

TSA Air Cargo Screening Technology List (ACSTL)

Version 11.4

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1 Introduction

1.1 Document Purpose

The Air Cargo Screening Technology List (ACSTL) serves as TSA's official guide for regulated parties to use when procuring screening devices and associated trace consumables in accordance with TSA approved security programs. Any technology purchased from this list must be utilized in accordance with measures outlined in a screener's Standard Security Program. This list does not apply to devices owned by TSA or devices used in TSA-sponsored tests or test beds. Reference the SSI version of the ACSTL to determine approved and qualified software versions. This information is not contained in the Non-SSI version of the ACSTL.

1.2 Document Format

The document is arranged by Technology Qualification Group as follows: (1) Visual Image (VI) Devices, formerly referred to as the Non-Computed Tomography (Non-CT) Transmission X-ray Devices, (2) Explosive Trace Detection (ETD) Devices, (3) Metal Detectors (MD), formerly referred to as the Electronic Metal Detection (EMD) Devices, (4) Explosive Detection Systems (EDS), and (5) Carbon Dioxide (CO₂) Monitors. Under each Technology Qualification Group are three sections: A Qualified Technology section, an Approved Technology section, and a Grandfathered Technology section. The Qualified Technology section specifies devices, by technology, which have undergone a formal TSA-sponsored test process and are deemed qualified for screening operations. When procuring a device from the ACSTL, regulated parties are encouraged to select a device from the Qualified Technology section. The Approved Technology section specifies devices, by technology, which have been conditionally approved for screening operations and are currently undergoing or are scheduled for field-test activities. These devices have up to 36 months from the date added to the Approved Technology section to successfully pass TSA's suitability based field-test activities. If a device is unable to pass field-test activities within the prescribed 36 months, it will be removed from the Approved Technology section. Due to this fact, regulated parties who procure a device from the Approved Technology section do so at their own risk. Additional technologies may be added to the Approved Technology section at TSA's discretion. The Grandfathered Technology section specifies devices, by technology, which are currently qualified to screen cargo but have a stated expiration date. This allows regulated parties who are using the grandfathered technology an opportunity to gradually phase out the device and transition to devices listed in the Qualified or Approved sections. Due to this fact, regulated parties should not purchase devices from this section; rather, they should reference the Qualified or Approved sections for their procurement needs.

1.3 Disclaimer

The Approved Technology section reflects devices that have successfully passed Stage I of the qualification testing process. TSA reserves the right to remove any device from this section that fails Stage II test activities. The Grandfathered Technology section reflects devices that are currently qualified to screen cargo but have a stated expiration date. TSA also reserves the right to remove

devices from the Approved or Qualified section or revise an expiration date for Grandfathered devices due to a device's inability to meet more stringent performance parameters associated with emerging threats. Should such a situation occur, TSA will issue specific guidance on how previously purchased devices may be used.

1.4 Device Configuration

Top Assembly Part Number and Required Software Version indicate the only qualified configurations for each Device Model Number. Models with different part numbers or software versions are not considered qualified screening devices. Reference the SSI version of the ACSTL to determine approved and qualified software versions. This information is not contained in the Non-SSI version of the ACSTL.

1.5 Operating Environment

Devices listed within the ACSTL are intended to be operated under controlled temperature and humidity conditions. Add-on components and kits may be available from vendors to extend operational temperature and humidity ranges.

1.6 Manufacturer Contact Information

Company	Address	Point of Contact	Phone Number	E-mail
American Sciences and Engineering, Inc. (AS&E)	829 Middlesex Turnpike Billerica, MA 01821	Dave Montion	978-262-8638	DMontion@as-e.com
Armstrong Monitoring	215 Colonnade Road South Ottawa, ON K2E 7K3 Canada	Scott Bissett	800-465-5777	SBissett@armstrongmonitoring.com
Astrophysics, Inc.	21481 Ferrero Parkway City of Industry, CA 91789	Jennifer Doran	909-598-5488 909-598-5546	jdoran@astrophysicsintl.com
Autoclear	10A Bloomfield Ave. Fine Brook, NJ 07058	Jacqueline "Mia" Draghi	973-276-6000 Ext. 241	miadraghi@autoclear.com
CEIA USA	9155 Dutton Drive Twinsburg Ohio 44087	Luca Cacioli	330-217-7995	LCacioli@ceia-usa.com
Gilardoni S.p.A.	Via Arturo Gilardoni 1 Mandello del Lario 23826 (LC), Italy	Luca Ghislanzoni	0039-0341-705218	lq@gilardoni.it
InstroTek, Inc.	1 Triangle Drive, PO 13944 Research Triangle Park, NC 27709	Ali Regimand	919-875-8371	AREgimand@instrotek.com
L3 Security & Detection Systems, Inc	One Radcliff Road Tewksbury, MA 01876	Ian McNaughton	613-292-3669	Ian.McNaughton@L3Harris.com

