

# X-ACT

## Advanced Contents Tracking

### Introduction

**X-ACT** offers an automated procedure for the recognition of particular substances. Suspicious or high absorbing materials are framed according to their material origin.

**X-ACT** can be used for selective targeting and detection of narcotics, explosives or other prior defined substances. The **X-ACT** system supports the difficult and responsible job of operators by accelerating the checking procedure due to the automatic and direct access to suspicious materials in the baggage.

### X-ACT Principle

The **X-ACT** system is based on the proven **HI-MAT<sup>plus</sup>** multi energy material discrimination technique, sophisticated image processing software and dedicated hardware. The **HI-MAT<sup>plus</sup>** material detection



X-ACT automatically marks suspect items

The automatic detection software which is run on a state-of-the-art computer hardware is a spin-off derived from the explosive detection system, EDS, for hold baggage screening.

The main feature is to separate the materials of interest from other bag contents. Even if suspect items are obscured or overlapped by others, they can be separated and alerted. Besides framing, the operator can be alerted through acoustic signals or stopping of the belt.

system has been further improved using a highly stabilized X-ray source and selected components for detection.

The detection system provides the required material resolution to distinguish between explosives, narcotics and other materials.



Would you expect explosives in this baggage ?

### Main Characteristics

- ▶ **X-ACT offers an automated procedure for the recognition of suspicious material**
- ▶ **X-ACT works online and in realtime without loss of evaluation time for the operator**
- ▶ **X-ACT is 'background-sensitive': detection of substances covered by other material**
- ▶ **X-ACT does not require further operator manipulation or stopping of baggage flow**
- ▶ **X-ACT provides automated conveyor stops without loss of information**
- ▶ **X-ACT implies an image storage function (IMS)**
- ▶ **X-ACT includes an automatic recalibration facility which guarantees long term stability**

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### Operation

Suspicious material that in the past has been difficult to recognize by the operator of standard baggage inspection units are automatically marked, i.e. without any further operator manipulation.

**X-ACT** operates without interrupting other evaluation procedures (e.g. no stopping of conveyor belt necessary).

**X-ACT** marks the substances in the **HI-SCAN** images. This means operators, using our standard systems, are familiar with the images and have an additional indication concerning the a. m. objects located in the bag. All other standard image evaluation functions are still available.

**X-ACT** works simultaneously to all other available online-functions as **HI-TIP** or **HI-SPOT**.

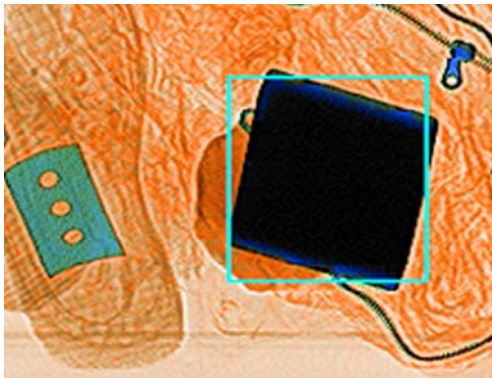
The frames are color-coded:

■ **Red frame: explosives**

■ **Green frame: narcotics (option)**

■ **Blue frame: high density (option)**

A blue frame is inserted where the material to be checked is very dense and the system can no longer discriminate due to the high X-ray absorption.

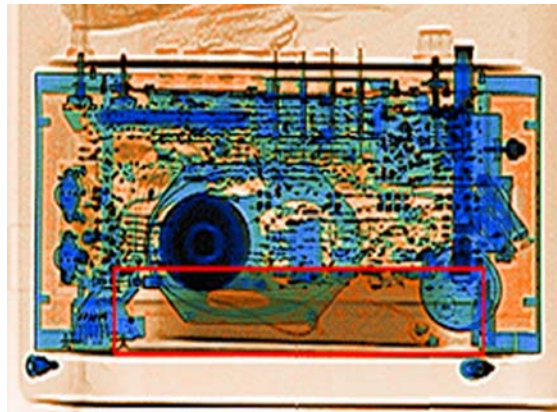


■ **Blue frame: dense material**

### Compatibility

**X-ACT** is compatible with the **HI-SCAN** units manufactured by Heimann Systems.

The younger generation of X-ray inspection units of Heimann Systems for hand baggage check can be retrofitted with **X-ACT**. (Details provided on request with indication of serial number).



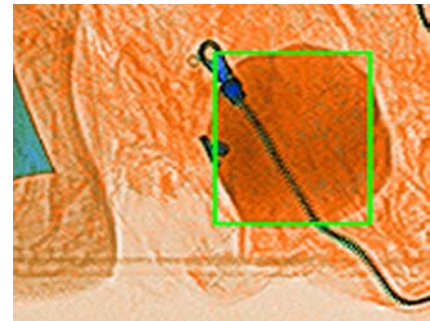
■ **Red frame: explosives**

### Customizing

Depending on the requirements special explosives and/or narcotics can be trained into the system on request.

### Setup

Due to the complexity of the detection data base the **X-ACT** system is pre-set according to the customer's requirements by the supplier.



■ **Green frame: narcotics**

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