

# RAPISCAN SECURE 1000® FREQUENTLY ASKED QUESTIONS REGARDING HEALTH AND SAFETY



## The Secure 1000: The World's Leading Advanced People Screening Solution



Deployed and tested in airports, as well as by law enforcement, homeland security and military organizations worldwide, Rapiscan Systems' family of Secure 1000 personnel screening products – the Secure 1000, the Secure 1000 Single Pose and the Secure 1000 MP (modular and portable) -- are the most proven, widely used and accepted advanced whole body imaging systems available today. It has been approved for use by multiple regulators, including the US Transportation Security Administration and the United Kingdom Department for Transport.

The Secure 1000 can reveal threats concealed on a person's body that other technologies, such as metal detectors, cannot. The Secure 1000 can reveal even very small quantities of liquid explosives, non-metallic weapons, and plastic explosives, making it ideal for aviation security applications.

### How Does It Work?

The Secure 1000 bounces very low energy x-rays off of a person to generate an image. This image is then analyzed by an operator to identify concealed potential threats.

## How Much X-ray Radiation Exposure is Generated by the Secure 1000®?

The amount of x-ray energy generated by the Secure 1000 is very small, in fact much less than naturally occurring background radiation people are exposed to. For example:

Regulatory Commission regulations and Food and Drug Administration regulations. With a single scan exposure of 0.05 microsieverts (0.05 uSv) per inspection, the Secure 1000 systems are 1/5 the allowable dose under ANSI Standard 43.17 which states the per inspection dose cannot be more than 0.25 microsieverts (0.25 uSv). Leading research laboratories have evaluated

A person would have to be inspected **1,000 times** by the Secure 1000 to receive the equivalent of one typical chest medical x-ray.

In **one day** on Earth, a person is exposed to **60 times** more radiation than in one inspection by the Secure 1000.

In **two minutes** of a typical commercial aviation flight, a person receives the same amount of radiation exposure that they would from one inspection by the Secure 1000.

### Rapiscan Secure 1000® Product Family X-ray Exposure Comparison



## Is the Secure 1000® Safe?

**Yes.** The Secure 1000 complies with all applicable regulations and standards that exist in the United States. These regulations include OSHA regulations, Nuclear

and confirmed that the Secure 1000 systems have met all applicable regulations and standards. The Secure 1000 also complies with other applicable international standards, such as the United Kingdom's Health Protection Agency.

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### Independent Reports Confirm Safety of the Secure 1000 Technology.

The latest report published by the European Union's Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR), confirms that **the use of backscatter X-ray technology in body scanners is safe to use at security checkpoints.**

The SCENIHR reports states that, with respect to the Secure 1000:

- The doses delivered by backscatter X-ray scanners are too low to cause any observable effects on the human body
- The dose levels are too low to form a scientific basis for making any quantitative risk estimates

To read the report, please visit [http://ec.europa.eu/health/scientific\\_committees/emerging/docs/scenih\\_r\\_o\\_036.pdf](http://ec.europa.eu/health/scientific_committees/emerging/docs/scenih_r_o_036.pdf)

The National Council on Radiation Protection and Measurement (NCRP) has reported that a traveler would need to experience 100 backscatter scans per year to reach what they classify as a Negligible Individual Dose. **An airline passenger flying cross-country is exposed to more radiation from the flight than from screening by one of these devices.** The American College of Radiology (ACR) agrees with this conclusion. By these measurements, a traveler would require **more than 1,000 such scans in a year** to reach the effective dose equal to one standard chest x-ray."

To read the statement visit: "ACR Statement on Airport Full-body Scanners and Radiation." American College of Radiology. [http://www.acr.org/MainMenuCategories/media\\_room/FeaturedCategories/PressReleases/statementon-AirportFullbodyScanners.aspx](http://www.acr.org/MainMenuCategories/media_room/FeaturedCategories/PressReleases/statementon-AirportFullbodyScanners.aspx) (26 January, 2010)

### Where Can I Learn More?

Presidential Report on Radiation Protection Advice "Screening of Humans for Security Purposes Using Ionizing Radiation Scanning Systems", by National Council on Radiation Protection and Measurements

"Screening Individuals with Backscatter X-Ray Systems", by Daniel Strom, Health Physics Society

"Screening of Humans for Security Purposes Using Ionizing Radiation Scanning Systems", NCRP COMMENTARY No. 16

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