Company	Address	Point of Contact	Phone Number	E-mail
Mettler-Toledo Safeline	6005 Benjamin Road Tampa, FL 33634	Chris Acierno	813-889-9500	Chris.Acierno@mt.com
Nuctech Company, Ltd.	2F/A Tong Fang Bldg. Shuang Qing Road Hai Dian District Beijing, P.R. China	Tao Yin Renran Xu	+86-139-1129-0208 +86-185-1128-9452	YinTao@nuctech.com XuRenran@nuctech.com
Rapiscan Systems	23 Frontage Road Andover, MA 01810	Jeffrey McClung (ETD/Trace only)	978-933-4351	jmclung@rapiscansystems.com
Rapiscan Systems	2805 Columbia Street Torrance, CA 90503	Lorie Halitzka (All product lines except ETD/Trace devices)	310-349-2637	LHalitzka@rapiscansystems.com
Reveal Imaging Technologies, Inc.	10260 Campus Point Drive, MS V2-F San Diego, CA 20190	Stan DeFilippis	202-361-3338	Stan.DeFilippis@leidos.com
Smiths Detection, Inc.	2202 Lakeside Blvd Edgewood, MD 21040	Ron Shields	571-242-5050	Ron.Shields@Smiths-Detection.com
VOTI Detection, Inc.	790 Begin St., St-Laurent, Quebec	Andrew Shapiro	514-705-3400	andrew.shapiro@votidetection.com
X-Ray Center (XRC)	Beylikduzu OSB Mahallesi, 10 Cadde, NO: 14 Beylikduzu Istanbul, 34524 Turkey	Kami Havluciyani	+90-212-665-1328	kami@x-raycenter.com

1.7 Updates in This Version

Page	Section	Change
11	2.1 Qualified Visual Image Technology	Update Rapiscan 620DV, 627DV, 628DV, 632DV, 920DX, 927DX, and 928DX Software version
13	2.1 Qualified Visual Image Technology	Addition of VOTI XR3D-6D, XR3D-7D, and XR3D-100D Software version
17	2.3 Grandfathered Visual Image Technology	Update Rapiscan 620DV, 627DV, 628DV, and 632DV Software version
18	2.3 Grandfathered Visual Image Technology	Addition of Rapiscan software
19	2.3 Grandfathered Visual Image Technology	Addition of VOTI software
21	3.2 Approved ETD Technology	Addition of Rapiscan IT5X; Removal of Smiths IonScan 600
22	3.3 Grandfathered ETD Technology	Addition of Smiths IonScan 600

2 Visual Image Devices

Technology Description: Fixed projection Visual Image inspection devices that display digitized transmission radiographic images of an object under inspection following an interrogation.

Technology Classification: This technology is classified by material discrimination capability, number of views, and capacity.

Material discrimination capability: Classification groups are “Yes (Y)” and “No (N).” “Yes” indicates devices that are capable of enabling visual differentiation between types of materials detected, e.g., nylon vs explosives vs PVS under steel. “No” indicates devices that do not discriminate between different materials.

Number of views: Classification groups are single view (grandfathered), dual view, and multi view. Devices may display images scanned from one, two, or multiple perspectives. Regardless of a device’s manual or assisted-detection capability, the operator must view and interpret one or more images of each object under inspection as dictated by the applicable security program.

Capacity designation: Device capacity groups are defined in the table below. The capacity listing is for testing and informational purposes only.

Visual Image Device Capacity Designations

ID	Description
A	Small Aperture – Can accommodate screening of air cargo with an item size of at least 49 cm (19.3 in) wide by 38 cm (15 in) high by 91 cm (35.8 in) long and 50 kg (110.2 lbs.) in weight and up to 80 cm (31.5 in) wide by 60 cm (23.6 in) high by 120 cm (47.2 in) long and 100 kg (220.5 lbs.) in weight.
B	Medium Aperture – Can accommodate screening of air cargo with at item size of at least 80 cm (31.5 in) wide by 60 cm (23.6 in) high by 120 cm (47.2 in) long and 100 kg (220.5 lbs.) in weight and up to 122 cm (48 in) wide by 153 cm (60.2 in) high by 122 cm (48 in) long and 1,000 kg (2,205 lbs.) in weight.
C	Large Aperture – Can accommodate screening of air cargo with an item size of at least 122 cm (48 in) wide by 153 cm (60.2 in) high by 122 cm (48 in) long and 1,000 kg (2,205 lbs.) in weight.

2.1 Qualified Visual Image Technology

The Qualified Technology section specifies devices that have undergone a formal TSA-sponsored test process and are deemed qualified for screening operations. When procuring a device from the ACSTL, regulated parties are encouraged to select a device from the qualified technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Date Qualified
Astrophysics, Inc.	XIS-100XDV	00-13-1XDV-21	Y	Dual View	B	165 kV	180 kV	10/23/2009
Astrophysics, Inc.	XIS-100XDX	00-22-1XDX-11 00-22-10DX-11	Y	Dual View	B	165 kV	180 kV	08/09/2012
Astrophysics, Inc.	XIS-1517DV 200kV	00-22-15DV-20	Y	Dual View	C	200 kV	200 kV	08/09/2012
Astrophysics, Inc.	XIS-1818DV 200kV	00-22-18DV-20	Y	Dual View	C	200 kV	200 kV	08/09/2012
Astrophysics, Inc.	XIS-1818DV 320kV	00-00-18DV-23	Y	Dual View	C	320 kV	320 kV	12/12/2012
Astrophysics, Inc.	XIS-6545DV	00-13-65DV-21	Y	Dual View	A	165 kV	180 kV	10/23/2009
Astrophysics, Inc.	XIS-6545DVS	00-30-6DVS-10	Y	Dual View	A	165 kV	180 kV	11/21/2016
Astrophysics, Inc.	XIS-7858DVS	00-30-7DVS-10	Y	Dual View	A	165 kV	180 kV	11/21/2016
Gilardoni, S.p.A.	FEP ME 755 AMX	05141096	Y	Dual View	A	150 kV	160 kV	10/23/2014
L3 Security & Detection Systems	ACX 6.4 MV	1000-MV3AC-00	Y	Multi View	A	150 kV	153 kV	10/23/2009
L3 Security & Detection Systems	CX 6000 P DV	002	N	Dual View	C	6MeV	6MeV	05/14/2010
L3 Security & Detection Systems	MVT-HR	1000-10001-HR 1000-10002-HR	Y	Multi View	B	150 kV	160 kV	02/03/2010

