

DGAC-STAC
CERTIFIED

SAMDEX

COMBINED SHOE METAL DETECTOR (SMD) AND SHOE EXPLOSIVE DETECTOR (SED)

SAMDEX allows passengers shoes to be analyzed with no need to remove them according to the **2019/103 EU Regulation** on Aviation Security.

SAMDEX automatically detects, in a few seconds, the presence of explosives and metallic and non-metallic threats such as firearms and knives.

Guided use is provided through proper graphic animations.

KEY FEATURES

- **CERTIFIED** against relevant detection standards for explosive and metallic threats
- **BULK DETECTION**, based on actual material properties measurement
- **INCREASED CHECKPOINT THROUGHPUT** by elimination of shoe divestiture and X-ray check
- **INCREASED COMFORT**: passengers keep their shoes on
- **ERGONOMICS**: simple and stress-free use
- **ANALYSIS TIME**: 4 sec. typical/shoe
- **CLEAR "OK/ALARM"** inspection result



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COMBINED SHOE METAL AND EXPLOSIVE DETECTOR

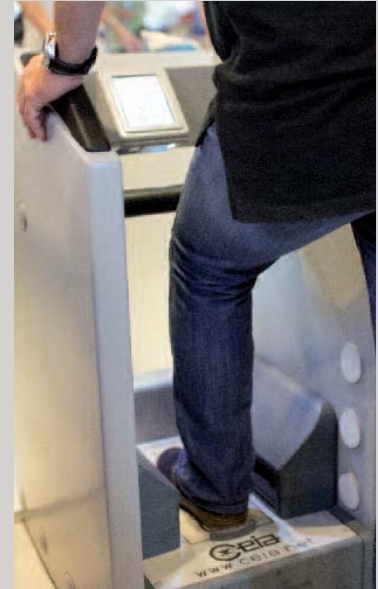
New experiments and trails with shoe analyzers were performed during the 2015 and 2016 as part of the Security Vision programme [Programme Vision Sûreté, France] and provided a preliminary feedback on this very promising type of equipment.

As well as substantially improving the quality of service given to passengers, the vast majority of whom no longer need to take their shoes off during screening, the shoe analyzers increased the efficiency of security checks. Actually, metal and explosives concealed in the shoes of people with malicious intent can be detected more easily.

Previous European regulations only authorised shoe analyzers that detect metal but during the course of 2016 France worked with international organizations [ICAO, IATA/ACI, etc.] to promote the benefits that these new shoe analyzers can offer to air passengers.

Then **STAC led a European group working on new regulations to be proposed to the European Commission, which brought in 2019 to the latest generation of shoe analyzers** being added to the list of authorised equipment.

In the light of these advances, many airports acquired these new technology. The latest version of the SAMDEX equipment, developed by CEIA, was successfully verified in specific Laboratory test by STAC and operationally tested in Paris Charles-de-Gaulle and Toulouse-Blagnac airports.



RELEVANT INFORMATION CAN BE FOUND IN THE **2016 ACTIVITY REPORT PUBLISHED BY STAC** [FRENCH CIVIL AVIATION TECHNICAL SERVICE]:

<http://www.stac.aviation-civile.gouv.fr/fr/presentation-stac/rapport-dactivite>



DESCRIPTION

The main components and features of the **SAMDEX** are as follows:

- A “step” structure designed so that the person being examined only has to place his/her foot in a well-defined area indicated by a positioning “footprint” engraved on the upper surface of the step.
- An automatic step-by-step guide to use of the analyzer, which addresses both the person being inspected and the security inspector via visual and audio messages.
- A compact, non-obstructive construction, characterized by its high degree of robustness and structural stability.

EASE OF USE AND ERGONOMIC DESIGN

Use of the Shoe Scanner is simple and stress-free. The time required for analysis is reduced to the minimum thanks to the innovative mechanical and electronic solutions adopted and is no longer necessary to bend down to carry out manual inspection.



THE SHOE SCANNER IS EASY TO USE AND TOTALLY HARMLESS FOR PEOPLE.

ANALYSIS COMPLETED SUCCESSFULLY.

