

# HI-SCAN™ 10080 EDX-2is



## Feature Highlights

- Automatic detection of explosives
- Analysis of  $Z_{\text{eff}}$  for efficient detection at low false alarm rates
- High belt speed, thus high throughput up to 1,800 items/h
- EU standard 2-compliant (acc. to regulation 1448/2006)
- Evaluation in real time
- Specially designed for multi-level systems
- Two high-resolution X-ray images (dual view) available for operator recheck
- Fully integratable in automatic conveyor devices and networks for image distribution, system management, archiving and TIP

Screening objects transported in the cargo hold of airplanes has historically represented a major challenge to the aviation industry. The evolution of this requirement to include 100% inspection of these objects has now become a critical element in maintaining traveler confidence and assuring the future success of the aviation industry.

The automatic explosive detection system HI-SCAN 10080 EDX-2is represents the latest development of the proven Smiths Heimann detection technology. The abilities of the system help meet all requirements existing within a 100% screening environment. Using the latest developments in this sector, the EDX-2is offers major technological innovations with regard to the X-ray generator, the X-ray sensors and automatic image evaluation. Thus the EDX-2is is able to offer the highest detection rate in its class.

With a tunnel opening of 107 cm in width and 81 cm in height, the system allows for the screening of oversized objects up to a length of 3.8 m, avoiding the need to divert to an alternate screening technology. Due to its detection capability, combined with a low false alarm rate, the system is able to screen up to 1,800 bags per hour – setting a new standard for automated screening technology.

The EDX-2is, operating at 0.5 m/sec, has been specifically designed to meet the challenges of integration into automated conveyor systems. The EDX-2is can be integrated into existing or newly designed conveyor systems. Within the proven multi-level screening concept, all objects to be inspected are screened automatically for explosives by this high speed Level 1 system. Objects cleared by EDX-2is continue to their determined destination while the X-ray images of objects rejected in Level 1 are automatically diverted to a second security level for further evaluation. Should further inspection be necessary, the image and object are sent to Level 3. With lower throughput requirements for Level 3 screeners, further technologies exist for this application and implementation will depend on the security philosophy and regulations of the airport.

Automation of the primary inspection process offers the added benefits of reducing staff requirements and recurring costs.

## Main Features

|  |   |
|--|---|
| <b>Tunnel dimensions (WxH)</b>                 | 1070 x 810 mm, 42.2" x 31.9"  |
| <b>Max. object size (WxHxL)</b>                | 1060 x 800 x 3.800 mm, 41.7" x 31.5" x 149.6"   |
| <b>Conveyor height <sup>1)</sup></b>           | approx. 800 mm, 31.5"   |
| <b>Belt speed</b>                              | 0.5 m/s, 98.5 ft/min  |
| <b>Max. conveyor load (evenly distributed)</b> | 75 kg/m <sup>2</sup> , 165 lbs/m <sup>2</sup><br>200 kg, 441 lbs total  |
| <b>Film safety</b>                             | also for highly sensitive films guaranteed up to ISO 1600 [33 DIN]  |
| <b>Data recording mediums</b>                  | no damage to computer memories, such as cassettes, floppy disks or hard disks due to X-rays<br>Reference: NSB Special Publication 500-101 |
| <b>Duty cycle</b>                              | 100% (approx. 2 min for boot procedure and self tests)  |

## Automatic detection

|                             |   |
|-----------------------------|---|
| <b>Real-time evaluation</b> | by means of high performance parallel computing                                   |
| <b>Throughput</b>           | typical: 1200 to 1800 objects/h (object length 1300 mm to 800 mm, 51.2" to 31.5") |

|                            |                  |
|----------------------------|------------------|
| <b>Gap between objects</b> | min. 0.2 m, 7.9" |
|----------------------------|------------------|

## X-ray generator

|                                |  |
|--------------------------------|--|
| <b>No. of X-ray generators</b> | 2  |
| <b>Anode voltage</b>           | max. 150 kV cp                           |
| <b>X-ray tube</b>              | focus <1.6 mm, anode voltage max. 160 kV |
| <b>Anode current</b>           | max. 5 mA                                |
| <b>Beam divergence</b>         | 70°                                      |
| <b>Beam direction</b>          | diagonal (bottom to top) and horizontal  |

## Image generating system

|                        |  |
|------------------------|--|
| <b>X-ray converter</b> | 2 L-shaped detector lines, photodiodes with highly efficient scintillators |
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## Installation Data

|  |  |
|--|--|
| <b>X-ray leakage</b>                       | meets all applicable laws and regulations with respect to X-ray emitting devices.          |
| <b>CE conformity</b>                       | in compliance with requirements of 2006/42/EC, 2004/108/EC, 2006/95/EC                     |
| <b>Sound pressure</b>                      | < 60 dB(A)   |
| <b>Operating temperature <sup>2)</sup></b> | +5 °C to +40 °C  |
| <b>Storage temperature</b>                 | -15 °C to + 60 °C (without UPS batteries)  |
| <b>Humidity</b>                            | 10% - 90% (non-condensing)   |
| <b>Power supply <sup>3)</sup></b>          | 400 VAC + 10% / -15%, 16 A (three-phase), 50/60 Hz ± 3 Hz,                                 |
| <b>Power consumption</b>                   | approx. 6 kVA  |
| <b>Protection class</b>                    | IP 54  |
| <b>Dimensions (LxWxH)</b>                  | 2900 x 2140 x 1900 mm, 114.2" x 84.3" x 74.8"  |
| <b>Weight <sup>4)</sup></b>                | standard: approx. 3,080 kg, 6,790 lbs<br>option long conveyor: approx. 3.230 kg, 7.121 lbs |

## Options

|                         |  |
|-------------------------|--|
| <b>Conveyor control</b> | Interfaces to control external conveyor system |
|-------------------------|--|

<sup>1)</sup> standard unit  
<sup>2)</sup> optional tunnel

<sup>3)</sup> other values optional  
<sup>4)</sup> without control desk, monitor(s) etc.



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