TSA Air Cargo Screening Technology List (ACSTL)
Non-SSI

Version 12.8

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Revision History

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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
1st Detect Corporation	2105 Donley Drive, Suite 100 Austin, TX 78758	Eric Wallis	512-485-9537	ewallis@astrotechcorp.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	Yaron Yezersky	909-598-5488	yyezersky@astrophysicsinc.com
Bruker Detection Corporation	40 Manning Road Billerica, MA 01821	Anthony Castellanos	978-729-2982	Anthony.Castellanos@BrukerDetection.US
Bruker Detection Corporation	40 Manning Road Billerica, MA 01821	Mirela Popa	980-392-9492	Mirela.Popa@BrukerDetection.US
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	lg@gilardoni.it
InstroTek, Inc.	1 Triangle Drive, PO 13944 Research Triangle Park, NC 27709	Ali Regimand	919-875-8371	ARegimand@instrotek.com

Company	Address	Point of Contact	Phone Number	E-mail
Leidos	One Radcliff Road Tewksbury, MA 01876	Lauren Presley	213-247-8820	Lauren.F.Presley@leidos.com
Rapiscan Systems	2900 Crystal Drive, Suite 910 Arlington, VA 22202	Iven King	540-300-0412	IKing@osi-systems.com
Smiths Detection, Inc.	2202 Lakeside Blvd Edgewood, MD 21040	Philip Tackett	410-652-3392	Philip.Tackett@Smiths-Detection.com
VMI Security	Av. Hum, 55-Distrito Industrial Genesco Aparecido De Oliveira, Lagoa Santa – MG 33400-000, Brazil	Lazaro Borges Silva	+55 31 3622-0470	Lazaro.silva@vmis.com.br
X-Ray Center (XRC)	Beylikduzu OSB Mahallesi, 10 Cadde, NO: 14 Beylikduzu Istanbul, 34524 Turkey	Kami Havluciyan	+90-212-665-1328	kami@x-raycenter.com

1.7 Updates in This Version

Page	Section	Change
6	1.6 Manufacturer Contact Information	Update Leidos Manufacturer Contact Information. Removal of Mettler-Toledo Contact Information.
10-14	2.1 Qualified VI Technology	Addition of Smiths HS 6040DV, including CN103454_A1. Addition of new software version for Rapiscan 920DX/927DX/928DX per ECP-AC-084_R2. Addition of new TAPN, per CN103508_A2, and software version for Smiths Detection HS 145180-2is Pro per CN103467_B. Addition of new software for Smiths Detection HS 6040-2is per CN211074_A4. Administrative change to correct Gilardoni ARGO Operating Voltage.
19	3.2 Approved ETD Technology	Addition of new software for Bruker DE-Tector Flex per CR011. Addition of new software for 1st Detect Tracer 1000 per FDTC-ChR-00198.
25	4.3 Grandfathered MD Technology	Removal of Mettler-Toledo expired Grandfathered MD Technology.
26	5.1 Qualified EDS Technology	Addition of new software for Rapiscan RTT110 per ECP-AC-ADS-074.
27	5.2 Approved EDS Technology	Addition of note for Smiths Detection HS 10080 XCT per Technical Bulletin 051.
32-33	Appendix A: Trace Consumables List	Update to clarify Leidos QS-B220 consumables are specific to the QS-B220-001.

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 Discrimi-nation	# 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
		00-23-1XDV-21 00-73-1XDV-11						
Astrophysics, Inc.	XIS-100XDX	00-22-1XDX-11	Y	Dual View	B	165 kV	180 kV	08/09/2012
		00-22-10DX-11						
		00-03-1XDX-31						
Astrophysics, Inc.	XIS-1517DV 200kV	00-22-15DV-20	Y	Dual View	C	200 kV	200 kV	08/09/2012
		00-04-15DV-31						
Astrophysics, Inc.	XIS-1818DV 200kV	00-22-18DV-20	Y	Dual View	C	200 kV	200 kV	08/09/2012
		00-04-18DV-31						
Astrophysics, Inc.	XIS-1818DV 320kV	00-00-18DV-23	Y	Dual View	C	320 kV	320 kV	12/12/2012
		00-05-18DV-31						
Astrophysics, Inc.	XIS-6545DV	00-13-6545DV-21	Y	Dual View	A	165 kV	180 kV	10/23/2009
		00-03-65DV-31						
Astrophysics, Inc.	XIS-6545DVS	00-30-6DVS-10	Y	Dual View	A	165 kV	180 kV	11/21/2016
	XIS-6545DVS	00-03-6DVS-31						

