



communications
Security & Detection Systems

Commercial Offerings

ALERT ADSA10 Workshop - May 6th and 7th
Northeastern University, Boston
Stewart Hampton, Director of Marketing
L-3 Security & Detection Systems



8 things you always wanted to know

Customers chose the most appropriate method for their commodity.

1. There is no one size fits all solution.
2. A combination of methods may be applicable.
3. Often, X-Ray will tick the most boxes.
4. Minimizing cost of compliance is key.
5. Regulation of air cargo security is increasing word wide but harmonizing
6. In advanced markets getting qualified by regulator is mandatory.
7. “Efficient market”:
 1. Many vendors and customers
 2. Low barriers to entry
8. Competitive X-ray products (specs.) are similar



L-3 SDS Product Segments



Certified

Checked Baggage



Automated



Conventional

Checkpoint Solutions

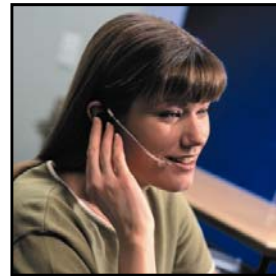


Trace



Advanced Imaging

Cargo Solutions



Installation, Field Service & Support

Air Cargo

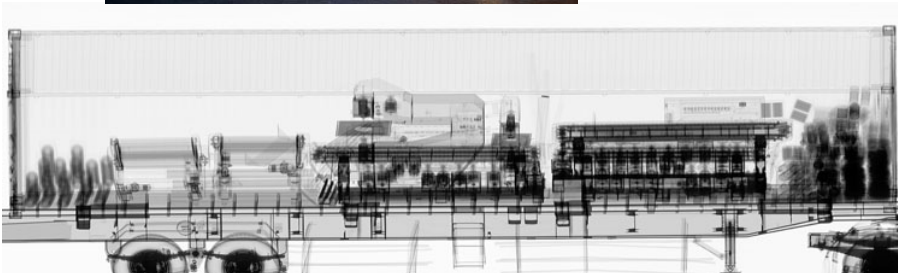


Break-Bulk



3

Pallets, Skids & ULDs



Screening methods for cargo and mail

Screening methods

- Transmission X-Ray
- EDS – Explosive Detection System (costly)
- EDD – Explosive Detection Dogs
 - REST- Remote Explosive Scent Trace
 - FREDs – Free Running Explosive Detection Dogs.
- ETD – Explosive Trace Detection
- CMMD – Cargo and Mail Metal Detection



L-3 Air Cargo Solutions to Keep Commerce Moving

Leading TSA-Qualified X-ray Screening Systems

Automated



ACX 6.4



ACX 6.4-MV



VDS 108



VIS-HR



MVT-HR

Conventional



PX 107



PX 10.10-MV



PX 15.17-MV



PX 18.18-MV

High-Energy
Pallet



L-3 Air Cargo Experience

- Providing airports and shippers with systems for break-bulk, skids, pallets* and ULDs* for more than a decade
- World's most advanced multi-sensor pallet scanner used by Dutch customs at Schiphol Airport in Amsterdam
- Over 150 company-employed field service techs in US
- Full service solutions

*subject to applicable regulatory requirements

Air Freight Forwarder issues

- **Regulator qualified**
- **Form factor / Size / Weight**
- **Cost to buy and operate**
- **Performance (imaging)**
- **Throughput**
- **Uptime**
- **Service / time to repair**
- **Networking – centralized screening (emerging)**

L-3 Air Cargo Solutions to Keep Commerce Moving

Leading TSA-Qualified X-ray Screening Systems

Automated



ACX 6.4



ACX 6.4-MV



VDS 108



VIS-HR



MVT-HR

Conventional



PX 107



PX 10.10-MV



PX 15.17-MV



PX 18.18-MV

High-Energy
Pallet



L-3 Air Cargo Experience

- Providing airports and shippers with systems for break-bulk, skids, pallets* and ULDs* for more than a decade
- World's most advanced multi-sensor pallet scanner used by Dutch customs at Schiphol Airport in Amsterdam
- Over 150 company-employed field service techs in US
- Full service solutions

*subject to applicable regulatory requirements

Screening methods – X-ray

Break bulk, parcel and mail

- Dual View
- Image Quality Compliant
- Minimize density alarms



PX™10.10-MV

Non-Palletized Freight X-ray System

**TSA ,Transport Canada,
and DfT Qualified**



APPLICATIONS

- Large Parcel / Light Freight Screening
- Break-Bulk Cargo Screening
- Out-of-Gauge Luggage Screening

