



BSI Standards Publication

Secure storage units - Requirements, classification and methods of test for resistance to burglary

Part 1: Safes, ATM safes, strongroom doors and strongrooms

National foreword

This British Standard is the UK implementation of EN 1143-1:2019. It supersedes BS EN 1143-1:2012, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GW/2, Secure storage of cash, valuables and data media.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Secure storage units - Requirements, classification and methods of test for resistance to burglary - Part 1: Safes, ATM safes, strongroom doors and strongrooms

Unités de stockage en lieux sûrs - Prescriptions, classification et méthodes d'essai pour la résistance à l'effraction - Partie 1 : Coffres forts, distributeurs automatiques de billets (DAB), portes fortes et chambres fortes

Wertbehältnisse - Anforderungen, Klassifizierung und Methoden zur Prüfung des Widerstandes gegen Einbruchdiebstahl - Teil 1: Wertschutzschränke, Wertschutzschränke für Geldautomaten, Wertschutzraumtüren und Wertschutzräume

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European foreword

This document (EN 1143-1:2019) has been prepared by Technical Committee CEN/TC 263 "Secure storage of cash, valuables and data media", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1143-1:2012.

Compared with EN 1143-1:2012, the following changes were made:

- a) requirements for the conduct of the additional T2 test have been added (4.1, 4.6, 12, 13.4, 14 c), Table 1, Table 2 and Table 3). Products tested with these new tools which are listed in Annex B have a 'T2' designation behind the resistance grade.
- b) In Annex A, a power supply, a plug and a cable connector have been added.
- c) The construction requirements for ATM safes of the resistance grade L have been deleted (7.5.5 has been deleted, changes in Table 2 and 7.5.4 have been made).
- d) For clarification 4.2.2 has been updated and an informative Annex C and text in the introduction has been added for different types of ATM systems.
- e) Updates have been integrated for the optional solid explosive test, above all: The explosive mass for the EX-option in 9.4 was changed to "active explosive mass", a definition for active explosive charge mass has been added (3.24), instead of specific energy the explosive heat of the PETN is defined (9.3); the detonation velocity of the PETN was raised from $(7\ 000 \pm 500)$ m/s to $(7\ 500 \pm 500)$ m/s (9.3); the tolerance of the active explosive charge mass has been changed from ± 1 g to ± 2 %, the requirement that test specimens shall have a certain internal capacity has been deleted from 9.2, the shape of the explosive charge shall now be spherical for ATM safes and safes (see 9.5.1), the clause for not permitting the entry of explosives through the cable-entry openings has been deleted (4.3). In addition, a note has been added in Table 4.
- f) Updates have been made in the optional gas explosive test: the background for using the amount of gas for resistance grade II, III and IV has been explained in greater detail (5.8 f), 10.4) and for resistance grade V, VI, VII and VIII a new formula has been integrated.
- g) An additional test condition for cutting steel sheets has been added (Clause 2 and 7.6.7);
- h) Editorial and minor changes have been integrated in the Clauses 3.10, 3.16, 3.17, 4.2.1, 6.1, 7.1, 7.3.1, 7.5.4.1, 7.5.4.2, 7.6.5, 7.6.6, 7.8, 9.5.2, 9.6, 10.4, 10.6, 11.3.1 and 11.3.2 as well as Figure 2.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Tests are made, the results of which are used to classify the resistance to burglary. The resistance classification can also be used for designing security systems with the provision that, depending on the criminal, the conditions at the place of the crime and the availability of tools, considerably longer times are likely to occur in real burglary attacks than in a test.

Manual tests are included, whose results and repeatability are dependent on the skill of the testing team. Machine-related tests are under development and may be included when this European Standard is revised.

For ATM systems the tests and requirements in this European standard are based on the following assumptions (conditions) of use:

- **ATM system:** assembly of sub-units which provides an ATM function and affords security to cash and/or valuables (e.g. checks) stored within the ATM safe.
- For using of an ATM safe the ATM manufacturer is responsible for the secure storage of the cash and/or valuables (e.g. checks).

Examples of different designs of ATM systems are given in Annex C.

1 Scope

This document establishes the basis for testing and classifying free-standing safes, built-in safes (floor and wall), ATM safes and ATM bases, strongroom doors and strongrooms (with or without a door) according to their burglary resistance.

This document does not cover testing and classifying Deposit Systems and ATM systems.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1300, *Secure storage units - Classification for high security locks according to their resistance to unauthorized opening*

EN 10051, *Continuously hot-rolled strip and plate/sheet cut from wide strip of non-alloy and alloy steels - Tolerances on dimensions and shape*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

safe

storage unit which protects its contents against burglary and when closed has at least one internal side ≤ 1 m length

3.2

free-standing safe

safe whose protection against burglary depends only upon the materials and construction of its primary manufacture and not upon materials added or attached during installation

3.3

built-in safe

safe whose protection against burglary is partly dependent upon materials incorporated into it, or attached to it, during installation

Note 1 to entry: Under floor safes and wall safes are special types of built-in safes.

3.4

strongroom

storage unit which protects against burglary and when closed has internal side lengths in all directions > 1 m

Note 1 to entry: Strongrooms may be cast *in situ*, constructed from pre-fabricated elements or a combination of both.