AVAILABLE EQUIPMENT FOR PASSENGER SCREENING

	EQUIPMENT	MAIN FUNCTION	ADDITIONAL FUNCTION/PROCEDURE
PRIMARY SCREENING	Walk-Through Metal Detector [WTMD]	<ul style="list-style-type: none"> • Full body detection of metal threats [shoe and body cavities included] 	<ul style="list-style-type: none"> • Random passenger selection for additional secondary screening [programmable] • Hand-Held Metal Detectors [HHMD]
	Combined WTMD and SSc [Security Scanner]	<ul style="list-style-type: none"> • Full body detection of metal threats [shoe and body cavities included] • Body inspection to highlight anomalies on the passenger body surface 	-
SECONDARY SCREENING	Shoe Scanner [SAMDEX]	<ul style="list-style-type: none"> • Shoe inspection for detection of metallic and non-metallic [explosive] threats 	<ul style="list-style-type: none"> • Additional random passenger selection for security and shoe scanner screening
	Explosive Trace Detector [ETD]	<ul style="list-style-type: none"> • Passenger body inspection to detect explosive traces 	<ul style="list-style-type: none"> • Hand-Held Metal Detectors [HHMD]
	Security Scanner [SSc]	<ul style="list-style-type: none"> • Body inspection to highlight anomalies on the passenger body surface 	-

EU REGULATION 2019/103 [23 JANUARY 2019]

SAMDEX is the **first equipment with double technology** for the **simultaneous detection of metallic and explosive threats** concealed in passenger shoes without the need of divesting shoes.

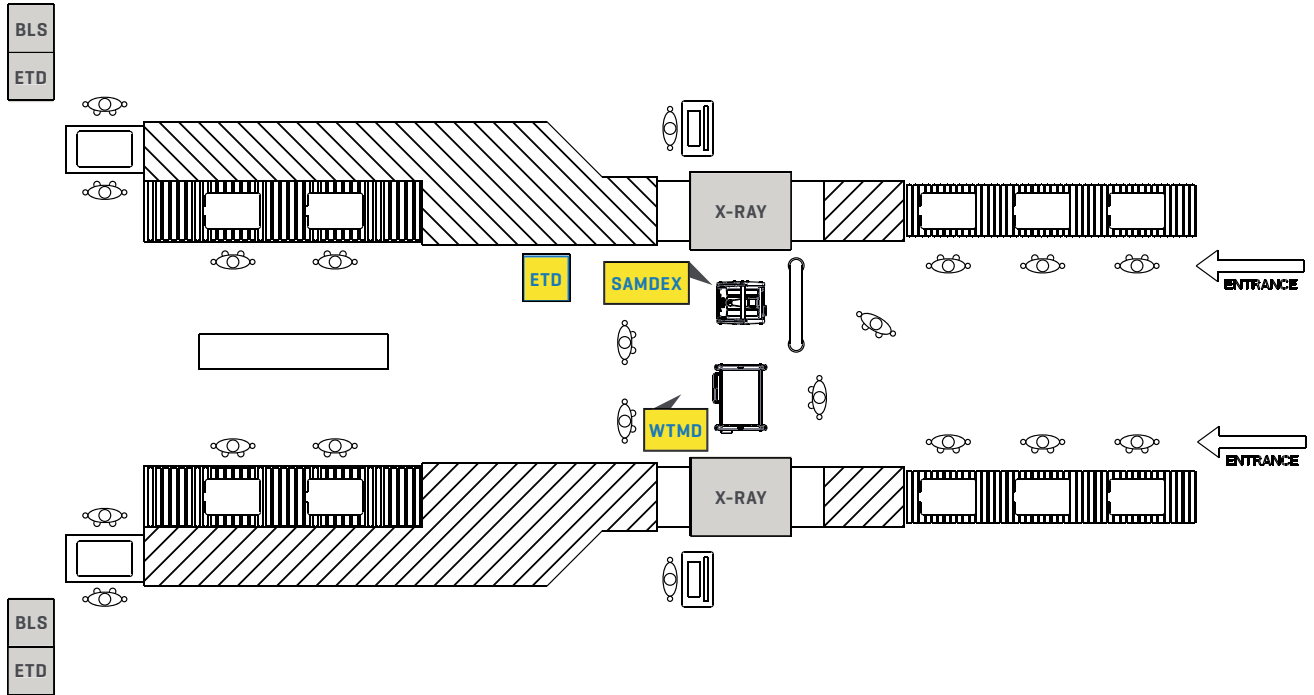
In November 2016 the **SAMDEX** received the **certification from DGAC-STAC in France as SMD and SED** to be used to resolve alarms on shoes generated by passengers on the Walk-Through Metal Detector. The deployment in several French Airports started immediately after the certification.

