SLOVENSKI STANDARD
SIST EN 13126-5:2012+A1:2015

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Stavbno okovje - Okovje za okna in zastekljena vrata - Zahteve in preskusne metode - 5. del: Naprave, ki preprečujejo odpiranje oken in zastekljenih vrat

Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 5: Devices that restrict the opening of windows and door height windows

Baubeschläge - Beschläge für Fenster und Fenstertüren - Anforderungen und Prüfverfahren - Teil 5: Vorrichtungen zur Begrenzung des Öffnungswinkels von Fenstern

Quincaillerie pour le bâtiment - Exigences et méthodes d'essai des ferrures de fenêtres et portes-fenêtres - Partie 5: Dispositifs limiteurs d'ouverture des fenêtres et portes-fenêtres

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Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 5: Devices that restrict the opening of windows and door height windows

Quincaillerie pour le bâtiment - Exigences et méthodes d'essai des ferrures de fenêtres et portes-fenêtres - Partie 5: Dispositifs limiteurs d'ouverture des fenêtres et portes-fenêtres

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 13126-5:2011+A1:2014) 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of an identical text or by endorsement, at the latest by May 2015, and conflicting national standards shall be withdrawn at the latest by May 2015.

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 ▌A1⟩ EN 13126-5:2011 ⟨A1▌.

This document includes Amendment 1 approved by CEN on 2014-09-22.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ▌A1⟩ ⟨A1▌.

A full contribution to the preparation of this European Standard has been made by the European manufacturers’ organization "ARGE" and national standards bodies.

This European Standard is one of a series of European Standards dedicated to building hardware products. It is divided into many parts, the first part being common to all the other parts of this standards series, incorporating all types of hardware for windows and door height windows.

Annex A (informative) of EN 13126-1 lists the titles of all parts of this European Standard and refers to their different window opening-type applications.

Annex B (informative) of EN 13126-1 provides a list of the elements of components used on the various types of window opening functions.

The performance tests incorporated in this standard are considered to be reproducible and as such will provide a consistent and objective assessment of the performance of these products.

▌A1⟩ *deleted text* ⟨A1▌

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

[A1] This Part of EN 13126 specifies requirements and test methods for durability, strength, security and functionality of devices that restrict the opening of windows and door height windows.

On devices that restrict the opening of

- Tilt&Turn, Tilt-First, Turn-Only, or Tilt-Only windows and door-height windows
- horizontal and vertical pivot windows and door height windows
- side-hung Casements and top–hung windows and door height windows (opening outwards)

this part of EN 13126 only applies, if a restriction of the opening occurs within the specification in Annex A, E or G of EN 1191:2012 in accordance with the intended use specified by the manufacturer. [A1]

NOTE 1 Restrictors and reverse restrictors can be either a separate item of hardware or an integral part of hardware, for example a part of the operating gear or an integral part of a hinge.

NOTE 2 Windows may be fitted with more than one restrictor.

NOTE 3 The requirements included within this standard take the needs for child safety into consideration, child protective window restrictors intended to be installed by the end consumers are beyond the scope of this standard. Therefore, for the DIY market refer to PC398 and [A1] EN 16281 [A1].

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 1670, *Building hardware - Corrosion resistance - Requirements and test methods*

EN 12519, *Windows and pedestrian doors - Terminology*

EN 13049, *Windows - Soft and heavy body impact - Test method, safety requirements and classification*

EN 13126-1, *Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 1: Requirements common to all types of hardware*

[A1] CEN/TR 13387, *Child use and care articles - Safety guidelines* [A1]

ISO 8317, *Child-resistant packaging — Requirements and testing procedures for reclosable packages*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13126-1 and EN 12519 and the following apply.

3.1
limiting restrictor (including maximum opening stops)
device intended to limit the movement of an active sash to a predetermined position

3.2
holding restrictor (including peg type casement stays)
mechanical device which is intended to hold the active sash in a predetermined position

3.3
reverse restrictor
mechanical device which holds a reversed active sash securely for cleaning

3.4
safety restrictor
robust mechanical device intended to limit the initial movement of an active sash in a predetermined position, maximum 100 mm, to prevent accidental passage through the window

3.5
child safety restrictor
[A1⟩ robust mechanical device intended to limit the initial movement of an active sash in a predetermined position, maximum 89 mm, to prevent the passage of small children (passage of small children aged from 9 to 12 months in accordance with CEN/TR 13387) ⟨A1]

4 Classification

4.1 General

The classification for devices that restrict the opening of windows shall be in accordance with the requirements of EN 13126-1.

4.2 Category of use (1 – first digit)

No marking is required for the category of use in accordance with EN 13126-1.

4.3 Durability (2 – second digit)

Grades shall be in accordance with EN 13126-1.

4.4 Mass (3 – third digit)

Grades shall be in accordance with EN 13126-1.

4.5 Fire resistance (4 – fourth digit)

Grades shall be in accordance with EN 13126-1.

4.6 Safety in use (5 – fifth digit)

One grade shall be identified in accordance with EN 13126-1.

Hardware with safety requirements shall show a grade as generated from Table 1.

The grade shall consist of two digits separated by a slash.

The first of the digits shall represent the testing performed to conform to the selected safety requirements as shown in Table 2.

The second of the digits shall represent the impact test drop height as shown in 5.7.

Table 1 — Safety in use grades

Safety requirement grade	Impact test drop height grade
1 : No requirements	0 : No requirements
2 : Safety requirements	1 : 200 mm
3 : Child safety requirements	2 : 300 mm
	3 : 450 mm
	4 : 700 mm
	5 : 950 mm
EXAMPLE Grade 3/2 – Child safety requirements. 300mm drop height for impact test.	

