Rapiscan XRD1000

Rapiscan® systems
An OSI Systems Company

HOLD BAGGAGE SCREENING

Dual View, Dual Energy

Diffractive X-ray

Flexible

Cost Effective

AUTOMATED EXPLOSIVES DETECTION

Rapiscan XRD1000 delivers automated explosives detection for your most stringent security applications. Utilizing next generation automated explosive detection algorithms, **XRD1000** combines dual view, dual energy X-ray imaging with secondary substance identification (SI) based upon advanced X-ray diffraction technology.

Stage 1 analysis provides automated explosives detection through the use of advanced detection algorithms, resulting in more accurate density and mass estimations and precision threat localization. These threat location coordinates are then used by the Stage 2 X-ray diffraction system to positively identify the explosive or to accurately resolve innocuous (false alarm) substances. (each material has their own unique X-ray diffraction signature)

HIGH DETECTION, LOW FALSE ALARM, MULTI MODE OPERATION

XRD1000 provides a high probability of detection while at the same time maintaining an extremely low false alarm rate. Automatic operation reduces manpower needs and the incidence of human error. In fully automatic "High Threat" mode, **XRD1000** achieves a peak throughput rate of 160 bags per hour. Extremely low false alarm rates results in very low numbers of bags requiring additional, time consuming security screening. Thus, the effective throughput of **XRD1000** rivals that of other higher speed, higher false alarm, and more costly EDS.

XRD1000 can also be configured to allow manual operator interaction. In "Operator Interactive" mode, the security screener can manually direct the stage 2 diffractive X-ray system to inspect suspect items as displayed on stage 1 high quality X-ray images.

XRD1000 NON-EXPLOSIVE SUBSTANCE IDENTIFICATION

XRD1000's flexibility is further enhanced by the learning capability of the X-ray diffraction neural-net based substance identification algorithms and threat signature library. Non-explosive contraband substances, such as illicit drugs, can be added to the **XRD1000** threat signature library, thus providing extended substance identification capabilities. Additionally, substance threat signature training can be conducted at the customer site with minimal impact to ongoing security screening operations.
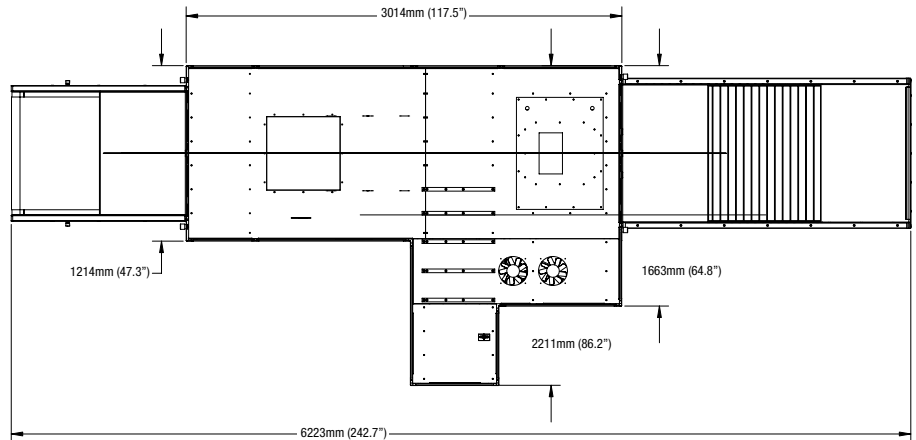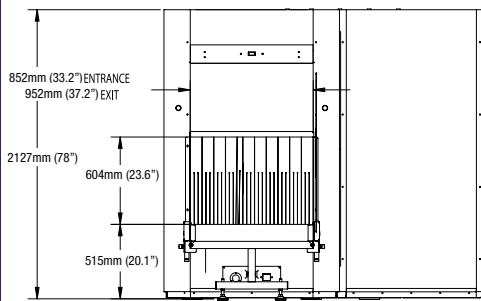
PRODUCT HIGHLIGHTS

- Stage 1, unparalleled HBS image quality, ASTM 975F and CTP compliant

- Stage 2, Substance-specific X-ray diffraction technology accurately identifies types of explosives from a neural net based library of threat and non-threat substances. This substance neural net allows for further training on specific substances of interest, increasing system performance flexibility.

- Advanced dual energy, multi-view explosive detection algorithms

- Neural-net based substance identification database means:
  - High probability of detection
  - Extremely low false alarm rate
  - Substance specific learning capability

- Flexible Modes of operation respond to changing threat levels

ONE COMPANY - TOTAL SECURITY

HOLD BAGGAGE SCREENING

852mm (33.2") ENTRANCE
952mm (37.2") EXIT

2127mm (78")

604mm (23.6")

515mm (20.1")

3014mm (117.5")

1214mm (47.3")

1663mm (64.8")

2211mm (86.2")

6223mm (242.7")

SPECIFICATIONS

Throughput:	160 Bags per hour @ 0.25 M/Sec
False Alarm Rate:	< 10%
Alarm Resolution:	2 high quality dual energy x-ray images plus automatic substance identification (SI) diffractive X-ray
Explosive Detection:	Yes
Automatic Detection:	Yes
Threat Substance Identification:	Yes
Threat Database Administration:	Yes
Network Ready:	Yes
Dimensions:	Length: 3,014 mm (118.7 in.)
	Height: 2,127 mm (83.7 in.)
	Width: 2,211 mm (87.0 in.)
Max Inspection Object:	Length: 1,200 mm (47.2 in.)
	Height: 540 mm (21.3 in.)
	Width: 800 mm (31.5 in.)
Input Conveyor Height:	550 mm (21.7 in.)
Conveyor Speed:	0.25 M/Sec
	Optional 0.5 M/Sec
Max Load:	165Kg (363 lbs)
Approx Weight:	3,000 Kg (6,600 lbs)

Number of Transmission X-ray Stage Generators (each 170KeV): 2
Number of Diffractive X-ray Stage generators (each 160 KeV): 1

HEALTH & SAFETY

All Rapiscan Systems products comply with applicable international health and safety regulations including USA FDA X-ray systems (Federal Standard 21CFR 1020.40) and Health and Safety at Work Act 1974-section 6, Amended by the Consumer Protection Act 1987. Maximum leakage radiation less than 0.1mR/hr (1µ Sv/hr) in contact with outer panels.
Film Safety: For ISO 1600/33 DIN, guaranteed up to 10 times exposure to radiation.
CE Compliance: Yes
FCC & IEC Compliance: Yes

With continual development of our products Rapiscan Systems reserves the right to amend specifications without notice.

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STANDARD FEATURES

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Windows User Interface
20" Flat Screen LCD
Network Ready
Manual Image Archive
Dual Energy Imaging
High & Low Penetration
Black and White Viewing
Organic Stripping
Inorganic Stripping
Panning Zoom
Variable Gamma
Baggage Counter
Date/Time Display
Input Conveyor
Tunnel Covers
Operator Console
Calibration Test Piece (Diffractive X-ray)

CUSTOMER SUPPORT SERVICES

Our team is dedicated to providing a prompt, effective and personalized response that exceeds your expectations. With spare parts inventory and skilled technicians all over the world, you can be certain Rapiscan Systems will always be prepared with a solution to address your requirements. By measuring response time, parts delivery and support status, our team embraces a customer centric philosophy to ensure continual improvement of our products and services.

www.rapiscansystems.com