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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;
English version EN 1143-1:2019,
English translation of DIN EN 1143-1:2019-07**

Wertbehältnisse –
Anforderungen, Klassifizierung und Methoden zur Prüfung des Widerstandes gegen
Einbruchdiebstahl –
Teil 1: Wertschutzschränke, Wertschutzschränke für Geldautomaten, Wertschutzraumtüren
und Wertschutzräume;
Englische Fassung EN 1143-1:2019,
Englische Übersetzung von DIN EN 1143-1:2019-07

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;
Version anglaise EN 1143-1:2019,
Traduction anglaise de DIN EN 1143-1:2019-07

Document comprises 56 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

National foreword

This document (EN 1143-1:2019) has been prepared by Technical Committee CEN/TC 263 “Secure storage of cash, valuables and data media” (Secretariat: BSI, United Kingdom).

The responsible German body involved in its preparation was *DIN-Normenausschuss Maschinenbau* (DIN Standards Committee Mechanical Engineering), Working Committee NA 060-20-01 AA “Secure storage units”. Representatives of manufacturers and users of secure storage units contributed to this standard.

The European Standards referred to in Clause 2 and in the Bibliography of the EN have been published as the corresponding DIN EN or DIN EN ISO Standards with the same number.

Amendments

This standard differs from DIN EN 1143-1:2012-07 as follows:

- a) requirements for the conduct of the additional test T2 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 are listed in Annex B and 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 (subclause 7.5.5 has been deleted, Table 2 and subclause 7.5.4 have been amended);
- d) for the clarification of different ATM systems, subclause 4.2.2 has been amended and an informative Annex C and text in the Introduction have been added;
- e) amendments have been integrated for the optional solid explosive test, among other things: in subclause 9.4, the explosive mass for this EX option has been changed to “active explosive mass”, a definition of the active explosive mass has been added (subclause 3.24), instead of the specific energy the explosive heat of the PETN is now defined (subclause 9.3), the detonation velocity of the PETN has been increased from $(7\ 000 \pm 500)$ m/s to $(7\ 500 \pm 500)$ m/s (subclause 9.3), the tolerance of the active explosive charge mass has been increased from ± 1 g to ± 2 %, the requirement that test specimens shall have a certain internal capacity has been deleted from subclause 9.2, the shape of the explosive charge has been adapted to be spherical for ATM safes and safes (see subclause 9.5.1) and the clause for not permitting the entry of explosives through cable entries has been deleted (subclause 4.3). In addition, a note has been added in Table 4;
- f) amendments have been made in the optional gas explosive test: the background for using the amount of gas for resistance grades II, III and IV has been rendered more precise (subclause 5.8 f), subclause 10.4) and a new formula has been integrated for resistance grades V, VI, VII and VIII;
- g) an additional test condition for cutting steel sheets has been added (Clause 2 and subclause 7.6.7);
- h) editorial and minor changes have been integrated in subclauses 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 in Figure 2.

Previous editions

DIN EN 1143-1: 1997-05, 2002-10, 2006-02, 2010-01, 2012-07

English Version

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

This European Standard was approved by CEN on 1 March 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Contents

Page

European foreword.....	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	6
4 Classification and requirements.....	9
4.1 Classification.....	9
4.2 General requirements	9
4.2.1 Safes, strongroom doors and strongrooms.....	9
4.2.2 ATM safes	9
4.2.3 Boltwork cover plate	10
4.2.4 Cable hole.....	10
4.2.5 User instructions.....	10
4.3 Additional requirements for EX designation	10
4.4 Additional requirements for GAS designation	10
4.5 Additional requirements for CD designation.....	10
4.6 Additional requirements for T2 designation.....	11
5 Technical documentation.....	15
6 Test specimen.....	16
7 Tool attack test.....	16
7.1 Principle	16
7.2 Testing team.....	17
7.3 Apparatus.....	17
7.3.1 Attack tools.....	17
7.3.2 Clock.....	17
7.3.3 Test blocks	18
7.4 Test criteria.....	18
7.5 Testing programme.....	19
7.5.1 Free-standing safes.....	19
7.5.2 Built-in safes	19
7.5.3 Strongrooms.....	19
7.5.4 ATM safes	20
7.6 Test conditions.....	20
7.7 Procedure.....	22
7.8 Operating time measuring.....	23
7.9 Calculation of resistance values.....	24
7.10 Test record	24
8 Anchoring strength test	24
8.1 Free-standing safes.....	24
8.1.1 Principle	24
8.1.2 Loading equipment.....	25
8.1.3 Procedure.....	25

8.1.4	Expression of test results.....	25
8.1.5	Test criteria	26
8.2	ATM safes.....	26
8.2.1	Principle.....	26
8.2.2	Loading equipment.....	26
8.2.3	Procedure	26
8.2.4	Expression of results	28
8.2.5	Test criteria	28
9	EX explosive test	28
9.1	Principle.....	28
9.2	Test specimen	28
9.3	Explosives.....	28
9.4	Determination of active explosive charge mass.....	29
9.5	Conditions for explosive attack test.....	29
9.5.1	Safes and ATM safes	29
9.5.2	Strongroom doors and strongrooms	29
9.6	Calculation of resistance values for the post-detonation tool attack	30
9.7	Test record.....	30
10	GAS explosive test.....	30
10.1	Principle.....	30
10.2	Test specimen	30
10.3	Gas	31
10.4	Determination of gas charge volume.....	31
10.5	Test equipment for gas attack testing.....	32
10.6	Procedure for gas attack testing	32
10.7	Calculation of resistance values for the post-detonation tool attack	32
10.8	Test record.....	33
10.9	Marking	33
11	Core drilling test	33
11.1	Principle.....	33
11.2	Test specimen	33
11.3	Apparatus	33
11.3.1	Safes.....	33
11.3.2	Strongroom doors and strongrooms	34
11.4	Test method	34
11.5	Calculation of resistance value	34
11.6	Marking	34
12	Tool attack test T2.....	35
12.1	Principle.....	35
12.2	Marking	35
13	Test report	35
14	Marking	36
Annex A (normative)	Attack tools.....	38
Annex B (normative)	Attack tools T2	47
Annex C (informative)	Examples for ATM systems and non-ATM systems	52
Bibliography		54

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.