In January 2019 Commission Implementing **Regulation (EU) 2019/103** strengthened certain specific aviation security measures in order to enhance security culture and resilience, and introduced performance standards and use of Shoe Explosive Detection equipment **[SED]** along with the already included Shoe Metal Detector **[SMD]**. **SAMDEX** is a single inspection unit which complies with both measures at the same time.

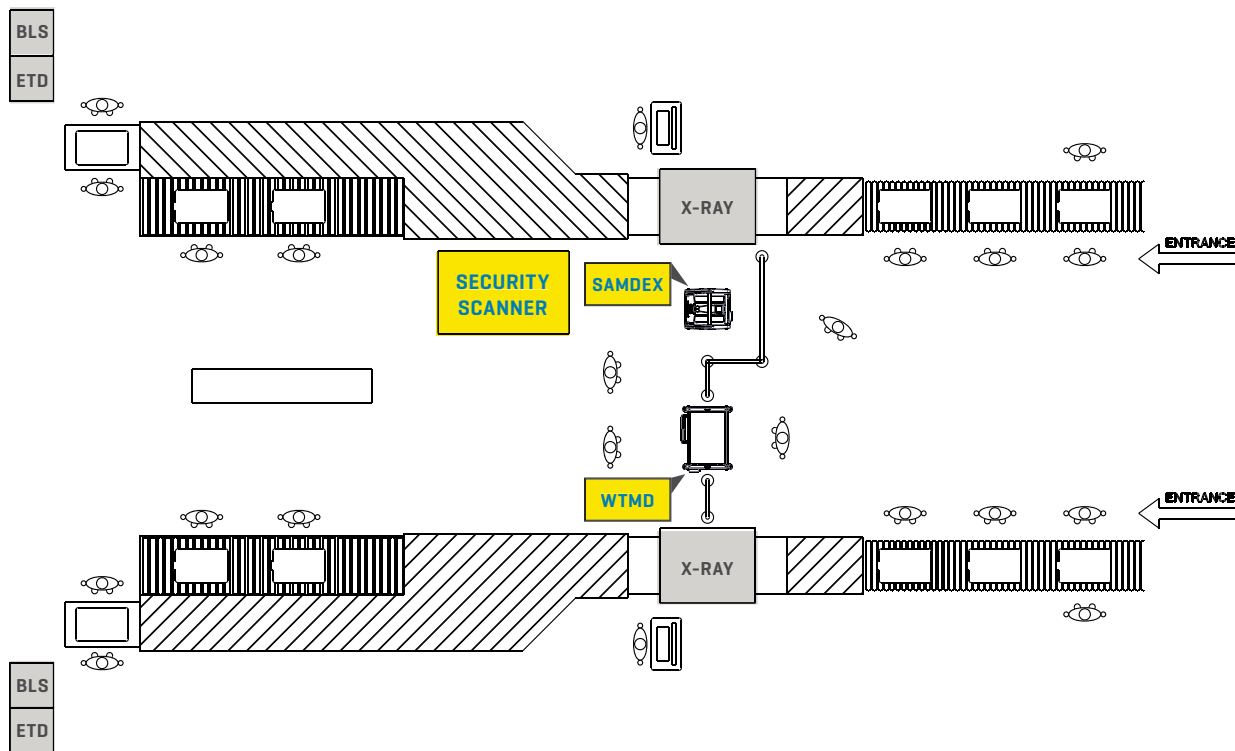
Following some checkpoints configuration compliant with Commission Implementing Regulation [EU] 2019/103 are shown.

