SLOVENSKI STANDARD
SIST EN 1627:2011

01-oktober-2011

Nadomešča:
SIST ENV 1627:2000

Vrata, okna, obešene fasade, mreže in polkna - Protivlomna odpornost - Zahteve in klasifikacija

Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Requirements and classification

Einbruchhemmende Bauprodukte (nicht für Betonfertigteile) - Anforderungen und Klassifizierung

Produits de construction résistants à l'effraction (sauf éléments en béton préfabriqué) - Prescriptions et classification

Ta slovenski standard je istoveten z: **EN 1627:2011**

ICS:

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

SIST EN 1627:2011 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 1627

May 2011

ICS 13.310; 91.060.50

Supersedes ENV 1627:1999

English Version

Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Requirements and classification

Blocs-portes pour piétons, fenêtres, façades rideaux, grilles et fermetures - Résistance à l'effraction - Prescriptions et classification

Türen, Fenster, Vorhangfassaden, Gitterelemente und Abschlüsse - Einbruchhemmung - Anforderungen und Klassifizierung

This European Standard was approved by CEN on 2 December 2010.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 1627:2011) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

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 November 2011, and conflicting national standards shall be withdrawn at the latest by November 2011.

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

This document supersedes ENV 1627:1999.

This European Standard is one of a series of standards for burglar resistant pedestrian doorsets, windows, curtain walling, grilles and shutters. The other standards in the series are:

— EN 1628:2011, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance under static loading*;

— EN 1629:2011, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance under dynamic loading*;

— EN 1630:2011, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance to manual burglary attempts*.

This standard is a revision of, and supersedes ENV 1627:1999. The three other standards in this series are revisions of, and supersede ENV 1628, ENV 1629 and ENV 1630 respectively.

This revision incorporates grilles and curtain walling in the range of application.

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

1 Scope

This European Standard specifies requirements and classification systems for burglar resistant characteristics of pedestrian doorsets, windows, curtain walling, grilles 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. It also covers products that include items such as letter plates or ventilation grilles. It specifies requirements for the burglar resistance of a construction product (as defined in 3.1 of this standard).

This European Standard does not directly cover the resistance of locks and cylinders to attack with picking tools. It also does not cover precast concrete elements.

It also does not cover the attack of electric, electronic and electromagnetic operated burglar resistant construction products using attack methods that might defeat these characteristics.

NOTE 1 The mechanical parts of electric, electronic and electromagnetic operated burglar resistant construction products may be tested in electrical powerless condition.

This European Standard does not apply to doors, gates and barriers, intended for installation in areas in the reach of persons, and for which the main intended uses are giving safe access for goods and vehicles accompanied or driven by persons in industrial, commercial or residential premises, as covered by EN 13241-1.

NOTE 2 Construction products that can be reached or driven through by vehicles should be protected by appropriate measures such as barriers, extensible ramps, etc.

2 Normative references

The following referenced documents are indispensable for the application 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 356:1999, *Glass in building — Security glazing — Testing and classification of resistance against manual attack*

EN 1303:2005, *Building hardware — Cylinders for locks — Requirements and test methods*

EN 1628:2011, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance under static loading*

EN 1629:2011, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance under dynamic loading*

EN 1630:2011, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance to manual burglary attempts*

EN 1906:2010, *Building hardware — Lever handles and knob furniture — Requirements and test methods*

EN 12209:2003, *Building hardware — Locks and latches — Mechanically operated locks, latches and locking plates — Requirements and test methods*

EN 12519:2004, *Windows and pedestrian doors — Terminology*

ISO 1000:1992, *SI units and recommendations for the use of their multiples and of certain other units*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12519:2004 and in ISO 1000:1992 and the following apply.

3.1
burglar resistance
property of pedestrian doorsets, windows, curtain walling, grilles and shutters to resist attempts at forced entry using physical force and with the aid of predefined tools into the protected room or area

3.2
burglar resistant product
complete, functioning element that, when built in and fastened or fastened and locked, has the function of resisting forced entry through the application of physical force assisted by predefined tools

3.3
Group 1 product
product that has a solid and rigid leaf or opening element and the principal movement to open is turning of the element

NOTE Examples of Group 1 products are hinged or pivoted windows and doorsets.