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Date Qualified
L3 Security & Detection Systems	PX 10.10 MV	1000-P1010-2V	Y	Dual View	B	160 kV	160 kV	08/09/2012
L3 Security & Detection Systems	PX 10.10 MV	1000-P1010-AC	Y	Dual View	B	160 kV	160 kV	08/09/2012
L3 Security & Detection Systems	PX 15.17 MV 200kV	0125-10732-00	Y	Dual View	C	200 kV	200 kV	08/09/2012
L3 Security & Detection Systems	PX 18.18 MV 200kV	0125-10734-00	Y	Dual View	C	200 kV	200 kV	08/09/2012
L3 Security & Detection Systems	PX 18.18 MV 320kV	0125-10735-00	Y	Dual View	C	320 kV	320 kV	12/12/2012
Rapiscan Systems	620DV	2010001 2010002	Y	Dual View	A	160 kV	180 kV	10/23/2009
Rapiscan Systems	627DV	2010003 2010004	Y	Dual View	B	160 kV	180 kV	10/23/2009
Rapiscan Systems	628DV	2010006	Y	Dual View	B	160 kV	180 kV	05/14/2010
Rapiscan Systems	632DV	2010007 2010008	Y	Dual View	C	200 kV	200 kV	10/23/2009
Rapiscan Systems	638DV	2010009	Y	Dual View	C	200 kV	200 kV	10/23/2009
		2010010	Y	Dual View	C	320 kV	320 kV	06/23/2016
Rapiscan Systems	920DX	2010011	Y	Dual View	A	160kV	180kV	01/22/2020
		2010012						
Rapiscan Systems	927DX	2010013	Y	Dual View	B	160kV	180kV	01/22/2020
		2010014						
		2010015						
		2010016						
		2010017						
		2010018						
Rapiscan Systems	928DX	2010019	Y	Dual View	B	160kV	180kV	01/22/2020

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Date Qualified
		2010020						
		2010021						
		2010022						
		2010023						
		2010024						
Rapiscan Systems	MVXR 5000	2010659-6	Y	Multi View	B	170 kV	180 kV	02/03/2010
Smiths Detection, Inc.	6040-2is	HS 6040-2is	Y	Dual View	A	160 kV	180 kV	08/27/2015
Smiths Detection, Inc.	6040aTiX	HS 6040aTiX	Y	Dual View	A	160 kV	176 kV	10/23/2009
Smiths Detection, Inc.	6040aX	HS 6040aX	Y	Dual View	A	160 kV	176 kV	08/09/2012
Smiths Detection, Inc.	7555aTiX	HS 7555aTiX	Y	Dual View	A	160 kV	176 kV	05/14/2010
Smiths Detection, Inc.	7555aX	HS 7555aX	Y	Dual View	A	160 kV	176 kV	08/09/2012
Smiths Detection, Inc.	10080 EdtS	HS 10080 EdtS	Y	Multi View	B	160 kV	176 kV	10/23/2009
Smiths Detection, Inc.	10080 EDX-2is	HS 10080 EDX-2is (1132486)	Y	Dual View	B	160 kV	176 kV	10/23/2009
Smiths Detection, Inc.	100100T-2is	HS 100100T-2is	Y	Dual View	B	160 kV	176 kV	10/23/2009
Smiths Detection, Inc.	100100V-2is	HS 100100V-2is	Y	Dual View	B	160 kV	176 kV	08/09/2012
Smiths Detection, Inc.	130130T-2is	HS 130130T-2is	Y	Dual View	B	160 kV	176 kV	10/23/2009
Smiths Detection, Inc.	145180-2is	HS 145180-2is	Y	Dual View	C	160 kV	176 kV	4/25/2013
Smiths Detection, Inc.	180180-2is	HS 180180-300kV-2is	N	Dual View	C	300 kV	320 kV	10/23/2009
Smiths Detection, Inc.	180180-2is Pro	HS 180180-2is Pro	Y	Dual View	C	300 kV	320 kV	10/18/2016
Smiths Detection, Inc. (1)	HRX 1000 DV	P0007033-011	Y	Dual View	B	165 kV	180 kV	05/14/2010

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Date Qualified
VOTI Detection Inc.	VOTI XR3D-6D	500002-001	Y	Dual View	A	160 kV	160 KV	10/24/2019
VOTI Detection Inc.	VOTI XR3D-7D	500003-002	Y	Dual View	A	160 kV	160 KV	12/20/2019
VOTI Detection Inc.	VOTI XR3D-100D	500068-001	Y	Dual View	B	160 kV	160KV	12/20/2019
X-Ray Center (XRC)	XRC 60-40DV	XRC 60-40DV	Y	Dual View	A	160 kV	170 KV	04/11/2018
X-Ray Center (XRC)	XRC 100-100DV	XRC 100-100DV	Y	Dual View	B	165 kV	180 KV	05/23/2018
X-Ray Center (XRC)	XRC 180-180DV (320KV)	XRC 180-180DV	Y	Dual View	C	320 kV	320 KV	09/17/2019

Notes:

- (1) Morpho Detection, Inc. was acquired by Smiths Detection, Inc. Either company's data plate is acceptable as long as the Top Assembly Part Number matches the number listed in the Qualified section.