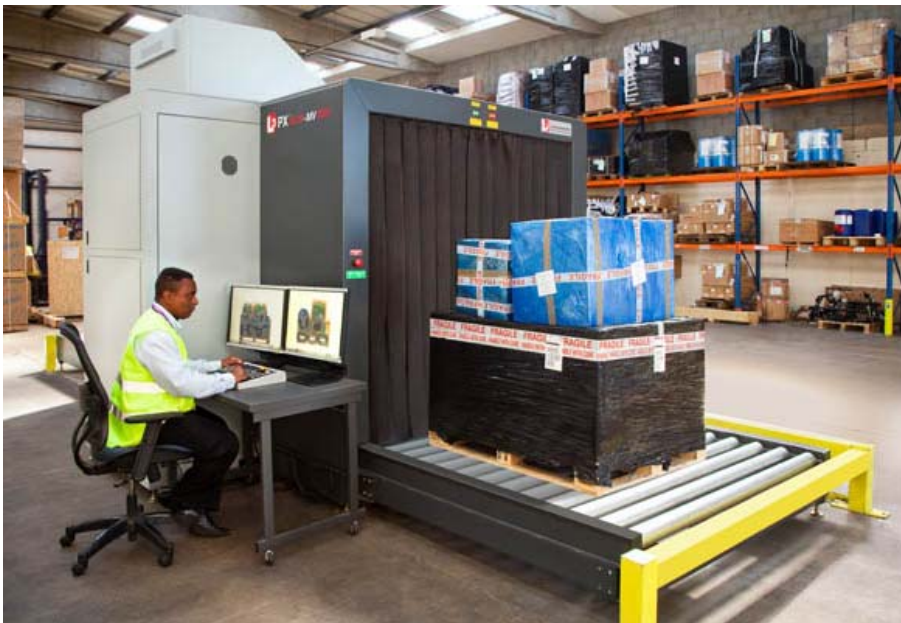
Features

- Dual-energy material discrimination
- Patented heads-up operator interface
- Optimal combination of belt height (19"/480mm) and geometry (up-shooter)
- High-power X-ray tank standard:
 - Improved penetration (42-44 mm steel)
- Upgradeability – 1 or 2 views
- Modularity – fits through doorways and in most elevators
- Options – motorized inclined conveyor capacity to **200 kg (440 lb)**
- EU-approved TIP library (1K images)
- Multi-language support

Screening methods – X-ray

Bulk or consolidated cargo

- Dual View
- Image Quality Compliant
- High power penetration required to minimize density alarms



PX™ 15.17-MV & PX™ 18.18-MV Palletized Freight X-ray System

**TSA, Transport Canada, STAC
and DfT Qualified**

Tank Power	Steel penetration (mm)*	Wire (AWG)*
200kV Tank	50-52 mm	38-40 AWG
320kV Tank	75-80 mm	38-40 AWG



Features:

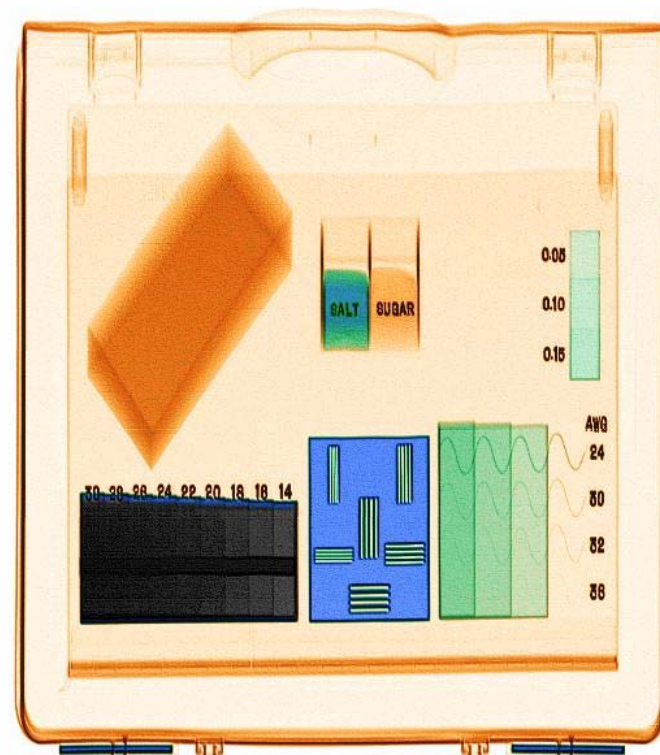
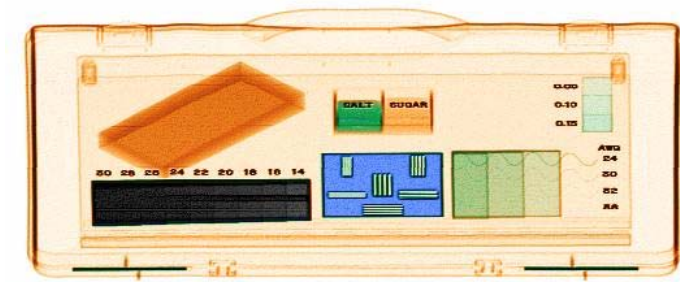
- Dual-energy material discrimination
- Low conveyor height with 2,000 kg capacity and powered, close-pitch rollers
- 6-color imaging with atomic Z-number correlation
- Continuous scanning and zoom 2x – 32x
- Reliable and easy to service
- Multi-language feature supported