Astrophysics, Inc.	XIS-7858DVS	00-30-7DVS-10 00-73-7DVS-11	Y	Dual View	A	165 kV	180 kV	11/21/2016
Gilardoni S.p.A	ARGO 640 DV	05141206	Y	Dual View	A	160 kV	160kV	12/05/2024
Gilardoni S.p.A	FEP ME CARGO DV	05141105	Y	Dual View	C	200 kV	300 kV	11/05/2021
Gilardoni S.p.A	FEP ME 640 AMX	05141182 05141122	Y	Dual View	A	150 kV	160kV	01/12/2021
Gilardoni, S.p.A.	FEP ME 755 AMX	05141096	Y	Dual View	A	150 kV	160 kV	10/23/2014
Gilardoni S.p.A	FEP ME 1000 HC DV	05141103	Y	Dual View	B	160 kV	160kV	01/12/2021
Leidos (4)	ACX 6.4 MV	1000-MV3AC-00	Y	Multi View	A	150 kV	153 kV	10/23/2009
Leidos (4)	CX 6000 P DV	002	N	Dual View	C	6MeV	6MeV	05/14/2010
Leidos (4)	MVT-HR	1000-10001-HR 1000-10002-HR	Y	Multi View	B	150 kV	160 kV	02/03/2010
Leidos (4)	PX 10.10 MV	1000-P1010-2V 1000-P1010-AC	Y	Dual View	B	160 kV	160 kV	08/09/2012
Leidos (4)	PX 15.17 MV 200kV	0125-10732-00	Y	Dual View	C	200 kV	200 kV	08/09/2012
Leidos (4)	PX 18.18 MV 200kV	0125-10734-00	Y	Dual View	C	200 kV	200 kV	08/09/2012
Leidos (4)	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 2010012	Y	Dual View	A	160kV	180kV	01/22/2020
Rapiscan Systems	927DX	2010026 2010027	Y	Dual View	B	160kV	180kV	01/22/2020
Rapiscan Systems	928DX	2010028 2010029	Y	Dual View	B	160kV	180kV	01/22/2020
Rapiscan Systems	935DX	2010025	Y	Dual View	C	240kV / 200 kV (2)	300 kV / 200 kV (2)	11/3/2022
Rapiscan Systems	MVXR 5000	2010659-6	Y	Multi View	B	170 kV	180 kV	02/03/2010
Rapiscan Systems (3)	XR3D-6D	500002-001	Y	Dual View	A	160 kV	160 KV	10/24/2019
Rapiscan Systems (3)	XR3D-7D	500003-002	Y	Dual View	A	160 kV	160 kV	12/20/2019
Rapiscan Systems (3)	XR3D-15D	534307-109, Rev D and 535307-107, Rev F	Y	Dual View	C	200 kV	200 kV	10/13/2021
Rapiscan Systems (3)	XR3D-100D	500068-001	Y	Dual View	B	160 kV	160kV	12/20/2019
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.	6040DV	34500285	Y	Dual View	A	160kV	176kV	05/29/2025
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 (0.2 m/s) 34504172 (0.5 m/s)	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
Smiths Detection, Inc.	HS 145180-2is Pro	11132774 90340002	Y	Dual View	C	200 kV	220kV	02/04/2021
VMI Security	Spectrum 180180DV (320kV)	27.04.00389	Y	Dual View	C	310kV	320kV	09/10/2024
VMI Security	Spectrum 6040DV	27.04.00342	Y	Dual View	A	170kV	170kV	09/10/2024

VMI Security	Spectrum 100100HDV	27.04.00377	Y	Dual View	B	170kV	170kV	09/10/2024
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 75-55DV	XRC 75-55DV	Y	Dual View	A	160 kV	170 kV	02/09/2021
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 100-100 HCDV	XRC 100-100 HCDV	Y	Dual View	B	165kV	180kV	06/04/2024
X-Ray Center (XRC)	XRC 180-180DV (200kV)	XRC 180-180DV	Y	Dual View	C	200 kV	200 kV	12/07/2021
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) Rapiscan 935DX Operating Voltage and Max Voltage reflect vertical / horizontal voltage.

(3) VOTI Detection, Inc. was acquired by Rapiscan Systems. Either company's data plate is acceptable as long as the Top Assembly Part Number matches the number listed in the Qualified section.