2.2 Approved Visual Image Technology

The Approved Technology section specifies devices that have been conditionally approved for screening operations and are currently undergoing - or are scheduled for - field test activities. These devices have up to 36 months from the date added to the Approved Technology section to successfully pass TSA's suitability-based field test activities. If a device is unable to pass field test activities within the prescribed 36 months, it will be removed from the Approved Technology section. Due to this fact, regulated parties who procure a device from the Approved Technology section do so at their own risk. Additional technologies may be added to the list at TSA's discretion.

There are currently no systems in the Approved Visual Image Technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Required Software Version	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Date Approved

2.3 Grandfathered Visual Image Technology

The Grandfathered Technology section specifies devices that are currently qualified to screen cargo but have a stated expiration date. This allows regulated parties who are using the grandfathered technology an opportunity to gradually phase out the device and transition to devices listed in the Qualified or Approved sections. Due to this fact, regulated parties should not purchase devices from this section; rather, they should reference the Qualified or Approved sections for their procurement needs.

Grandfathered Configurations for “hardware and software” are defined as the hardware configuration and any associated software version is grandfathered. Grandfathered Configurations for “software only” are defined as a particular software version is grandfathered; other Approved/Qualified software versions are available for this hardware configuration

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Grandfathered Configuration	Expiration Date
American Sciences and Engineering, Inc. (AS&E)	Gemini 6040	299-0500	Y	Single View	A	140 kV	140 kV	Hardware and Software	12/31/2020
American Sciences and Engineering, Inc. (AS&E)	Gemini 7555	288-0500	Y	Single View	A	170 kV	170 kV	Hardware and Software	12/31/2020
American Sciences and Engineering, Inc. (AS&E)	Gemini 100100	302-0500	Y	Single View	B	170 kV	170 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	6545VI	00-12-65VI-11	Y	Single View	A	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-100X	00-13-1XST-21	Y	Single View	B	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-100XD	00-13-1XDM-21	Y	Single View	B	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-1080	00-13-1080-21	Y	Single View	B	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-1080D	00-23-108D-21	Y	Single View	B	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-1517	00-13-1517-20	Y	Single View	C	165 kV	180 kV	Hardware and Software	12/31/2020

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Grandfathered Configuration	Expiration Date
Astrophysics, Inc.	XIS-1517 200kV	00-23-1517-20	Y	Single View	C	200 kV	200 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-1818	00-13-1818-20	Y	Single View	C	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-1818 200kV	00-23-1818-20	Y	Single View	C	200 kV	200 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-1818 320kV	00-25-1818-20	Y	Single View	C	320 kV	320 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-5878	00-13-5878-12	Y	Single View	A	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-6040	00-12-6040-21	Y	Single View	A	150 kV	160 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-6545	00-13-6545-21	Y	Single View	A	165 kV	180 kV	Hardware and Software	12/31/2020
Astrophysics, Inc.	XIS-7858	00-13-7858-21	Y	Single View	A	165 kV	180 kV	Hardware and Software	12/31/2020
Autoclear (1)	6040	6040M-AC2	Y	Single View	A	140 kV	160 kV	Hardware and Software	12/31/2020
Autoclear (1)	7555M	7555M-AC2	Y	Single View	A	140 kV	160 kV	Hardware and Software	12/31/2020
Autoclear (1)	100100T	100100T-AC2	Y	Single View	B	140 kV	160 kV	Hardware and Software	12/31/2020
L3 Security & Detection Systems	ACX 6.4	1000-ACX64-00	Y	Single View	A	150 kV	153 kV	Hardware and Software	12/31/2020
L3 Security & Detection Systems	PX 6.4	1000-1PX64-00	Y	Single View	A	150 kV	153 kV	Hardware and Software	12/31/2020
L3 Security & Detection Systems	PX 107	1000-PX107-00	Y	Single View	B	150 kV	153 kV	Hardware and Software	12/31/2020
L3 Security & Detection Systems	PX 160 P	0125-10431-00	N	Single View	C	160 kV	160 kV	Hardware and Software	12/31/2020
L3 Security & Detection Systems	PX 208	1000-PX208-00	Y	Single View	B	150 kV	153 kV	Hardware and Software	12/31/2020

