

Cargo Inspection Solutions



A guide to X-ray cargo screening, selecting your system, and product offerings.



The X-ray Advantage

Since September 11, 2001, aviation security has become a headline topic around the world. We have all witnessed the long security lines, the stringent carry-on regulations, and the notorious pat-downs. Further, as part of implementing the recommendations of the 9/11 Commission Act of 2007, the U.S. Transportation Security Administration (TSA) has executed new security measures on air cargo. TSA mandated 100% airfreight screening on domestic and commercial flights as of August 2010.

To avoid bottleneck screening and delayed shipping, TSA has allowed airlines as well as indirect air carriers (freight forwarders and third parties) to qualify for Certified Cargo Screening Facilities (CCSF's), essentially pushing the screening requirement further back in the supply chain. To become CCSF, layered security measures must be in place for screening, access control, and the personnel of air freight facilities.

X-ray, physical search, and Explosive Trace Detection (ETD) qualify as successful screening methods to meet the TSA requirement, however X-ray screening provides the most thorough primary screening tool with the best overall value. This value is outlined in our air cargo screening white paper, which includes a detailed description of non-SSI TSA screening methodologies and comprehensive cost comparisons.

Without the costs of increased personnel required for physical search or the consumables of ETD, X-ray represents the lowest long term cost. Likewise, X-ray has a high throughput rate, accommodating up to 480 homogeneous pallets or 4800 small to medium size boxes a day.



XIS-1517



XIS-1517DV 200kV



XIS-1818DV 200kV



Cargo Simplified

At Astrophysics, we want to simplify cargo screening. With this in mind, we have identified 3 key factors you should consider when selecting your cargo system: Tunnel Size, Dual View, and Generator Power.

Tunnel Size:

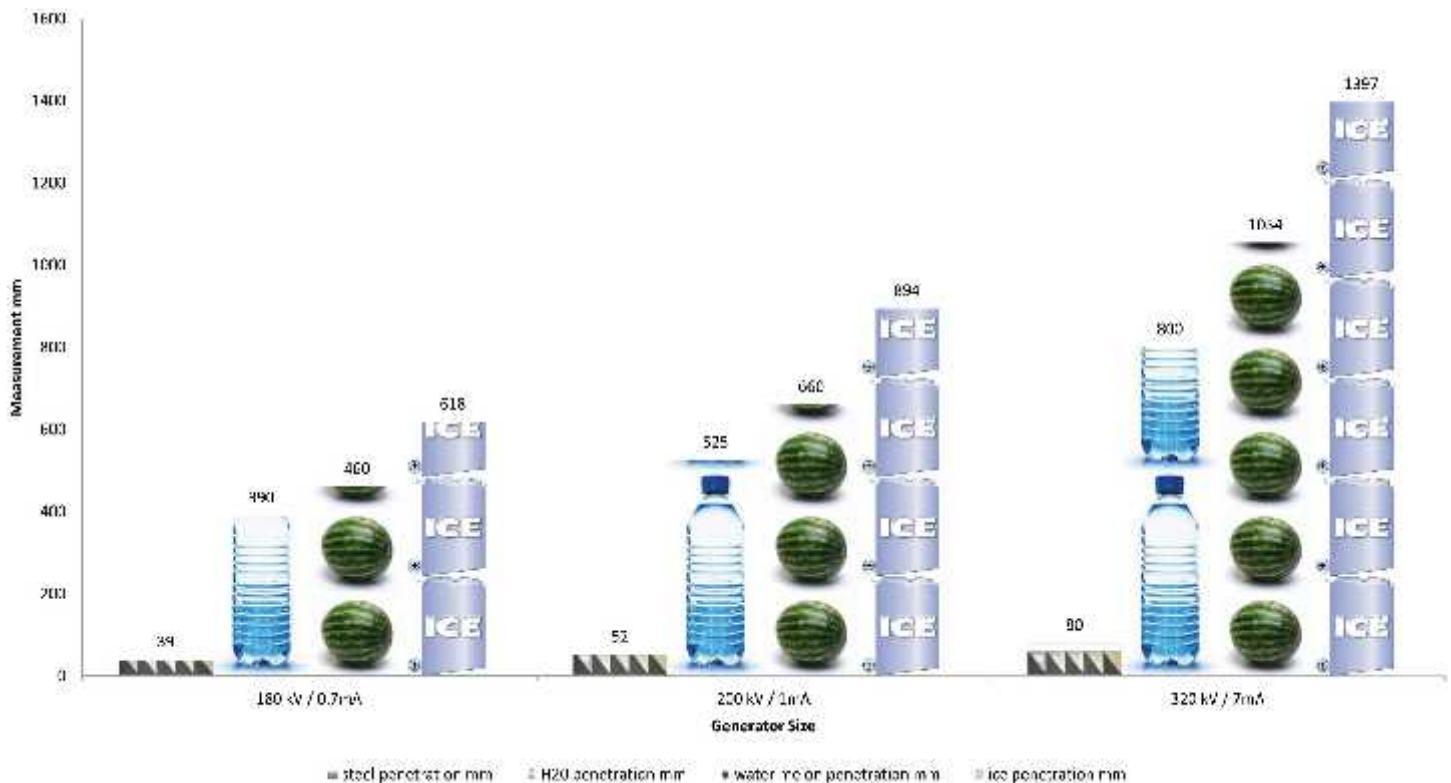
When selecting the system tunnel size best suited for your facility, it is important to consider the size of the objects and cargo being screened. The Astrophysics product range covers all three TSA capacities, ranging from small to medium-sized boxes, to crates, shipping containers and large pallets. Tunnel sizes range from 58.4 cm x 78.3 cm to 180.3 cm x 190 cm.