(4) L3 Security & Detection Systems was acquired by Leidos, 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	Material Discrimi-nation	# 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 Discrimi-nation	# of Views	Capacity	Operating Voltage	Max Voltage	Grandfathered Configuration	Expiration Date
Rapiscan Systems	620DV	620DVLHS-STND	Y	Dual View	A	160 kV	180 kV	Hardware and Software	12/31/2028
		620DVRHS-STND							
Rapiscan Systems	627DV	627DV-STND	Y	Dual View	B	160 kV	180 kV	Hardware and Software	12/31/2028
		627DVE							
Rapiscan Systems	628DV	628DV-STND	Y	Dual View	B	160 kV	180 kV	Hardware and Software	12/31/2028
Rapiscan Systems	632DV	632DV200	Y	Dual View	C	200 kV	200 kV	Hardware and Software	12/31/2028
		632DV-STND							
		632DVE							

Rapiscan Systems	638DV	638DV200	Y	Dual View	C	200 kV	200 kV	Hardware and Software	12/31/2028
		638DV-STND							
		638DV300	Y	Dual View	C	320 kV	320 kV	Hardware and Software	12/31/2028
Rapiscan Systems	927DX	2010013	Y	Dual View	B	160kV	180kV	Hardware and Software	12/31/2041
		2010014							
		2010015							
		2010016							
		2010017							
		2010018							
Rapiscan Systems	928DX	2010019	Y	Dual View	B	160kV	180kV	Hardware and Software	12/31/2041
		2010020							
		2010021							
		2010022							
		2010023							
		2010024							

Notes:

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.

Vendor (2)	Device Model Number	Required Top Assembly Part Number	Configuration Tested (1)	Date Qualified
Smiths Detection, Inc.	IONSCAN 600	4824000E-301-3 (3)	No Wand	08/15/2023
Rapiscan Systems	Itemiser 5X (IT5X)	P0007018-018-CAR	No Wand	08/15/2023

Notes:

(1) Specification of "Wand" indicates a wand, also referred to as a hand-wand, is required to operate the device, to include all sampling, while the specification of "No Wand" indicates a wand must not be used to operate the device, to include all sampling which must be conducted by hand.

(2) This model has a non-radioactive source thus annual radiation testing is not required.

(3) The TAPN configuration for the IONSCAN 600 can be located on the bottom underneath the chassis.

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
1st Detect	Tracer 1000	00-10001-04	No Wand	06/13/2024
Bruker	DE-tector *flex*	1880000T-TSA	No Wand	08/08/2023
Leidos	QS-B220	QS-B220-019	No Wand	01/06/2025

Notes:

(1) Specification of "Wand" indicates a wand, also referred to as a hand-wand, is required to operate the device, to include all sampling, while the specification of "No Wand" indicates a wand must not be used to operate the device, to include all sampling which must be conducted by hand.

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

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

Vendor	Device Model Number	Required Top Assembly Part Number	Configuration Tested (1)	Grandfathered Configuration	Expiration Date

Notes:

(1) Specification of "Wand" indicates a wand, also referred to as a hand-wand, is required to operate the device, to include all sampling, while the specification of "No Wand" indicates a wand must not be used to operate the device, to include all sampling which must be conducted by hand.

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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

There are currently no systems in the Grandfathered 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	Grandfathered Configuration	Expiration Date

Notes:

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.

Vendor	Device Model Number	Required Top Assembly Part Number	Date Qualified
Rapiscan Systems	RTT110	RTT110-TSA	04/02/2024

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
Smiths Detection, Inc.	HS 10080 XCT	34453300	01/19/2022 (1)(2)

Notes:

(1) Smiths Detection, Inc. HS 10080 XCT extended to 07/19/2025 per Technical Bulletin 043, EDS Technology Approval Extension.

(2) Smiths Detection, Inc. HS 10080 XCT extended to 10/19/2025 per Technical Bulletin 051, EDS Technology Approval Extension.

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

There are currently no systems in the Grandfathered EDS Technology section

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

Notes:

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.

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

Vendor	Device Model Number	Required Top Assembly Part Number	Date Qualified

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

Vendor	Device Model Number	Required Top Assembly Part Number	Grandfathered Configuration	Expiration Date
Armstrong Monitoring	AMC-CD-2	AMC-CD-2	Hardware and Software	12/31/2025
InstroTek, Inc.	Guard 1	1010000	Hardware and Software	12/31/2025

Notes:

Appendix A: Trace Consumables

To ensure that Explosive Trace Detection (ETD) units operate at a level of maximum effectiveness in detecting explosives, TSA requires that all consumables purchased for screening air cargo either appear on the Trace Consumables List (TCL) or be supplied by the manufacturer of the ETD device. TSA expresses no preference for manufacturer-supplied consumables or for third-party-supplied consumables.

