SLOVENSKI STANDARD
SIST ENV 1627:2000

01-maj-2000

Okna, vrata in polkna - Protivlomna odpornost - Zahteve in klasifikacija

Windows, doors, shutters - Burglar resistance - Requirements and classification

Fenster, Türen, Abschlüsse - Einbruchhemmung - Anforderungen und Klassifizierung

Fenetres, portes, fermetures - Résistance a l'effraction - Prescriptions et classification

Ta slovenski standard je istoveten z: **ENV 1627:1999**

ICS:

13.310	Varstvo pred kriminalom	Protection against crime
91.060.50	Vrata in okna	Doors and windows

SIST ENV 1627:2000 **en**

EUROPEAN PRESTANDARD
PRÉNORME EUROPÉENNE
EUROPÄISCHE VORNORM

ENV 1627

January 1999

ICS 13.310; 91.060.50

Descriptors: doors, windows, closures, mechanical strength, burglar resistance, specifications, classifications, safety

English version

Windows, doors, shutters - Burglar resistance - Requirements and classification

Fenêtres, portes, fermetures - Résistance à l'effraction - Prescriptions et classification

Fenster, Türen, Abschlüsse - Einbruchhemmung - Anforderungen und Klassifizierung

This European Prestandard (ENV) was approved by CEN on 25 December 1997 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. ENV 1627:1999 E

Contents

0 Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 33 "Doors, windows, shutters and building hardware", the secretariat of which is held by AFNOR.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The status of European Prestandard was proposed because some countries do not yet have any experience in testing with manual burglary attempts. The ENV period gives all countries the possibility of gaining experience in the application of this Prestandard, of exchanging the experience gained and of harmonising the procedure. During this period it will be possible to determine whether parts of the manual attempt test methods can be replaced by test methods with a higher degree of reproducibility, see e. g. BSI:PAS011:1994.

The resistance classes relate to the test methods published in ENV 1628, ENV 1629 and ENV 1630.

1 Scope

This European Prestandard specifies requirements and classification for burglar resistant properties of doors, windows and shutters. It is applicable to the following means of opening: Turning, tilting, folding, turn-tilting, top or bottom hung, sliding (horizontally and vertically) and rolling, as well as fixed constructions.

This European Prestandard is not applicable to manipulation and burglary attempts in respect of electronic or electromagnetic security devices.

> **NOTE:** Building elements which can be reached or driven through by vehicles should be protected by appropriate measures such as barriers, extensible ramps, etc.

2 Normative references

This European Prestandard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ENV 1628: 1999	Windows, doors, shutters Burglar resistance Test method for the determination of resistance under static loading
ENV 1629: 1999	Windows, doors, shutters Burglar resistance Test method for the determination of resistance under dynamic loading
ENV 1630: 1999	Windows, doors, shutters Burglar resistance Test method for the determination of resistance to manual burglary attempts
prEN 356: 1990	Glass in building - Security glazing: Testing and classification of resistance against manual attack
prEN 1303	Building hardware - Cylinders for locks - Requirements and test methods
prEN 1906	Building hardware - Lever handles and knobs - Requirements and test methods
prEN 12209-1	Building hardware - Locks and latches - Part 1: Mechanically operated locks and latches; Requirements and test methods

3 Definitions

For the purposes of this European Prestandard, the following definitions apply:

3.1 burglar resistance: The property of a door, window or shutter, to resist attempts at forced entry into the protected room or area. By applying physical force and with the aid of predefined tools, the window, door or shutter is damaged or destroyed. The criteria for this action are defined within this European Prestandard.

3.2 burglar resistant elements: Complete, functioning elements that comply with this European Prestandard. These elements when built in and fastened or fastened and locked, have the function of resisting forced entry through the application physical force assisted by predefined tools.

3.3 resistance class: The level of resistance that a window, door or shutter provides against burglary attempts.

3.4 test specimen: Complete, functioning window, door or shutter

3.5 sub-frame: A surrounding frame into which the test specimen is mounted by the applicant in accordance with the manufacturer´s instructions. The sub-frame is supplied by the applicant and takes the place of the various forms of wall constructions.

3.6 shutter for windows and doors: For the static test (ENV 1628), shutters are separated according to the type of construction into the following 2 groups:

3.6.1 panel shutter: Shutter consisting of one or more panels which may pivot and / or fold and / or slide in order to open / close (see 4.5.1).

3.6.2 roller shutter: Shutter, the curtain of which consists of movable, interconnected laths, and travels over a roller in order to open / close (see 4.5.2).

3.7 attack side: The side of the test specimen defined by the applicant as the side exposed to attack.

3.8 closing conditions

3.8.1 closed and fastened condition: The condition where the window, door or shutter is secured in such a way that it can be opened from the inside without a key and without any damage - but it cannot be opened from the attack side (see examples in Annex A).

3.8.2 closed, fastened and locked condition: The condition where the window, door or shutter is secured in such a way that it cannot be opened from either side without a key or electronic device and without any damage (see examples in Annex A).

3.9 resistance time: The working time of the test person carrying out the manual burglary test, including times of less than 5 s each for tool changes, e.g. exchanging a screw driver for a crow bar.