APPLICATIONS

- Air Cargo Skid / Pallet / Most ULD screening
- Large parcel / Bulk Mail screening
- Manifest Verification

Standard Test Piece

- STP Default Image. No Image enhancement tools applied.
- Determines x-ray systems resolution and penetration and organics.
- ASME / STP
- Human Based Evaluation (ensure you tester has 20/20 or better vision!)

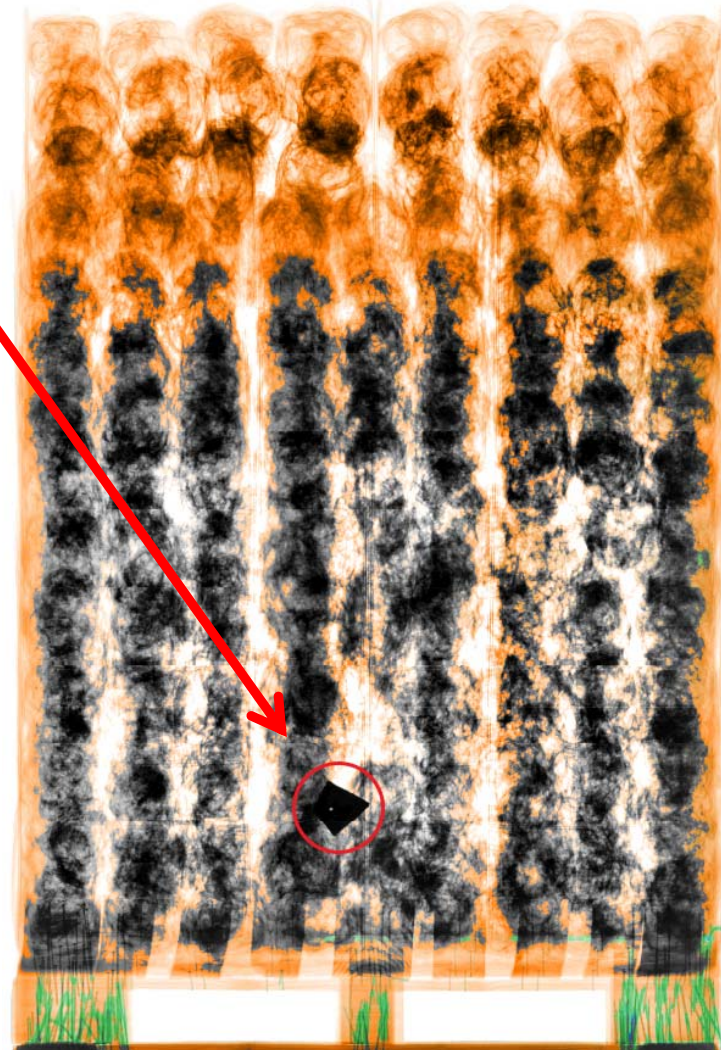


L-3 Air Cargo Qualified X-Ray Scanners

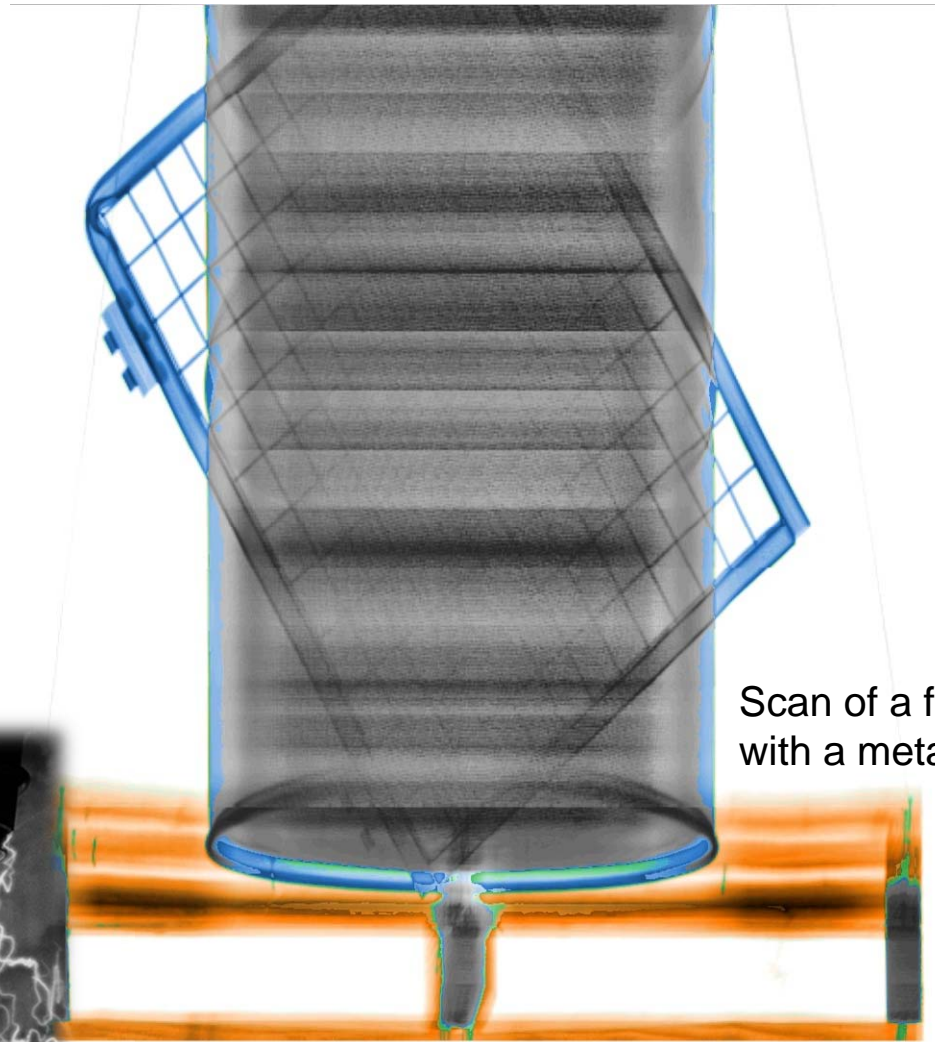
TSA Classification	Product	Tunnel Size (mm/in)	Certified EDS (CT)	Advanced Technology (AT)	Multiview	Transport Canada Approved	TSA Qualified
Large X-ray	PX 160P	1501 x 1650 59.1 x 65					✓
	PX 15.17 200	1501 x 1702 59.1 x 67					
	PX 15.17-MV 200	1501 x 1702 59.1 x 67			✓	✓	✓
	PX 15.17-MV 320	1509 x 1706 59.4 x 67.2			✓		✚
	PX 18.18 200	1803 x 1805 71 x 71.1					
	PX 18.18-MV 200	1803 x 1804 71 x 71			✓		✓
	PX 18.18-MV 320	1810 x 1807 71.3 x 71.1			✓		✓
	CX-Pallet 6000 P DV	3 m x 3.5 m 9.8 ft x 11.5 ft			✓		✓
Medium X-ray	PX 208	825 x 654 32.5 x 25.7					✓
	VDS 108	1000 x 800 39.4 x 31.5				✓	✓
	VIS-HR	1000 x 800 39.4 x 31.5		✓		✓	✓
	MVT-HR	1000 x 800 39.4 x 31.5		✓	✓	✓	✓
