

HCVM™ XT

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 mobile mode and up to 120 trucks per hour in pass through mode
- Steel Penetration up to 330mm (12.99") @ 6/4MeV
- Small footprint
- Advanced technology, viZual™, provides a high performance imaging capability with organic/inorganic material discrimination and colorization in a single scan

The HCVM XT series of X-ray screening systems is designed to optimize 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 HCVM XT uses a dual energy 6/4MeV accelerator and enhanced detection line, allowing steel penetration of more than 330mm @ 24m/min.

A high maximum throughput of 25 (typical 20) trucks per hour can be achieved in mobile mode; and a maximum of 120 (typical 100) trucks per hour in pass through mode. Up to three operators can be accommodated in the cabin.

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

The optional addition of automatic radioactive material detection (iCMORE™ Radioactivity), 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 complies with the majority of 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

Nominal energy (MeV)	4/6
Scanning modes	Mobile (without the need of a tractor) and Passthrough

System specifications

Chassis	Louault ISO profile
Weight	Less than 28 tons
Engine	N/A
Truck dimensions (LxWxH)	13.60 [44.6'] (L without tractor) x 2.5 [8.2'] x 4.0m [13.1']
Scanning speed	24 or 12m/min - 36m/min available in option Speed of the trucks in pass-through mode up to 15km/h
Speed	N/A
Footprint (LxWxH)	12.40 [40.7'] x 9.8m [32.2'] x 5.8m [19']
Scanning height	From 0.35 to 5.2m
Maximum height below gantry	5.3m [17.4']
Installation time	Less than 30 min (average 15 min)
Inspection throughput	Up to 25 trucks per hour (typical 20) in mobile mode and up to 120 (typical 100) in passthrough mode*
Minimum crew requirement	1 image/system operator and 1 traffic marshal
Operating temperature	-15 to +40°C, can be extended to -30 or +55°C
Storage temperature	-30 to +60°C
Relative humidity	Up to 95%
Electrical consumption	24 kVA in average
Cabin comfort	A/C, refrigerator, natural light – Can accommodate up to 3 operators

Computer system

Image workstation (RIW)	Two 24" flat LCD screen workstations
Image analysis tools	Contrast and edge enhancement, filters, marks and annotations, histogram equalization, review of stored images and manifest data for comparison, image conversion to standard formats, objects measurement
Data storage	more than 100,000 images as standard
Printer	Color laser printer

Radiation protection safety

Surveillance	CCTV (including one PTZ) + radio intercom
Markings	3-color safety light + siren
Regulations	Compliant with WHO, ICRP 103-2007, EU & US regulations

Health & security

Dose in the environment	Average <0,5µSv/h <1mSv/an
Dose rate in operator cabin	Average <0.5µSv/h <1mSv/an

Options

iCMORE tools	Automatic radioactive material detection (gamma and neutron)
ClearCab	Scan of driver cabin at low dose level – compliant with ANSI 43.17-2008
Check-in workstation (CIW)	Station(s) with manifest and data recording scanner
Image Operator Post	Additional workstation with 24" LCD flat screen/manifest screen optional
Tow bar (3T500)	Tow Hitch

Configurations

	HCVm XT-D5	HCVm XT-DM
Nominal energy (MeV)	6/4	6/4
Steel penetration (mm)	330mm	370mm
Contrast/100mm (%)	1.5% behind 100mml	Less than 0.6% behind 100mm of steel
Steel wire (mm)	1.5mm	1.2mm
Radiological safety area - ground to 2.5m (8.2')*	33(L) x 37m(l)	TBC
Absorbed dose per scan**	Less than 6µSv/scan	TBC
Organic/inorganic material discrimination	Yes	Yes

* Operating zone can be larger than safety one

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

For product information, sales or service, please go to www.smithsdetection.com/locations

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