

MV3D™

Explosives Detection System



MV3D delivers an unbeatable combination of innovative technology, superior threat detection, reliable performance and cost efficiency

NOVEL DESIGN SOLUTION

MV3D is designed to meet the highest level of detection performance without the use of a rotating gantry. The system utilizes a series of fixed X-ray sources and multiple detector arrays to create high resolution 2D and 3D images. It generates the throughput and image quality of previous EU Standard 2 systems, while providing the detection performance required of EU Standard 3 Approved and TSA Certified systems, all at a high level of reliability.

OPTIMIZED BHS INTEGRATION

MV3D is designed to insure seamless integration with an airport's baggage handling system. The system's 0.5 meters-per-second belt speed allows it to scan up to 1,800 bags per hour. Its 102 cm wide by 81 cm high tunnel integrates easily with standard baggage handling systems. The MV3D's dieback tolerant technology allows bags to be stopped in the scan plane for short periods and still allow the explosives detection analysis to proceed without impact. This increases the effective throughput and reduces costly rescreening of these bags.

LOW TOTAL COST OF OWNERSHIP

The system is architected to offer customers a lower total cost of ownership. The stationary gantry design eliminates moving parts to deliver superior mean time between failures and system availability, ensuring lower maintenance costs for airport operators. Since the MV3D does not require air conditioning, it consumes less energy to operate at temperatures ranging from 0 to 40°C. Networking option links with other Leidos hold baggage systems and respective workstations over a secure network.

EXCEPTIONAL DETECTION AND RAPID ALARM RESOLUTION

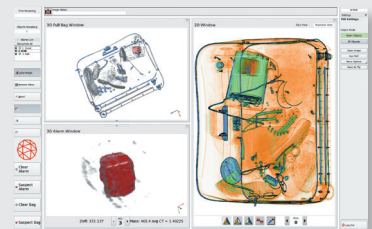
MV3D's design provides our advanced algorithms with both high resolution 2D and 3D image data. Leidos is uniquely positioned to utilize our explosives detection experience in both automated and traditional rotation gantry computed tomography (CT) systems, providing the user with improved detection and false alarm performance.



Large Tunnel Opening:
102 cm x 81 cm minimizes
out-of-gauge bags

PRODUCT HIGHLIGHTS

- › TSA Certified and ECAC/EU Standard 3 Approved
- › Scans up to 1,800 bags per hour
- › Stationary gantry improved reliability
- › Best-in-class imaging and detection
- › Flexible alarm resolution options – 2D and 3D imaging
- › Large rectangular tunnel – 102 cm x 81 cm
- › 0.5 meters-per-second belt speed



MV3D Universal Viewing Station



HIGH-RESOLUTION IMAGING

Images of suspect bags are displayed on our latest viewing station, where operators have both high-resolution 2D and 3D views to evaluate. Leidos' STP-compliant 2D imaging facilitates rapid on-screen alarm resolution. Intuitive on-screen 3D image and threat object rotation tools allow operators to see through clutter to make faster, higher-confidence decisions.

SPECIFICATIONS

GENERAL

Dimensions:	540 cm (212.6") L x 218 cm (85.8") W x 218 cm (79.5") H
Tunnel Opening:	102 cm (40.1") W x 81 cm (31.9") H
Conveyor Height:	Adjustable from 97.4 cm (38.3") to 107.5 cm (42.3")
Conveyor Speed:	0.5 m/sec (98.4 ft/min), 1,800 bags per hour, dieback tolerant technology
Conveyor Capacity:	290 kg (639 lb); maximum bag size: 250 cm (98.4") L x 100 cm (39.4") W x 80 cm (31.5") H
System Power Requirements:	400-480 VAC ±10%, 50/60 Hz ±1%, 13 kVa max, dedicated 3Ø service

X-RAY SOURCES

Voltage:	180kV DC
Cooling:	Closed loop, oil with forced heat exchanger

High-resolution, dual energy detectors with multiple row arrangement

PHYSICAL SPECIFICATIONS

Weight (Uncrated):	7,530 kg (16,600 lb)
Weight (Crated):	7,974 kg (17,580 lb)
Construction:	Welded steel frame and composite panels