Dual View (DV):

It is a market trend in the cargo industry to utilize dual view X-ray inspections over single view. A single view X-ray system provides a single generator positioned either downward or sideways to create one image perspective of the object screened. In comparison, a dual view system provides two generators, one angled downward and one angled sideways to create dual image perspectives so operators can better view the object and identify potential threat objects.

Generator Power:







Most Astrophysics TSA Capacity A, Capacity B, and Capacity C products include a standard 180kV generator. Depending on the objects screened and their respective densities, increased generator power may be necessary to ensure object penetration. If regions of the object screened are impenetrable, they will appear as opaque on the image screen and will require the object be broken down and rescreened to determine if threat objects are located in the dense regions. Astrophysics offers generator upgrades of either 200kV or 320kV. Please reference the penetration chart below for a comparison of 180kV, 200kV, and 320kV generators in relation to steel, water, watermelon and ice.






Products



Small Baggage/Parcel (TSA Capacity A)








TSA Qualified	XIS-6040	 <p>Tunnel Dimensions: 60 cm x 40 cm 23.6" x 15.7" (WxH)</p> <p>Ideal for Checkpoint Security with minimized footprint</p>
TSA Qualified	XIS-6545	 <p>Tunnel Dimensions: 65.1 cm x 45.4 cm 25.6" x 18" (WxH)</p> <p>Increased tunnel size Ideal for Checkpoint Security</p>
TSA Qualified	XIS-6545DV	 <p>Tunnel Dimensions: 65 cm x 45 cm 25.6" x 17.7" (WxH)</p> <p>Dual View technology</p>
TSA Qualified	6545VI	 <p>Tunnel Dimensions: 65.1 cm x 45.4 cm 25.6" x 18" (WxH)</p> <p>Small baggage with new luxurious design and maximized penetration</p>
TSA Qualified	XIS-5878	 <p>Tunnel Dimensions: 58.4 cm x 78.3cm 23" x 31" (WxH)</p> <p>Low conveyor belt for heavy object screening</p>
TSA Qualified	XIS-7858	 <p>Tunnel Dimensions: 78 cm x 58.3 cm 31" x 23" (WxH)</p> <p>Maximized tunnel with minimized system footprint</p>

Large Baggage/Parcel (TSA Capacity B)

TSA Qualified	XIS-1080	 <p>Tunnel Dimensions: 101.6 cm x 81.4 cm 40" x 32" (WxH)</p> <p>Mid-sized cargo solution</p>
TSA Qualified	XIS-1080D	 <p>Tunnel Dimensions: 101 cm x 80 cm 40" x 31.4" (WxH)</p> <p>Low conveyor belt for heavy object screening</p>
TSA Qualified	XIS-100X	 <p>Tunnel Dimensions: 101.6 cm x 101.3 cm 40" x 40" (WxH)</p> <p>Maximized inspection throughput</p>

TSA Qualified	XIS-100XD	 <p>Tunnel Dimensions: 100 cm x 100 cm 39.4" x 39.4" (WxH)</p> <p>Low conveyor belt for heavy object screening</p>
TSA Qualified	XIS-100XDV	 <p>Tunnel Dimensions: 101.6 cm x 101.6 cm 40" x 40" (WxH)</p> <p>Dual View technology</p>
TSA Qualified	XIS-100XDX	 <p>Tunnel Dimensions: 100 cm x 100 cm 39.4" x 39.4" (WxH)</p> <p>Dual view system with low conveyor belt</p>

Pallet and Cargo (TSA Capacity C)

TSA Qualified	XIS-1517	 <p>Tunnel Dimensions: 150 cm x 170.2 cm 59" x 67" (WxH)</p> <p>Ideal for standard cargo pallets</p>
TSA Qualified	XIS-1517 200kV	 <p>Tunnel Dimensions: 150 cm x 170.2 cm 59" x 67" (WxH)</p> <p>Ideal for standard cargo pallets</p>
TSA Qualified	XIS-1517DV 200kV	 <p>Tunnel Dimensions: 150 cm x 170.2 cm 59" x 67" (WxH)</p> <p>Dual View technology</p>
TSA Qualified	XIS-1818	 <p>Tunnel Dimensions: 180.3 cm x 180.5 cm 71" x 71.1" (WxH)</p> <p>Premier heavy duty cargo system</p>
TSA Qualified	XIS-1818 320kV	 <p>Tunnel Dimensions: 181 cm x 180.5 cm 71.3" x 71.1" (WxH)</p> <p>Premier heavy duty cargo system with high powered generator</p>
TSA Qualified	XIS-1818DV 200kV	 <p>Tunnel Dimensions: 180.3 cm x 180.5 cm 71" x 71.1" (WxH)</p> <p>Dual View technology</p>
TSA Qualified	XIS-1818DV 320kV	 <p>Tunnel Dimensions: 181 cm x 180.7 cm 71.3" x 71.1" (WxH)</p> <p>Increased tunnel size with high powered generator</p>