion to standard formats, objects measurement
<b>Database workstation (DBW)</b>	SQL data base
<b>Data storage</b>	280,000 images as standard
<b>Data archiving</b>	DVD burner (standard)
<b>Printer</b>	Color laser printer

## Radiation protection safety

<b>Surveillance</b>	Cameras (including one PTZ) + radio intercom
<b>Markings</b>	3-color safety light + siren
<b>Regulations</b>	Compliant with WHO, ICRP 103-2007, EU & US regulations
<b>Radiation protection</b>	Security perimeter zone defined by infrared markers

## Health & security

<b>Dose in the environment</b>	Average <0,5µSv/h <1mSv/an
<b>Dose rate in operator cabin</b>	Average <0,5µSv/h <1mSv/an

## Options

<b>ARD</b>	Automatic radioactive material detection (gamma)
<b>ARD n</b>	Automatic radioactive material detection (gamma, neutron)
<b>Check-in workstation (CIW)</b>	Station(s) with manifest and data recording scanner
<b>Image Operator Post</b>	Additional workstation with 22" LCD flat screen/manifest screen optional
<b>Tow bar (3T500)</b>	Tow Hitch

	<b>Configurations 4031</b>	<b>6032 viZual</b>
<b>Nominal energy (MeV)</b>	4.5	6/4
<b>Steel penetration (mm)</b>	310	320
<b>Contrast (%)</b>	0.6	1.12
<b>Steel wire (mm)</b>	0.5	1.5
<b>Safety area - ground to 2.5m (8.2') for a 20m (65.5') truck @ 0.5µSv/h 20t/h</b>	46m(L) x 45m(l)	40m(L) x 41m(l)
	150.9' x 147.6'	131.2' x 134.5'
<b>Absorbed dose per scan*</b>	Less than 7µSv/scan	Less than 6µSv/scan
<b>Organic/inorganic material discrimination</b>	no	yes (mobile mode)

\* Typical values - values may differ depending on freight and scanning conditions.

For product information, sales or service, please go to [www.smithsdetection.com/locations](http://www.smithsdetection.com/locations)

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