SLOVENSKI STANDARD
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Varnostne shranjevalne enote - Zahteve, klasifikacija in metode preskušanja protivlomne odpornosti - 1. del: Jeklene blagajne (sefi), bankomatne blagajne (sefi), vrata trezorskih prostorov in trezorski prostori

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

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

Unités de stockage en lieux sûrs - Exigences, 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

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13.310	Varstvo pred kriminalom	Protection against crime
35.220.99	Druge naprave za shranjevanje podatkov	Other data storage devices

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EUROPEAN STANDARD

NORME EUROPÉENNE

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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

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 263.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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European foreword

This document (prEN 1143-1:2026) has been prepared by Technical Committee CEN/TC 263, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1143-1:2019.

prEN 1143-1:2026 includes the following significant technical changes with respect to EN 1143-1:2019:

a) Requirements for testing ATM safes against hydraulic and electric spreaders and door openers have been added (Clause 2 , *3.26* , 4.1, 4.7, Clause 13 and Table 2) Products tested with these new tools have a 'HYD' designation behind the resistance grade.

b) a new product "safe plinth" has been integrated (clause *safe plinth* , 4.2.1 , 5.8, list item a), 7.4, list item c) , 7.5.1, 7.5.4.4, 7.6.14 and Table 1).

c) The possibility to include locks according to EN 17646 [1] has been included (Table 1, Table 2 , Table 3).

d) The requirement for "complete access" and partial access has changed – a removal of a wall (in certain tolerances) is now also counted as complete access (*safe* and 7.4).

e) New requirements for the cable holes have been set (4.2.1 and 4.2.4)

f) Strongrooms weighing less than 1.000 kg shall now have a fixing system. Additionally, strongroom accessories shall not permit a direct view inside (4.2.1)

g) Requirements for the anchoring instruction have been included (5.8, list item a))

h) The tolerances of the explosive heat have been adapted (9.3).

i) Clarifications have been included in 7.5.3.2 ,7.6.7, 7.9, 8.1.2, 8.2, 8.3.2.1, 11.4, Table A.5, Table A.12, Table A.13 and Table A.14.

This document is one of a series of product standards for secure storage units of different types.

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 document is revised.

For ATM systems the tests and requirements in this document 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, safe plinths, 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*

EN 17646, *Secure storage units - Classification for high security locks according to their resistance to unauthorized opening - Distributed systems*

3 Terms and definitions

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

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
safe
storage unit which protects its contents against burglary and when closed has at least one internal side ≤ 1 m length and at least one body wall with an inside face larger than all partial access test blocks according to 7.3.3.2

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
safe plinth
integral part which is located between a specific free-standing safe and the surface to which the safe is to be anchored

Note 1 to entry: A safe plinth may be a solid construction aimed to anchor the product in a more efficient way or a hollow construction to position a safe to a more reachable height. Other constructions are also possible.

Note 2 to entry: A safe plinth can be an integral part of the free-standing safe (permanently connected) or a separate part delivered with the free-standing safe or both. Solution where the plinth is an in-situ part of the building / floor are not meant by the safe plinth.

3.4
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.

3.5
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.

3.6
strongroom door
door with lock(s), boltwork and frame intended for giving access to a strongroom

3.7
ATM safe
safe forming part of an ATM system

3.8
ATM base
integral part of an ATM system located between the ATM safe and the surface to which the ATM safe is to be anchored

3.9
internal space
part of the interior of an ATM safe which is bounded by the inside surfaces of the ATM safe and the boltwork cover plate(s) of the door of the ATM safe body

3.10
ATM
automatic-teller-machine
means for holding and processing cash and/or valuables

Note 1 to entry: For the purpose of this document, automated teller machines, currency exchange machines, currency recycling machines and machines such as teller assist machines are all considered types of ATM.

3.11
ATM-System
assembly of sub-units which provides an ATM function and affords security to cash and/or valuables stored within the ATM safe

Note 1 to entry: An example of an ATM system is shown in Annex C.

Note 2 to entry: Of the sub-units shown in Annex C, the ATM mechanism and the ATM control unit are not tested according to this document.

3.12
accessories
installations/devices which are part of the structure or which pass through the structure of the strongroom or strongroom door(s) for ventilation or for deposit of cash and valuables

Note 1 to entry: Accessories may be always open, usually open (but can be closed in case of emergency), or closed (but can be opened if necessary).

3.13
operating time
time during which a tool is used attempting to create a change in the test specimen

Note 1 to entry: In the context of this document, there are also operating times considered during which no visible modifications/changes are caused to the test specimen.

3.14
resistance unit
RU
burglary resistance which results from one minute's use of a tool carrying the coefficient 1 and the basic value 0

3.15
resistance grade
classification designation for burglary resistance

3.16
resistance value
numerical value in resistance units calculated for each test

3.17
basic value
BV
number in resistance units allocated to a particular tool

3.18
tool coefficient
number in resistance units per minute allocated to a group of tools

Note 1 to entry: For Annex A: The tool coefficient represents factors such as noise, smoke, fumes and other effects, which increase the likelihood of a burglary attack being detected.