EXAMPLE OF COMPLIANT PASSENGERS' INSPECTION CHECKPOINT CONFIGURATIONS

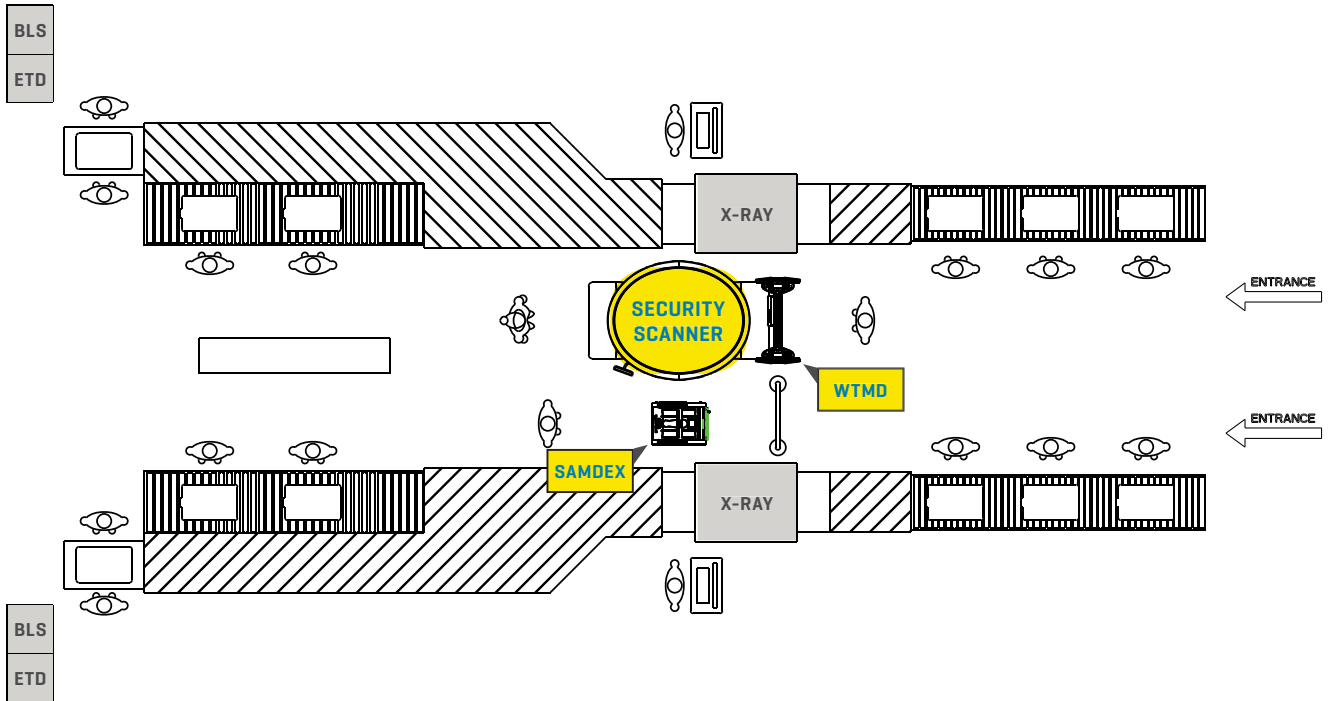
1 Passenger Screening by Walk-through Metal Detector (WTMD), Shoe Scanner (SAMDEX) and passenger body control through Explosive Trace Detector (ETD)



2 Passenger Screening by Walk-through Metal Detector (WTMD), Shoe Scanner (SAMDEX) and passenger body control through SECURITY SCANNER



3 Passenger Screening by Combined System [WTMD and SECURITY SCANNER] and Shoe Scanner [SAMDEX]



CERTIFIED BY GOVERNMENTAL LABORATORIES

SAMDEX compliance to operational requirements has been successfully verified and certified by Governmental Laboratories.

DEPLOYMENT

Over 200 **SAMDEX** have been deployed and are currently in use in Airports up to date [June 2019].