3.4
Group 2 product
product that has a solid and rigid leaf or opening element and the principal movement to open is sliding

NOTE Examples of Group 2 products are sliding doorsets and sliding windows.

3.5
Group 3 product

product that has a leaf or opening element constructed from a number of rigid elements joined together such that the elements may move relative to each other

NOTE An example of a Group 3 product is a roller shutter.

3.6
Group 4 product
product with one or more openings (excluding letter plates) through which gap gauge B (25 mm) can pass

NOTE An example of a Group 4 product is a grille.

3.7
resistance class (RC)
level of resistance that the product provides against burglary attempts

3.8
attack side
side of the test specimen defined by the applicant as the side exposed to attack

3.9
non-attack side
side of the test specimen defined by the applicant as the side not exposed to attack

3.10
roller shutter
shutter, the curtain of which consists of movable, interconnected rigid elements, and travels over a roller in order to open/close

3.11
roller grille
component that can be moved vertically or horizontally in front of the opening to be secured and that can also be removed

NOTE The individual grille bars are movably interconnected with each other. The grille curtain travels over a roller in order to open.

3.12
closed condition
condition defined and described by the manufacturer or applicant in which the tested element meets the burglar resistant requirements

3.13
closed and fastened condition
condition where the window, doorset or shutter is secured in such a way that it can be opened from the non-attack side without a key, but that it cannot be opened from the attack side without a key

3.14
closed, fastened and locked condition
condition where the window, doorset or shutter is secured in such a way that it cannot be opened from either side without a key

3.15
resistance time
working time of the test person carrying out the manual burglary test

NOTE The resistance time includes times of less than 5 s each for tool changes, e.g. exchanging a screwdriver for a crow bar.

3.16
infilling
glazing or panel of any material or combination of materials which are used to fill an aperture in a window or doorset that can be replaced, and which are typically retained by glazing beads

4 Resistance classification

Each construction product conforming to this standard shall be classified according to one of six resistance classes, depending on the level of burglar resistance offered by the product.

NOTE The resistance classes correspond to known methods of attack currently used by burglars as described in Annex C, Table C.1.

A system or family of products shall be classified using the approach described in Annex D.

A product offering burglar resistance at more than one closing condition shall be tested, assessed and classified at each closing condition.

In the documentation accompanying the product, the resistance class shall be given as per the following examples:

— Burglar resistant window EN 1627 RC 1N

— Burglar resistant window EN 1627 RC 3

— Burglar resistant door EN 1627 RC 2.

The procedure for testing and classification shall be carried out as described in Annex F.

For the purpose of historic data, products classified under ENV 1627:1999 to classes 2 to 6 can be assumed to meet the same classes of this standard.

5 Infillings

When tested in accordance with EN 1628:2011, EN 1629:2011 or EN 1630:2011, infilling other than glass shall not exhibit failure at the resistance class claimed. This standard specifies requirements relating to the security level of glazing.

When several panes of glass are used in a product, e.g. insulating glass units, then at least one pane shall meet the resistance class as shown in Table 1.

Table 1 — Minimum requirements for glazings

Resistance class	Resistance class of glazing according to EN 356
RC 1 N	No requirements*
RC 2 N	No requirements*
RC 2	P4 A
RC 3	P5 A
RC 4	P6 B
RC 5	P7 B
RC 6	P8 B
* In these resistance classes, national provisions may be followed.	

NOTE The use of furniture that requires a removable key to effect unlocking might be required when glazing with a resistance class lower than P4A is used.

6 Hardware

Lock cylinders, furniture and locks shall either meet the requirements of Table 2 or shall conform to Annex B, Table B.1.

Human intervention tests according to EN 1630:2011 shall be carried out on all hardware for resistance class 5 and 6.

Table 2 — Requirements for hardware

Resistance Class	RC 1 N	RC 2 N / RC 2	RC 3	RC 4	RC 5	RC 6
EN 1303 **Cylinder (Digit 7)** **Cylinder (Digit 8)**	 4 1	 4 1	 4 1	 6 2	 6 2	 6 2
EN 1906 **Furniture (Digit 7)**	1	2	3	4	4	4
EN 12209 **Locks (Digit 7)**	3	3	4	7 [a]	7	7
[a] A lock with security class 6 (digit 7) may be used if the drill resistance required in class 7 is provided by the door construction.						