Note 2 to entry: For Annex B: The tool coefficient represents tool efficiency and factors such as noise, smoke, fumes and other effects, which increase the likelihood of a burglary attack being detected.

3.19
boltwork
mechanism by which a closed door is held such that, until it is in the withdrawn position, the door cannot be opened

3.20
lock
device able to recognize a coded input and which performs a blocking function on the boltwork or the door

3.21
relocking device
system comprising blocking and detecting elements which will prevent the boltwork from being withdrawn if a burglary attack is detected

Note 1 to entry: A relocking device can be part of the locking mechanism (e.g. active or live relocker) or an independent unit (e.g. passive relocker).

3.22
to close
to move the door so it becomes possible to bolt it

3.23
to bolt
to throw the boltwork or the bolt of the lock (if there is no boltwork) to a position where it fixes the door in closed position

3.24
to lock
to block a thrown boltwork by action of a lock

3.25
active explosive charge mass
part of the solid explosive mass, which is pure PETN without any additives

3.26
spreading force
minimum spreading for 25 mm from the tip as defined in EN 13204

4 Classification and requirements

4.1 Classification

Safes (3.1) are classified to a *resistance grade* (3.15) according to Table 1.

ATM safes (3.7) are classified to a resistance grade according to Table 2.

Strongroom doors (3.6) and *strongrooms* (3.5) (with or without a door) are classified to a resistance grade according to Table 3.

All products shall meet general requirements (4.2), products with EX, GAS, CD, HYD and T2 designation shall meet additional requirements (4.3, 4.4, 4.5, 4.6 and 4.7).

4.2 General requirements

4.2.1 Safes, strongroom doors and strongrooms

There shall be no holes through the protection material other than those necessary for locks, cables, anchoring or for the fitting of *accessories* (3.12) to strongroom doors and strongrooms. Accessories shall not be designed in such a way that a direct view inside is possible.

Cable openings in safes, strongroom doors and strongrooms (with or without a door) shall not exceed 100 mm^2 each without additional measures. Unused cable entry openings shall be obstructed or plugged by the manufacturer in such a way it cannot be removed from the outside without leaving visible traces.

To allow the passage of certain types of cables, cable openings in safes and strongrooms can exceed 100 mm^2 but shall not exceed 150 mm^2 provided they are not designed or positioned such that they permit a direct access to a vulnerable or crucial component.

The testing laboratory decides if the cable opening is vulnerable. To be permitted all cable openings shall have been tested or assessed by the testing laboratory according to the 7.5.

Free-standing safes with a mass of less than 1 000 kg shall have at least one hole by which they can be anchored according to the installation instruction. The anchoring assembly for each anchoring hole shall sustain the force given in Table 1.

Free-standing safes with a mass of less than 1 000 kg including a connected or integrated safe plinth (if available) shall have a fixing system by which they can be anchored according to the installation instruction. When tested in accordance with 8.2, the fixing system shall achieve the criteria in Table 1. The anchoring assembly for each anchoring hole and/or connection point shall sustain the force given

in Table 1. In case that the safe plinth has a door or lid which can be opened without opening of the free-standing safe door, this door or lid shall be equipped and locked with a high security lock according to EN 1300 according to EN 17646.

Strongrooms including a strongroom door with a combined mass of less than 1 000 kg shall have a fixing system by which they can be anchored in one of the panels according to the installation instructions. The requirements for testing the anchoring of a strongroom are identical to those of free-standing safes.

4.2.2 ATM safes

ATM safes shall have means for plugging unused openings. These means shall be impossible to remove from the outside without leaving visible traces.

Openings through the protection material for ATM functioning are permitted in ATM safes.

NOTE Cable entry openings in ATM safes can be larger than 100 mm^2.

ATM safes, including optional ATM bases, shall have a fixing system by which they can be anchored. When tested in accordance with Clause 7 and Clause 8, the fixing system shall achieve the criteria in Table 2.

4.2.3 Boltwork cover plate

Safes, ATM safes and strongroom doors shall have an internal boltwork cover plate that prevents unauthorized viewing of the *locks* (3.20) and *boltwork* (3.19) and access to them, when the door is open. Boltwork cover plates shall be secured so that they cannot be opened or removed by an unauthorized person without leaving visible traces.

4.2.4 Cable hole

Safes, strongroom doors and strongrooms of grade III and higher shall either have a hole for a cable or a preparation enabling a cable hole to be used for a connection to be made to an alarm system after the secure storage unit has been installed.

The position and dimension of the cable holes shall follow the requirements for cable openings of 4.2.1.

4.2.5 User instructions

Safes, strongrooms and ATM safes shall be provided with operating and maintenance instructions, including instructions regarding the locks. Free-standing safes and ATM safes shall have instructions for anchoring. For built-in safes, strongroom doors and strongrooms, installation instructions shall be provided.