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Grandfathered Configuration	Expiration Date
L3 Security & Detection Systems	VDS 108	1000-10001-SF	Y	Single View	B	150 kV	150 kV	Hardware and Software	12/31/2020
L3 Security & Detection Systems	VIS-HR	1000-10001-VH	Y	Single View	B	150 kV	160 kV	Hardware and Software	12/31/2020
Nuctech Company	CX6040BI	CX6040BI	Y	Single View	A	160 kV	160 kV	Hardware and Software	12/31/2020
Nuctech Company	CX100100TI	CX100100TI	Y	Single View	B	160 kV	160 kV	Hardware and Software	12/31/2020
Rapiscan Systems	620DV	620DVLHS-STND 620DVRHS-STND	Y	Dual View	A	160 kV	180 kV	Hardware and Software	12/31/2028
Rapiscan Systems	620XR	620XRW-STND	Y	Single View	A	160 kV	180 kV	Hardware and Software	12/31/2020
Rapiscan Systems	622XR	622XRW-STND	Y	Single View	A	160 kV	180 kV	Hardware and Software	12/31/2020
Rapiscan Systems	624XR	624XRW-STND	Y	Single View	A	160 kV	180 kV	Hardware and Software	12/31/2020
Rapiscan Systems	627DV	627DV-STND 627DVE	Y	Dual View	B	160 kV	180 kV	Hardware and Software	12/31/2028
Rapiscan Systems	627XR	627XRW-STND	Y	Single View	B	160 kV	180 kV	Hardware and Software	12/31/2020
Rapiscan Systems	628DV	628DV-STND	Y	Dual View	B	160 kV	180 kV	Hardware and Software	12/31/2028
Rapiscan Systems	628XR	628XRW-STND	Y	Single View	B	160 kV	180 kV	Hardware and Software	12/31/2020
Rapiscan Systems	632DV	632DV200 632DV-STND 632DVE	Y	Dual View	C	200 kV	200 kV	Hardware and Software	12/31/2028
Rapiscan Systems	638DV	638DV200 638DV-STND	Y	Dual View	C	200 kV	200 kV	Hardware and Software	12/31/2028
		638DV300	Y	Dual View	C	320 kV	320 kV	Hardware and Software	12/31/2028

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Grandfathered Configuration	Expiration Date
Rapiscan Systems	632XR	632XRW-STND	Y	Single View	C	200 kV	200 kV	Hardware and Software	12/31/2020
Rapiscan Systems	638XR	638XRW-STND	Y	Single View	C	200 kV	200 kV	Hardware and Software	12/31/2020
Rapiscan Systems	Eagle A 1000	A10T480	N	Single View	C	1 MV	1 MV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	6040ds	HS 6040ds	Y	Single View	A	140 kV	160 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	6040i	HS 6040i	Y	Single View	A	140 kV	160 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	6046si	HS 6046si	Y	Single View	A	160 kV	176 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	7555i	HS 7555i	Y	Single View	A	140 kV	160 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	7555si	HS 7555si	Y	Single View	A	160 kV	176 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	9075	HS 9075 (4)	Y	Single View	B	160 kV	176 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	100100T	HS 100100T (4)	Y	Single View	B	160 kV	176 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	100100V	HS 100100V	Y	Single View	B	160 kV	176 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	145180	HS 145180 (3)	N	Single View	C	160 kV (4)	176 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc.	180180	HS 180180 300kV	N	Single View	C	300 kV	320 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc. (2)	HRX 650	P0007033-003	Y	Single View	A	150 kV	160 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc. (2)	HRX 750	P0007033-004	Y	Single View	A	165 kV	180 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc. (2)	HRX 1000	P0007033-005	Y	Single View	B	165 kV	180 kV	Hardware and Software	12/31/2020

Vendor	Device Model Number	Required Top Assembly Part Number	Material Discrimination	# of Views	Capacity	Operating Voltage	Max Voltage	Grandfathered Configuration	Expiration Date
Smiths Detection, Inc. (2)	HRX 1500	P0007033-012	Y	Single View	C	165 kV	180 kV	Hardware and Software	12/31/2020
Smiths Detection, Inc. (2)	HRX 1800	P0007033-013	Y	Single View	C	165 kV	180 kV	Hardware and Software	12/31/2020
VOTI Detection Inc.	VOTI XR3D-6D	500002-001	Y	Dual View	A	160 kV	160 KV	Software Only	12/31/21
X-Ray Center (XRC)	XRC 6040	XRC 60-40	Y	Single View	A	160 kV	170 kV	Hardware and Software	12/31/2020

Notes:

- (1) Control Screening was acquired by Autoclear. Either company's data plate is acceptable as long as the Top Assembly Part Number matches the number listed in the Grandfathered section.
- (2) Morpho Detection, Inc. was acquired by Smiths Detection, Inc. Either company's data plate is acceptable as long as the Top Assembly Part Number matches the number listed in the Grandfathered section.
- (3) The "TS" shown in the startup screen as part of the top assembly part number does not indicate a different hardware configuration.
- (4) Smiths Detection, Inc. model 145180 manufactured in June 2007 or earlier, the operating voltage may be 140kV instead of 160kV.

3 Explosive Trace Detection (ETD) Devices

Technology Description: Desktop or handheld devices that detect explosive residual material on typical cargo substrates through the application and analysis of a swab-based collection process.

Refer to Appendix A, TSA's Trace Consumables List (TCL) for the TSA-approved third-party ETD Trace Consumables vendors.