4.7 Corrosion resistance (6 – sixth digit)

Grades shall be in accordance with EN 13126-1.

4.8 Security (7 – seventh digit)

No marking is required for the category of security in accordance with EN 13126-1.

4.9 Application (8 – eighth digit)

The eighth digit shows a grade as indicated in Table 2 indicating the part of the standard which was used for testing the devices that restrict the opening of windows in accordance with EN 13126-1. Seven grades are identified.

Table 2 — Application grade

	Safety in use grade (5th digit)	1				2			3	
	Application Grade (8th digit)	5/1	5/2	5/3		5/4	5/5		5/6	5/7
Clause	Description	Limiting restrictor	Holding restrictor	Reverse restrictor		Safety limiting restrictor	Safety holding restrictor		Child safety limiting restrictor	Child safety holding restrictor
5.2.2	Safety initial opening (max. 100 mm)					X	X			
5.2.3	Child safety initial opening (max. 89 mm)								X	X
5.3.2	Restrictor operation cycle	X	X			X	X		X	X
5.3.3	Restrictor engage and release cycle	X	X	X		X	X		X	X
5.4.2	Hold open strength 200 N		X				X			X
5.4.3	Restrictor strength 350 N	X	X	X		X	X			
5.4.4	Child safety restrictor strength 500 N								X	X
5.5	Static load					X	X		X	X
5.6	Percussion								X	X
5.7	Impact					X	X		X	X
5.8	Cutting					X	X		X	X

4.10 Test sizes – Size limitations (9 – ninth digit)

The ninth digit shows the test sizes in accordance with EN 13126-1 as follows:

S.W. (sash width) in mm / S.H. (sash height) in mm

EXAMPLE 600 S.W. x 1 200 S.H.

NOTE The specified sizes are a test sizes only. It does not relate to the maximum sizes to which a window may be fabricated.

The window test size shall be determined by reference to the relevant part of the standards series for that hardware type or in accordance with Table 3.

Table 3 — Test window size (S.W. x S.H.)

	Test size A	Test size B	Test size C	Test size D	Test size E
Side Hung / Vertical Pivot	600 x 1 200	900 x 1 200	1 200 x 1 200	1 800 x 1 200	2 300 x 1 200
Top Hung / Horizontal Pivot	1 200 x 600	1 200 x 900	1 200 x 1 200	1 200 x 1 800	1 200 x 2 300

4.11 Example of classification for devices that restrict the opening of windows

1	2	3	4	5	6	7	8	9
-	**5**	**030**	**0**	**3/2**	**3**	**-**	**5/7**	**600/1 200**

This denotes a device that restricts the opening of windows, which has the following:

Digit 1	category of use	(no requirements)
Digit 2	durability	grade 5 (25 000 operation cycles, 3 750 engage and release cycles)
Digit 3	mass	30 kg
Digit 4	fire resistance	grade 0 (no requirements)
Digit 5	safety in use	grade 3/2 – Child safety requirements. 300 mm drop height for impact test
Digit 6	corrosion resistance	grade 3
Digit 7	security	(no requirements)
Digit 8	applicable part	grade 5/7; Child safety holding restrictor (max. 89 mm opening)
Digit 9	test sizes	S.W. = 600 mm, S.H. = 1 200 mm

5 Requirements

5.1 General

The requirements for devices that restrict the opening of windows shall be in accordance with EN 13126-1.

For restrictors that are a separate item of hardware the manufacturers' installation documentation shall make clear the application range (minimum and maximum dimensions) of the restrictor. (See Figure A.1)

Where a restricted initial opening dimension is specified the installation position on the window shall include the locating dimensions to ensure that the intended grade is achieved.

Where the functionality of the restrictor is determined by the installation position on the window, the locating dimensions shall ensure the hardware functions correctly.

Locating dimensions shall ensure the hardware functions correctly.

5.2 Initial opening test

5.2.1 General

The test specified in 7.2.1 shall be used to ensure the hardware restricts the initial movement of the active sash, in accordance with Table 2.

Safety hardware shall be tested in accordance with 5.2.2.

Child safety hardware shall be tested in accordance with 5.2.3.

The gauge type selected shall be relevant to the grade necessary. (See Figure A.2).

NOTE Where hardware has multiple restrictor functions, in addition to the intended safety / child safety restrictor function, only the intended safety / child safety restrictor function has to conform to the initial opening criteria between the sash and fixed outer frame.

5.2.2 Safety initial opening test (max. 100 mm)

Upon completion of the initial opening test in accordance with 7.2.2:

— Gauge A (see Figure A.2) shall not pass through the opening between the sash and frame (see Figure A.3) without any force applied; and

— the restrictor shall continue to function normally.

5.2.3 Child safety initial opening test (max. 89 mm)

Upon completion of the initial opening test in accordance with 7.2.3:

— gauge B (see Figure A.3) shall not pass through the opening between the sash and the frame (see Figure A.3) during the test;

— the restrictor shall continue to function normally; and

— the restrictor shall conform with one of the following three criteria:

a) the restrictor cannot be released to enable further opening; or

b) the restrictor is able to be secured against further opening with the use of a specifically designed removal device or tool; or

c) the restrictor is able to be secured against further opening with the use of a release mechanism which conforms to the requirements of ISO 8317 when tested in accordance with ISO 8317.

NOTE ISO 8317 “Child-resistant packaging — Requirements and testing procedures for reclosable packages” contains test procedures and pass/fail criteria for child-resistant packages. The same procedures are applicable to child safety restrictors.

5.3 Durability test

5.3.1 General

The tests specified in 7.3.2 and 7.3.3 shall be used to ensure the hardware is capable of continued operation after cycling in accordance with grades specified in 7.3.1, with regard given to normal maintenance.