4.3 Additional requirements for EX designation

When tested in accordance with Clause 9, safes of resistance grades II to X designated 'EX' shall achieve the minimum post-detonation resistance values given in Table 1. EX designation is not applicable to safes of resistance grade 0 and I.

When tested in accordance with Clause 9, ATM safes of resistance grades II to VIII designated 'EX' shall achieve the minimum post-detonation resistance values given in Table 2. EX designation is not applicable to ATM safes of resistance grades L and I.

When tested in accordance with Clause 9, strongroom doors and strongrooms (with or without doors) of resistance grades II to XIII designated 'EX' shall achieve the minimum post-detonation resistance values given in Table 3. EX designation is not applicable to strongroom doors and strongrooms of resistance grades 0 and I.

4.4 Additional requirements for GAS designation

When tested in accordance with Clause 10, ATM safes of resistance grades II to VIII designated 'GAS' shall achieve the minimum post-detonation resistance values given in Table 2. 'GAS' designation is not applicable to ATM safes of resistance grades L and I.

4.5 Additional requirements for CD designation

When tested in accordance with Clause 11, safes of resistance grades IV to X designated 'CD' shall achieve the minimum resistance values given in Table 1. 'CD' designation is not applicable to safes of resistance grades 0 to III and ATM safes.

When tested in accordance with Clause 11, strongroom doors and strongrooms (with or without a door) of resistance grades VIII to XIII designated 'CD' shall achieve the minimum resistance values given in Table 3. 'CD' designation is not applicable to strongroom doors and strongrooms of resistance grades 0 to VII.

4.6 Additional requirements for T2 designation

When tested in accordance with Clause 12, safes of resistance grades 0 to X (including EX and CD designation, if applicable) designated 'T2' shall achieve the minimum resistance values and requirements given in Table 1.

When tested in accordance with Clause 12, ATM safes of resistance grades L to VIII (including EX and GAS designation, if applicable) designated 'T2' shall achieve the minimum resistance values and requirements given in Table 2.

When tested in accordance with Clause 12 strongroom doors and strongrooms (with or without doors) of resistance grades 0 to XIII (including EX and CD designation, if applicable) designated 'T2' shall achieve the minimum resistance values and requirements given in Table 3.

4.7 Additional requirements for HYD designation

When tested in accordance with Clause 13, ATM safes of resistance grades III to VIII designated 'HYD' shall achieve the resistance test criteria stated given in Clause 13.

'HYD' designation is not applicable to ATM safes of resistance grade L to II, safes, strongrooms and strongroom doors.

Table 1

Minimum requirements for classification of safes (excluding ATM safes) into resistance grades

Resistance grade	Tool attack test (Clause 7) Tool attack test T2 (Clause 12)		Anchoring strength [a] (Clause 8)	Tool attack test on safe plinths (Clause 7)	Locks		Additional requirements for EX designation (optional) (Clause 9)	Additional requirements for CD designation (optional) (Clause 11)
	Resistance value for		Required force	Resistance value [c]	Quantity	Class according to EN 1300/ EN 17646	Post-detonation resistance valued [bc]	Resistance value [bc]
	Partial access	Complete access						
	RU	RU	kN	RU			RU	RU
0	30	30	50	20	1	A	[d]	[e]
I	30	50	50	20	1	A	[d]	[e]
II	50	80	50	30	1	A	4	[e]

Minimum requirements for classification of safes (excluding ATM safes) into resistance grades

Resistance grade	Tool attack test (Clause 7) Tool attack test T2 (Clause 12)		Anchoring strength [a] (Clause 8)	Tool attack test on safe plinths (Clause 7)	Locks		Additional requirements for EX designation (optional) (Clause 9)	Additional requirements for CD designation (optional) (Clause 11)
	Resistance value for		Required force	Resistance value [c]	Quantity	Class according to EN 1300/ EN 17646	Post-detonation resistance valued e [bc]	Resistance value [bc]
	Partial access	Complete access						
	RU	RU	kN	RU			RU	RU
III	80	120	50	50	1	B	6	[e]
IV	120	180	100	80	2	B	9	1 000
V	180	270	100	120	2	B	14	1 000
VI	270	400	100	180	2	C	20	1 000
VII	400	600	100	270	2	C	30	1 000
VIII	550	825	100	400	2	C	41	1 000
IX	700	1 050	100	550	2	C	53	1 000
X	900	1 350	100	700	2	C	68	1 000

[a] Applicable only to free-standing safes with a mass less than 1 000 kg.

[b] Resistance value for partial access.

[c] If the tool test is performed according Clause 12 (T2), the resistance value shall be achieved according Clause 12 (T2).

[d] EX designation is not permitted for resistance grades 0 and I.

[e] CD designation is not permitted for resistance grades 0 to III.