3.1 Qualified ETD Technology

The Qualified Technology section specifies devices that have undergone a formal TSA-sponsored test process and are deemed qualified for screening operations. When procuring a device from the ACSTL, regulated parties are encouraged to select a device from the qualified technology section.

There are currently no systems in the Qualified ETD Technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Configuration Tested	Date Qualified

Notes:

3.2 Approved ETD Technology

The Approved Technology section specifies devices that have been conditionally approved for screening operations and are currently undergoing - or are scheduled for - field test activities. These devices have up to 36 months from the date added to the Approved Technology section to successfully pass TSA's suitability-based field test activities. If a device is unable to pass field test activities within the prescribed 36 months, it will be removed from the Approved Technology section. Due to this fact, regulated parties who procure a device from the Approved Technology section do so at their own risk. Additional technologies may be added to the list at TSA's discretion.

Vendor	Device Model Number	Required Top Assembly Part Number	Configuration Tested (1)	Date Approved
Rapiscan Systems	Itemiser 5X (IT5X)	P0007018-018-CAR	No Wand	11/19/2020

Notes:

- (1) Specification of "Wand" indicates a wand is required to operate the device while specification of "No Wand" indicates a wand must not be used to operate the device.

3.3 Grandfathered ETD Technology

The Grandfathered Technology section specifies devices that are currently qualified to screen cargo but have a stated expiration date. This allows regulated parties who are using the grandfathered technology an opportunity to gradually phase out the device and transition to devices listed in the Qualified or Approved sections. Due to this fact, regulated parties should not purchase devices from this section; rather, they should reference the Qualified or Approved sections for their procurement needs.

Grandfathered Configurations for “hardware and software” are defined as the hardware configuration and any associated software version is grandfathered. Grandfathered Configurations for “software only” are defined as a particular software version is grandfathered; other Approved/Qualified software versions are available for this hardware configuration

Vendor	Device Model Number	Required Top Assembly Part Number	Configuration Tested (1)	Grandfathered Configuration	Expiration Date
L3 Security & Detection Systems (2) (3)	QS-B220	10011225 Rev. E, F, G, H, J, K, L, M, or N QS-B220-001 Rev. A, B, C, D, or E	No Wand	Hardware and Software	12/31/2024
Rapiscan Systems (4)	Itemiser DX	P0007018-014-CAR Rev. 2 P0007018-014-CAR-R	No Wand	Hardware and Software	12/31/2024
Smiths Detection, Inc.	Ionscan 500DT	Ionscan 500DT	Wand/No Wand (5)	Hardware and Software	12/31/2024
Smiths Detection, Inc. (2)	IONSCAN 600	4824000E-301-2	No Wand	Hardware and Software	10/31/2023

Notes:

- (1) Specification of “Wand” indicates a wand is required to operate the device while specification of “No Wand” indicates a wand must not be used to operate the device.
- (2) This model has a non-radioactive source thus annual radiation testing is not required.
- (3) Implant Sciences Corporation was acquired by L3 Security & Detection Systems. Either company’s data plate is acceptable as long as the Top Assembly Part Number matches the number listed in the Grandfathered section.
- (4) General Electric Homeland Protection was acquired by Morpho Detection; Morpho Detection’s ETD business was subsequently acquired by Rapiscan Systems. All three companies’ data plates are acceptable as long as the Top Assembly Part Number matches the number listed in the Grandfathered section.
- (5) This device can be used with or without a wand.

4 Metal Detection (MD) Devices

Technology Description: Devices that interrogate items under inspection with a time varying electromagnetic field. Secondary magnetic disturbances induced by the primary field are detected by the MD, and an alarm condition is displayed if threshold levels have been exceeded.

Technology Classification: This technology is classified by three designations: type, class, and capacity (see below for descriptions). Although a device can only be classified into one type and capacity, it can be qualified for more than one class.

Type Designations	
ID	Description
Type I	General Detection Capability – Capable of detecting threats without any indication of threat location.
Type II	Detection Plus Localizing Capability – Capable of detecting threats and providing visual cues for the location of detected threats.

Class Designations		
ID	Description	Examples
1	Printed Matter (PM)	Newspapers, Books, Magazines, Flyers.
2 (1)	Electronic Equipment (EE)	Digital Clocks, Sandwich Makers, Blow Dryers, Computers, Personal Digital Assistants.
3 (1)	Machine Parts (MP)	Auto Parts, Aircraft Starters, Car Jacks, Food Graters.
4 (1)	Misc. Durable Goods (MDG)	Home Renovation Materials, Canned Goods, Furniture.
5	Wearing Apparel (WA)	Clothing, Shoes, Handbags, Jackets.
6	Fresh Produce (FP)	Grapefruit, Pineapple, Cucumbers.
7	Fresh Flowers (FF)	Various Tubers and Bulbs, Annual and Perennial Flowers, Cut Flowers.
8	Fish and Meats (FM)	Shrimp, Fish, Beef, Poultry.

Notes:

- (1) These commodity classes are expected to contain trace or significant amounts of metallic materials, and hence are not suitable for metal screening.