	PX 107	1011 x 1011 39.8 x 39.8					✓
	PX 10.10-MV	1013 x 1016 40 x 40			✓	✓	✓
Certified Explosives Detection Systems (EDS)	eXaminer 3DX (inline)	800 x up to 630 (31.5 x 24.8)	✓			✓	✓
	eXaminer HTSA (stand-alone)	800 x up to 630 (31.5 x 24.8)	✓			✓	✓
Small X-ray	PX 6.4	640 x 430 25.2 x 16.9					✓
	ACX 6.4	640 x 430 25.2 x 16.9		✓		✓	✓
	ACX 6.4-MV	640 x 430 25.2 x 16.9		✓	✓	✓	✓

Lettuce Scan on a PX18.18-MV 320 kV

Scan of a pallet of lettuce with triangular
Steel wedge visible behind the pallet



Oil Drum Example: 300kV and L-3's 320kV



Scan of a filled 55 gallon oil drum with a metal fence behind it



8 things you always wanted to know

Customers chose the most appropriate method for their commodity.

1. There is no one size fits all solution.
2. A combination of methods may be applicable.
3. Often, X-Ray will tick the most boxes.
4. Minimizing cost of compliance is key.
5. Regulation of air cargo security is increasing word wide but harmonizing
6. In advanced markets getting qualified by regulator is mandatory.
7. “Efficient market”:
 1. Many vendors and customers
 2. Low barriers to entry
8. X-ray products (specs.) are similar