3.10 rest time: The time taken when the test person carrying out the manual burglary test interrupts his work for a rest. It is not compulsory to take a rest.

3.11 time for tool changes: The time for the exchange or replacement of a tool or a part thereof, e.g. a defective drill, a blunt saw blade etc.

3.12 observation time: The time required for the leader of the test team to observe the test and to decide on the further execution of the test. The observation time is not included in the resistance time.

3.13 total test time: The combination of the resistance times, the rest times, the times for tool changes and the observation times.

3.14 accessible opening: An opening permitting a test block of cross section of any of the dimensions shown below to be passed through it.

a rectangle of 400 mm x 250 mm or
an ellipse of 400 mm x 300 mm or
a circle of diameter 350 mm

4 Requirements

4.1 Documentation

Which of the closed conditions (see 3.6) is important for a test specimen shall be determined and described by the applicant.

Before the test the applicant shall provide the following documents to the testing laboratory :

- Detailed drawings
- Parts lists
- A list of all the available sizes of the burglar resistant window, the burglar resistant door or the burglar resistant shutter
- Definition of the attack side(s)
- The resistance class that the applicant wishes to attain
- All available evidence of performance in respect of hardware, seals or other accessories
- Manufacturer's installation instructions

NOTE: If it is intended that a window, door or shutter should be burglar resistant in several closing conditions, then these are to be considered during the test and noted in the test report

4.2 Manufacturer's installation instructions

Installation shall be carried out in accordance with the manufacturer's written installation instructions. An example for the contents of the installation instructions is contained in annex B.

4.3 Glazing and other infillings

4.3.1 Fixings

The fixings for glazing and other infillings shall be so constructed as to be able to withstand static and dynamic loading and manual burglary attempts and shall not be capable of being removed from the attack side.

4.3.2 Minimum requirements for infillings of glass

Glazing units shall as a minimum comply with the requirements of table 1 relevant to the anticipated resistance class.

Table 1

Anticipated resistance class of window, door or shutter in accordance with this ENV	Resistance class of glazing in accordance with prEN 356
1	No requirement
2	4
3	5
4	6
5	7
6	8

For test specimens for resistance classes 1 to 6 no manual burglary attempt in accordance with subclause 4.5.4 has to be carried out on the glass if evidence exists that the resistance class for the glass is in accordance with table 1.

Where the sight size of the glazed opening is greater than the size of an accessible opening stated in subclose 3.14, then for classes 5 and 6 manual burglary attempts have to be carried out in accordance with subclause 4.5.4. This test is not necessary if in addition to the evidence that the resistance class of the glazing is in accordance with table 1, documented evidence exists that the glazing meets the relevant requirements of this European Prestandard.

NOTE: This can be archieved e. g. by testing the glass in a similar construction in accordance with the criteria of this European Prestandard.

4.3.3 Requirements for infillings of other materials

Infillings of other materials shall conform with the requirements of subclause 4.5.4

4.4 Requirements for hardware

The requirements given in Annex C (normative) shall apply until the European standards on locks and hardware are published.

All operating elements shall be capableof ensuring the closed and fastened condition. Operating elements accessible from the attack side as well as operating elements of glazed windows, doors and shutters of resistance class 1 which do not have security glazing in accordance with prEN 356 shall in addition be capable of ensuring locked condition.

Locks and hardware shall fulfill the protection objective of table C1 in Annex C.

4.5 Requirements for mechanical strength

4.5.1 Static loading of windows, doors, and panel shutters for windows and doors

In the static loading test in accordance with ENV 1628, the test specimen shall not deflect beyond the limits cited in table 2 under the application of the respective loads.

Table 2

Resistance Class	1+2 [1]			3			4			5+6 [1]		
	Test Load	Deflection	Pressure Pad	Test Load	Deflection	Pressure Pad	Test Load	Deflection	Pressure Pad	Test Load	Deflection	Pressure Pad
Loading Points	kN	mm	Type	kN	mm	Type	kN	mm	Type	kN	mm	Type
F1 Corner of infilling	3	8	1 [3]	6	8	1	10	8	1	15	8	1
F2 Between Locking Points	1,5	30	1/2	3	20	1/2	6	10	1/2	10	10	1/2
F3 Locking Points	3/6 [2]	10	1/2	6	10	1/2	10	10	1/2	15	10	1/2

[1] **Resistance classes 1 and 2 and also 5 and 6:** The static and dynamic tests are carried out with identical loads for resistance classes 1 and 2 and resistance classes 5 and 6 respectively. Only for the manual burglary attempt tests will the requirements be different.

[2] When a test specimen is equipped with a multi-point locking system or with a main lock and an additional lock, the static load F3 for classes 1 and 2 shall be **3 kN**. When the test specimen is equipped only with a main lock, the static load F3 for classes 1 and 2 shall be **6 kN**.

[3] For the static tests in resistance class 1 a sheet of derived timber products of 300 mm x 300 mm may be used between the pressure pad and the glass in order to avoid any glass breakage.

As no deflection as specified in table 2 is measured at the special loading points when two- or multi-leaf windows, doors or shutters are tested these elements shall not open under the load and shall still function afterwards. The determination of the deflection is described in ENV 1628.