

# B-SCAN™ 16HR-DV

## Transmission X-Ray People Screening Technology



### Feature Highlights

- Detects objects concealed internally in or externally on the body.
- Contraband and threat detection including: weapons, explosives (plastic and powder), detonators, narcotics, electronic devices, diamonds, precious stones/metals and mobile phones.
- High throughput – scan time less than 7 seconds.
- Dual view – full body and additional high resolution torso scan at the same time
- Complete head to toe inspection in one short inspection cycle.
- State of the art image processing software and zoom functions facilitates efficient image evaluation
- Low dose rate <math><4.5\mu\text{Sv}</math>/inspection

B-SCAN™ uses transmission x-ray technology employing very low dose rates to screen people. This non-intrusive approach to people screening enables the detection of objects concealed internally in body cavities, on a person beneath clothing, or in artificial limbs.

The 16HR-DV model of B-SCAN™ simultaneously creates two images of the person being scanned. These are a fully body head to toe image and a high resolution torso image.

The 16HR-DV produces an enhanced view of the more difficult torso area with its high resolution image and second viewing angle. This gives more detailed information to assist the operator in their task. The 16HR-DV model of B-SCAN is the only transmission x-ray people screening security system on the market producing two views from different viewing angles.

The B-SCAN™ system is used to detect contraband and threat objects in applications including prisons, customs and border crossings.

High resolution images, a second viewing angle and image enhancement tools allow the 16HR-DV dual view B-SCAN™ operator to accurately and quickly evaluate the images.

Using specially adapted image processing software B-SCAN™ provides security checks of unequalled quality.

B-SCAN™ uses state of the art safety systems to monitor the radiation generation and dose.

With over ten years of field experience B-SCAN™ is proven as a well engineered and reliable screening system.

## Function

<b>Material detected includes</b>	Metal, ceramic, plastics, powders, explosives, narcotics
<b>Detection capability</b>	Objects hidden internally and externally on the body
<b>Type of scan</b>	Full body scan in one inspection pass
<b>Primary function</b>	Screen people for contraband and threats
<b>Wire detectability</b>	standard: 36 AWG (0.13 mm) • typical: 38 AWG (0.10 mm)
<b>Technology</b>	Low dose transmission x-ray

## Operational Data

<b>Physical format</b>	Open tunnel - In line with checkpoint flow
<b>Start up time</b>	<2 minutes
<b>Belt speed</b>	Approx. 0.12 m/s
<b>Scan method</b>	Person moved through the beam
<b>Scan time</b>	< 7 Seconds
<b>Alarm resolution</b>	Dual image review
<b>Image one</b>	Full body – Head to toe
<b>Image two</b>	High resolution torso image - enhances detection capability
<b>Conveyor load capacity</b>	>220kg (485 lb)

## Installation information

<b>Dimensions</b>	approx. 2585 [L] x 2525 [H] x 2350 [W][mm] (101.8" x 99.4" x 92.5")
<b>Weight</b>	990kg
<b>Humidity</b>	10% - 90% (non condensing)
<b>Storage temperature</b>	-20°C to 60°C
<b>Operating temperature</b>	0°C to 40°C
<b>Power consumption</b>	< 1.0 kVA
<b>Mechanical construction</b>	Metal body (aluminium, steel)
<b>Sound pressure</b>	< 70 dB (A)
<b>Power supply (standard)</b>	230 VAC / 120VAC +10% / -15% 50 Hz / 60 Hz

## Image generation

<b>Generator cooling</b>	Oil cooled, closed circuit
<b>Scan format</b>	Fan beam line scan
<b>Generator</b>	160kV cp, Hermetically sealed oil bath.
<b>X-ray converter</b>	High resolution semiconductor detector lines
<b>Dose per inspection</b>	< 4.5 µSv (<0.45 mRem)*
<b>Duty cycle</b>	100%

## Image presentation

<b>Result presentation</b>	Two post scan still images Dual images - Fully body and high resolution torso
<b>Grey levels stored</b>	65536
<b>Image display</b>	b/w
<b>Image evaluation functions</b>	zoom, various enhancement and filter functions
<b>Monitor</b>	special colour TFT monitor

## Options / Features

Operator's table
Side wall / side wall with window
Can be configured with image store and load capability
Programmable function keys
Remote operator privacy solution
Software for instantaneous offsite independent image assessment

Other B-SCAN™ models available with different dose per inspection

\* Measured in the centre of the tunnel

All applicable national regulations, requirements and approvals need to be considered and addressed by the customer  
All models of B-SCAN have been independently tested against the ANSI/HPS N43.17-2009 guideline



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

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