Capacity Designations (1)	
ID	Description
A	Small Aperture – Can accommodate screening of air cargo with an item size of at least 49 cm (19.3 in.) wide by 38 cm (15 in.) high by 91 cm (35.8 in.) long and 50 kg (110.2 lbs.) in weight and up to 80 cm (31.5 in.) wide by 60 cm (23.6 in.) high by 120 cm (47.2 in.) long and 100 kg (220.5 lbs.) in weight.
B	Medium Aperture – Can accommodate screening of air cargo with an item size of at least 80 cm (31.5 in.) wide by 60 cm (23.6 in.) high by 120 cm (47.2 in.) long and 100 kg (220.5 lbs.) in weight and up to 122 cm (48 in.) wide by 153 cm (60.2 in.) high by 122 cm (48 in.) long and 1,000 kg (2,205 lbs.) in weight.
C	Large Aperture – Can accommodate screening of air cargo with an item size of at least 122 cm (48 in.) wide by 153 cm (60.2 in.) high by 122 cm (48 in.) long and 1,000 kg (2,205 lbs.) in weight.

Notes:

- (1) The capacity listing is for testing and informational purposes only.

4.1 Qualified MD Technology

The Qualified Technology section specifies devices that have undergone a formal TSA-sponsored test process and are deemed qualified for screening operations. When procuring a device from the ACSTL, regulated parties are encouraged to select a device from the qualified technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Class 1 (PM)	Class 5 (WA)	Class 6 (FP)	Class 7 (FF)	Class 8 (FM)	Type	Capacity	Date Qualified
CEIA USA (2)	EMIS 6047	EMIS6047 EMIS_6047_001	YES	YES	YES	YES	YES	I	A	03/13/2013
CEIA USA (2)	EMIS 8075	EMIS8075 EMIS_8075_001 EMIS_8075_002	YES	YES	YES	YES	YES	I	B	03/13/2013
CEIA USA (2)	EMIS 110160	EMIS_110160_001	YES	YES	YES	YES	YES	I	B	03/13/2013
CEIA USA (2)	EMIS 130160	EMIS_130160_001	NO	NO	YES	YES	YES	I	C	03/13/2013
CEIA USA (2)	EMIS 130200	EMIS_130200_002	YES	YES	YES	YES	YES	I	C	05/10/2018

Notes:

- (1) "YES" indicates the commodity classes for which each EMD device passed Stage I testing. "NO" indicates the commodity classes for which each EMD device did not pass Stage I testing.
- (2) CEIA models must contain all three software components listed.

4.2 Approved MD Technology

The Approved Technology section specifies devices that have been conditionally approved for screening operations and are currently undergoing - or are scheduled for - field test activities. These devices have up to 36 months from the date added to the Approved Technology section to successfully pass TSA's suitability-based field test activities. If a device is unable to pass field test activities within the prescribed 36 months, it will be removed from the Approved Technology section. Due to this fact, regulated parties who procure a device from the Approved Technology section do so at their own risk. Additional technologies may be added to the list at TSA's discretion.

There are currently no systems in the Approved MD Technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Class 1 (PM)	Class 5 (WA)	Class 6 (FP)	Class 7 (FF)	Class 8 (FM)	Type	Capacity	Date Approved

Notes:

4.3 Grandfathered MD Technology

The Grandfathered Technology section specifies devices that are currently qualified to screen cargo but have a stated expiration date. This allows regulated parties who are using the grandfathered technology an opportunity to gradually phase out the device and transition to devices listed in the Qualified or Approved sections. Due to this fact, regulated parties should not purchase devices from this section; rather, they should reference the Qualified or Approved sections for their procurement needs.

Grandfathered Configurations for “hardware and software” are defined as the hardware configuration and any associated software version is grandfathered. Grandfathered Configurations for “software only” are defined as a particular software version is grandfathered; other Approved/Qualified software versions are available for this hardware configuration

Vendor	Device Model Number	Required Top Assembly Part Number	Class 1 (PM)	Class 5 (WA)	Class 6 (FP)	Class 7 (FF)	Class 8 (FM)	Type	Capacity	Grandfathered Configuration	Expiration Date
Mettler-Toledo Safeline	SL 2000 A	176Y7692	YES	YES	YES	YES	YES	I	A	Hardware and Software	06/13/2025
Mettler-Toledo Safeline	SL 2000 B	176W7692	YES	YES	YES	YES	YES	I	B	Hardware and Software	06/13/2025

Notes:

- (1) “YES” indicates the commodity classes for which each MD device passed Stage I testing. “NO” indicates the commodity classes for which each EMD device did not pass Stage I testing.

5 Explosive Detection Systems (EDS)

Technology Description: Devices that use computed tomography and sophisticated algorithms to automatically detect explosive materials.

5.1 Qualified EDS Technology

The Qualified Technology section specifies devices that have undergone a formal TSA-sponsored test process and are deemed qualified for screening operations. When procuring a device from the ACSTL, regulated parties are encouraged to select a device from the qualified technology section.

There are currently no systems in the Qualified EDS Technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Date Qualified

Notes:

5.2 Approved EDS Technology

The Approved Technology section specifies devices that have been conditionally approved for screening operations and are currently undergoing - or are scheduled for - field test activities. These devices have up to 36 months from the date added to the Approved Technology section to successfully pass TSA's suitability-based field test activities. If a device is unable to pass field test activities within the prescribed 36 months, it will be removed from the Approved Technology section. Due to this fact, regulated parties who procure a device from the Approved Technology section do so at their own risk. Additional technologies may be added to the list at TSA's discretion.