The TCL identifies third-party ETD consumable items tested by TSA and found to have comparable performance to similar type consumables supplied by the security system manufacturers. Third party consumable items not on the TCL either did not pass the TSA evaluation or were not tested by TSA.

Third-Party Consumables Vendors

Contact information for vendors appearing in the TCL is listed below in alphabetical order.

Company	Address	Phone	Website
DSA Detection	120 Water Street, Suite 211 N. Andover, MA 01845	(978) 975-3200	www.dsadetection.com
ETD Direct, LLC	1121 Route 34, Suite N-404 Aberdeen, NJ 07747	(908) 614-7835	www.etddirect.com
Microsilver Wear, Inc.	601 Route 206, Suite 26-330 Hillsborough, NJ 08844	(908) 698-4421	www.microsilverinc.com
US Testing Equipment, LTD	7201 NE 18th St., Suite A Vancouver, WA 98661	(888) 687-8378	www.ustesting.com

Trace Consumables List

Model	Manufacturer	Item Description	Part Number	Supplier
Itemiser 5X	Rapiscan Systems	Assy, Dopant, Ammonium Carbamate, G-CAL, In Packaging	101018182	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Assy, Dopant, Dichloromethane, G-CAL, In Packaging	101018180	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Assy, Dopant, Toluene, G-CAL, In Packaging	101018184	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Assy, HV Lamp Extraction Tool, IT 4DX	M1000365	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Assy, Single Flow Meter, Itemiser 5X	101032440	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Calibrant, Internal, Methyl Salicylate	MP100973	US Testing Equipment, LTD
Itemiser 5x	Rapiscan Systems	Calibration Traps (100ct)	MD1965-100	ETD- Direct
Itemiser 5X	Rapiscan Systems	Filter Element, In-Line Air Filter, 12MMX8MMX20MML	MP101671	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Flow Meter	M0001931	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Kit, Lamps, Itemiser 5X	K1000200	US Testing Equipment, LTD
Itemiser 5X	Rapiscan Systems	Product Accessory, Nozzle Screen Kit, Itemiser 5X	PA005379	US Testing Equipment, LTD
Itemiser 5x	Rapiscan Systems	Sample Swabs (100ct)	MD1964	ETD- Direct
Itemiser 5x	Rapiscan Systems	Verification Traps (100ct)	MD1966-100	ETD- Direct
QS B220-001	Leidos	Calibration Trap	CT1272	DSA Detection
QS B220-001	Leidos	Calibration Trap	IS1272-25	ETD Direct
QS B220-001	Leidos	Dual Mode Verification Swab (A Negative and B Positive)	VT1272	DSA Detection
QS B220-001	Leidos	Molecular Sieve Canister	BSC1329	DSA Detection
QS B220-001	Leidos	Positive Verification Tin	BSB1035	DSA Detection
QS B220-001	Leidos	Sample Swabs (100ct)	ST1269P	DSA Detection
QS B220-001	Leidos	Sample Swabs	IS1000-100 Rev E	ETD Direct
QS B220-001	Leidos	Sample Swabs (100ct)	SWB/220	Microsilver
QS B220-001	Leidos	Sample Trap	ST1269	DSA Detection
QS B220-001	Leidos	Sieve Canister, QS-B220	MSC-220	Microsilver
QS B220-001	Leidos	Sieve Canister, single	IS1329	ETD Direct
QS B220-001	Leidos	Sieve Canister, 4 pack	IS0023	ETD Direct
QS B220-001	Leidos	Verification Pen Kit, A (Neg) and B (Pos)	ISV1482PK	ETD Direct

Model	Manufacturer	Item Description	Part Number	Supplier
QS B220-001	Leidos	Verification Pen, Sample A (Neg)	ISV0156P	ETD Direct
QS B220-001	Leidos	Verification Pen, Sample B (Pos)	ISV1326P	ETD Direct
QS B220-001	Leidos	Verification Sample A (Negative)	BSA1030	DSA Detection
QS B220-001	Leidos	Verification Sample A, Negative mode	VSA/N	Microsilver
QS B220-001	Leidos	Verification Sample B, Positive mode	VSB/P	Microsilver