ENVIRONMENTAL

Operating Temperature:	0°C to 40°C (32°F to 104° F)
Storage Temperature:	-20°C to 50°C (-4°F to 122°F)
Humidity:	95% non-condensing
Noise Level:	<70dB (A)

WORKSTATION

Dimensions (Uncrated):	(including optional table) 86.4 cm (34") L x 71.1 cm (28") W x 133.4 cm (52.5") H
(Crated):	88.9 cm (35.0") L x 99.1 cm (39.0") W x 142.2 cm (56.0") H
Weight (Uncrated):	approx 98 kg (217lb)
(Crated):	approx 113 kg (250 lb)

IMAGING AND PERFORMANCE*

Resolution:	38 AWG tinned copper wire
Penetration:	30 mm steel
Contrast Sensitivity:	256 shades of grayscale
Video Resolution:	1920 x 1200
Video Display:	High-performance 32-bit video display processor, 24" wide screen high-resolution color video display monitor
Image Analysis Modes:	2D, 3D Threat alert and density alert, TRI-MAT (organic/inorganic/metallic); pseudo-color; reverse video; three-level

contrast; edge enhancement; metallic item removal; continuous zoom; continuously variable contrast adjustment.

3D imaging with threat alert, density alert, and imaging tools

Bag Buffer:	30-bag internal memory – Level 2 72,000-bag internal memory – Level 3
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RADIATION SAFETY

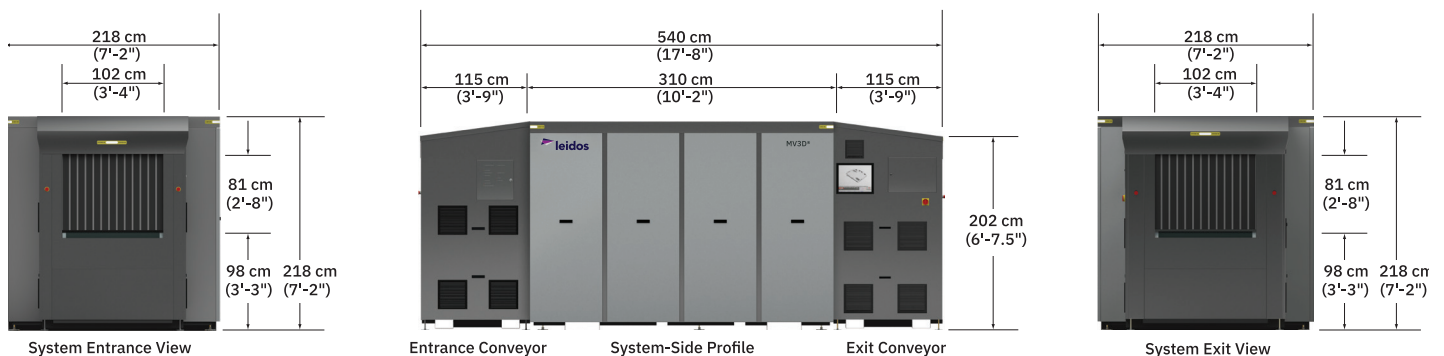
All Leidos X-ray systems are certified to be in full compliance with all radiation safety requirements and external emissions limits as specified in the United States Code of Federal Regulations, Title 21, Section 1020.40 (21 CFR 1020.40) that apply to our products. Typical leakage radiation is less than 0.1 mR/hr.

OPERATIONAL STANDARDS

- › CDRH 21 CFR 1020.40 Cabinet X-ray Systems and maximum leakage radiation less than 0.1mR/hr (1µ Sv/hr)
- › NRTL certified to ANSI/UL 61010-1, CAN/CSA 22.2 No.61010-1 and CE compliant
- › Designed for TIP1A/TIPII/STIP compliance

DESIGN POLICY

Leidos reserves the right to change specifications in the course of continuous improvement. Specifications are provided for reference only and actual equipment may differ slightly from the description given. Typical dimensions are within ± 5% of nominal values.



FOR MORE INFORMATION VISIT

leidos.com/security-detection