7 Mechanical strength

7.1 Static loading

When tested in accordance with EN 1628:2011 using the loads detailed in Tables 3, 4 and 5 as appropriate, the test specimen shall not exhibit failure at the resistance class claimed.

The loading tests shall be conducted in the sequence detailed in the relevant test method.

Table 3 — Static loading of Group 1 and Group 2 products

	Resistance class (RC)											
	1, 2			**3**			**4**			**5, 6**		
Loading points	Test load kN	Gap gauge	Pressure pad Type	Test load kN	Gap gauge	Pressure pad Type	Test load kN	Gap gauge	Pressure pad Type	Test load kN	Gap gauge	Pressure pad Type
F1 Corner of infilling	3	B	1	6	B	1	10	B	1	15	B	1
F2 Leaf and casement corners	1,5	B	1 or 2	3	B	1 or 2	6	B	1 or 2	10	B	1 or 2
F3 Locking Points	3	A	1 or 2	6	A	1 or 2	10	A	1 or 2	15	A	1 or 2
F3.a Group 1 [a] **products** Locking Points (additional loadings)	1,5	A	–	–	–	–	–	–		–	–	–
F3 Group 2 products Lift up (additional loadings)	3	A	1 or 2	6	A	1 or 2	10	A	1 or 2	15	A	1 or 2

[a] Resistance class 1 product only.

Table 4 — Static loading of Group 3 products

	Resistance class (RC)											
	1, 2			3			4			5, 6		
Loading points	Test load kN	Limiting value mm	Pressure pad Type	Test load kN	Limiting value mm	Pressure pad Type	Test load kN	Limiting value Mm	Pressure pad Type	Test load kN	Limiting value mm	Pressure pad Type
F1.1 Guide rail deflection test	3	30°[a]	4	6	30°[a]	4	10	30°[a]	4	15	30°[a]	4
F3 Curtain lift test	3	C[c]	1 or 2	6	C[c]	1 or 2	10	C[c]	1 or 2	15	C[c]	1 or 2
F2 Lath engagement test	1,5	10	1 or 2	3	10	1 or 2	6	10	1 or 2	10	10	1 or 2
F1 Static test on guide rail and curtain	3	10[b]	3	6	10[b]	3	10	10[b]	3	15	10[b]	3

[a] Maximum allowable deflection of the loaded leg of the guide rail is 30°. The determination of the angle is described in EN 1628.
[b] Minimum depth of penetration under static load.
[c] Checked by means of gap gauge type C.

Table 5 — Static loading of Group 4 products

Loading points	Resistance class (RC)											
	1, 2			3			4			5, 6		
	Test Load kN	Gap gauge mm	Pressure pad Type	Test Load kN	Gap gauge mm	Pressure pad Type	Test Load kN	Gap gauge mm	Pressure pad Type	Test Load kN	Gap gauge mm	Pressure pad Type
F2.1 Between two fixing points	1,5	D	5	3	D	5	6	D	5	10	D	5
F2.2 Loading between two junction points	1,5	D	5	3	D	5	6	D	5	10	D	5
F3 Locking points	3	D	1 or 2	6	D	1 or 2	10	D	1 or 2	15	D	1 or 2
F3.1 Fixing point between grille and masonry	3	D	5	6	D	5	10	D	5	15	D	5
F1 Static test on guide rail and curtain or two adjacent grille bars at a junction point	3	D	5	6	D	5	10	D	5	15	D	5
F1.1 Guide rail deflection test load	3	30°[a]	4	6	30°[a]	4	10	30°[a]	4	15	30°[a]	4
F3.2 Curtain lift test	3	D	1 or 2	6	D	1 or 2	10	D	1 or 2	15	D	1 or 2
F2.3 Drawing the grille curtain out of the guide rail	1,5	D	1 or 2	3	D	1 or 2	6	D	1 or 2	10	D	1 or 2

[a] Maximum allowable deflection of the loaded leg of the guide rail is 30°. The determination of the angle is described in EN 1628.