Vendor	Device Model Number	Required Top Assembly Part Number	Date Approved
Rapiscan Systems	RTT110	RTT110-TSA	10/17/2019

Notes:

5.3 Grandfathered EDS Technology

The Grandfathered Technology section specifies devices that are currently qualified to screen cargo but have a stated expiration date. This allows regulated parties who are using the grandfathered technology an opportunity to gradually phase out the device and transition to devices listed in the Qualified or Approved sections. Due to this fact, regulated parties should not purchase devices from this section; rather, they should reference the Qualified or Approved sections for their procurement needs.

Grandfathered Configurations for “hardware and software” are defined as the hardware configuration and any associated software version is grandfathered. Grandfathered Configurations for “software only” are defined as a particular software version is grandfathered; other Approved/Qualified software versions are available for this hardware configuration

Vendor	Device Model Number	Required Top Assembly Part Number	Grandfathered Configuration	Expiration Date
L3 Security & Detection Systems	eXaminer 6000	1000-11216-00 106106	Hardware and Software	12/31/2022
L3 Security & Detection Systems	eXaminer 6600	1000-11216-00 106106	Hardware and Software	12/31/2022
L3 Security & Detection Systems(1)	eXaminer 3DX	1000-11690-00 106016	Hardware and Software	12/31/2022
L3 Security & Detection Systems(1)	eXaminer 3DX ES	1000-11700-00	Hardware and Software	12/31/2022
L3 Security & Detection Systems	eXaminer SX	10-64987-01	Hardware and Software	12/31/2022
Reveal Imaging Technologies, Inc.	CT-80	10360-1 Rev. D	Hardware and Software	12/31/2022
Reveal Imaging Technologies, Inc.	CT-80DR	10360-1DR Rev. A	Hardware and Software	12/31/2022
Reveal Imaging Technologies, Inc. (1)	CT-80DR+	11729-1 Rev. A	Hardware and Software	12/31/2022
Smiths Detection, Inc. (2)	CTX 2500	103100-1 103100-2	Hardware and Software	12/31/2022
Smiths Detection, Inc. (2)	CTX-5500 DS	103000-1 103000-2	Hardware and Software	12/31/2022

Vendor	Device Model Number	Required Top Assembly Part Number	Grandfathered Configuration	Expiration Date
Smiths Detection, Inc. (2)	CTX 5800	500000-1 500000-2	Hardware and Software	12/31/2022
Smiths Detection, Inc. (2)	CTX 9000 Dsi	600600-1	Hardware and Software	12/31/2022
Smiths Detection, Inc. (2)	CTX 9400 Dsi	605200-1	Hardware and Software	12/31/2022
Smiths Detection, Inc. (2)	CTX 9800 Dsi	604750-1 605577-1	Hardware and Software	12/31/2022
Smiths Detection, Inc. (2)	CTX 9800 Dsi (HS configuration)	1002333-02	Hardware and Software	12/31/2022

Notes:

- (1) These devices are certified to TSA detection standard 7.2 but not qualified.
- (2) Morpho Detection, Inc. was acquired by Smiths Detection. Either company's data plate is acceptable as long as the Top Assembly Part Number matches the number listed in the Grandfathered section.

6 Carbon Dioxide (CO2) Monitors

Technology Description: Handheld or portable devices that collect air samples and evaluate the concentration of carbon dioxide to detect the presence of a concealed human in a tendered cargo item.

6.1 Qualified CO2 Monitor Technology

The Qualified Technology section specifies devices that have undergone a formal TSA-sponsored test process and are deemed qualified for screening operations. When procuring a device from the ACSTL, regulated parties are encouraged to select a device from the qualified technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Date Qualified
Armstrong Monitoring	AMC-CD-2	AMC-CD-2	8/27/2010
InstroTek, Inc.	Guard 1	1010000	8/27/2010

Notes:

6.2 Approved CO2 Monitor Technology

The Approved Technology section specifies devices that have been conditionally approved for screening operations and are currently undergoing - or are scheduled for - field test activities. These devices have up to 36 months from the date added to the Approved Technology section to successfully pass TSA's suitability-based field test activities. If a device is unable to pass field test activities within the prescribed 36 months, it will be removed from the Approved Technology section. Due to this fact, regulated parties who procure a device from the Approved Technology section do so at their own risk. Additional technologies may be added to the list at TSA's discretion.

There are currently no systems in the Approved CO2 Monitor Technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Date Approved

Notes:

6.3 Grandfathered CO2 Monitor Technology

The Grandfathered Technology section specifies devices that are currently qualified to screen cargo but have a stated expiration date. This allows regulated parties who are using the grandfathered technology an opportunity to gradually phase out the device and transition to devices listed in the Qualified or Approved sections. Due to this fact, regulated parties should not purchase devices from this section; rather, they should reference the Qualified or Approved sections for their procurement needs.

Grandfathered Configurations for “hardware and software” are defined as the hardware configuration and any associated software version is grandfathered. Grandfathered Configurations for “software only” are defined as a particular software version is grandfathered; other Approved/Qualified software versions are available for this hardware configuration

There are currently no systems in the Grandfathered CO2 Monitor Technology section.

Vendor	Device Model Number	Required Top Assembly Part Number	Grandfathered Configuration	Expiration Date

Notes:

Appendix A: Trace Consumables