SPECIFICATIONS

ENVIRONMENTAL DATA

Power Supply	100-277V~, 50±60 Hz, 1,8A
Serial Interface	RS-232C
Ethernet Interface	10/100 base-T
Operating temperature	-10°C to +55°C
Storage temperature	-37°C to +70°C
Relative Humidity	0 to 95% without condensation

ANALYSIS TIME

Reduced analysis time for a rapid flow-rate: 4 sec. typical/shoe

ALARM MODES

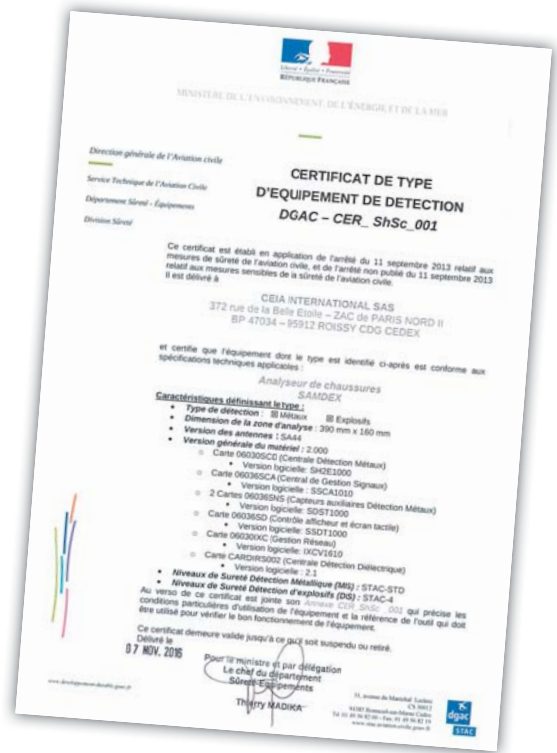
- SIGNALING**
- Detection of metallic and non-metallic threats
 - Random alarm, with programmable rate
 - Interrupted analysis
 - Sabotage or internal self-diagnosis

TYPE

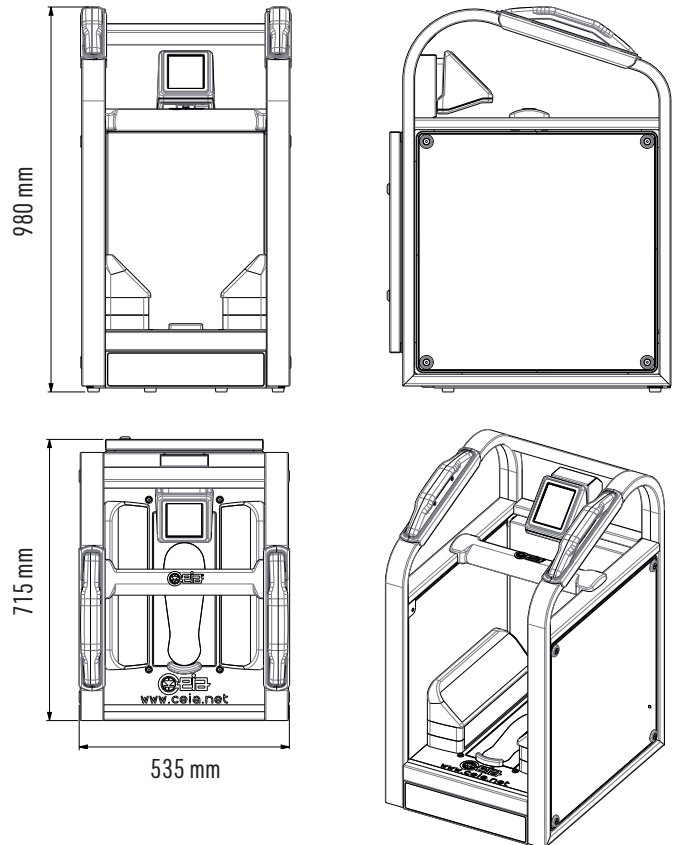
- OF SIGNALING**
- Visual, via 5.7" TFT display
 - Resolution: 960 [V] x 240 [H] dots
 - Brightness: up to 1100 cd/m²
 - Audio, adjustable for:
 - 10 selectable sound intensities ranging from 0 to 85 dbA at 1 m;
 - 44 selectable continuous and pulsed tones

DIMENSIONS [WxDxH] 535 mm x 715 mm x 980 mm

WEIGHT 120 kg



MECHANICAL DIMENSIONS



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