



SLOVENSKI STANDARD

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Stavbno okovje - Okovje za okna in zastekljena vrata - Zahteve in preskusne metode - 9. del: Okovje za vodoravno in navpično vrtljiva okna

Building hardware - Hardware for windows and door height windows - Requirements and test methods - Part 9: Hardware for horizontal and vertical pivot windows

Baubeschläge - Beschläge für Fenster und Fenstertüren - Anforderungen und Prüfverfahren - Teil 9: Beschläge für Schwing- und Wendefenster

Quincaillerie pour le bâtiment - Ferrures de fenêtres et portes-fenêtres - Exigences et méthodes d'essai - Partie 9: Ferrures pour fenêtres basculantes et pivotantes

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EUROPEAN STANDARD

EN 13126-9

NORME EUROPÉENNE

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English Version

Building hardware - Requirements and test methods for windows and door height windows - Part 9: Hardware for horizontal and vertical pivot windows

Quincaillerie pour le bâtiment - Exigences et méthodes d'essai des ferrures de fenêtres et portes-fenêtres - Partie 9: Ferrures pour fenêtres basculantes et pivotantes

Baubeschläge - Anforderungen und Prüfverfahren für Fenster und Fenstertüren - Teil 9: Beschläge für Schwing- und Wendefenster

This European Standard was approved by CEN on 14 December 2012.

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.

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COMITÉ EUROPÉEN DE NORMALISATION
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EN 13126-9:2013 (E)**Foreword**

This document (EN 13126-9:2013) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling - Building hardware”, 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of an identical text or by endorsement, at the latest by August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

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 CEN/TS 13126-9:2004.

EN 13126 is composed of the following parts:

- 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*;
- EN 13126-2, *Building hardware — Requirements and test methods for windows and doors height windows — Part 2: Window fastener handles*;
- EN 13126-3, *Building hardware — Hardware for windows and door-height windows — Requirements and test methods — Part 3: Handles, primarily for Tilt&Turn, Tilt-First and Turn-Only hardware*;
- EN 13126-4, *Building hardware — Requirements and test methods for windows and doors height windows — Part 4: Espagnolettes*;
- EN 13126-5, *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*;
- EN 13126-6, *Building hardware — Requirements and test methods for windows and doors height windows — Part 6: Variable geometry stay hinges (with or without a friction stay)*;
- EN 13126-7, *Building hardware — Requirements and test methods for windows and door height windows — Part 7: Finger catches*;
- EN 13126-8, *Building hardware — Requirements and test methods for windows and doors height windows — Part 8: Tilt&Turn, Tilt-First and Turn-Only hardware*;
- EN 13126-9, *Building hardware — Hardware for windows and door height windows — Part 9: Hardware for horizontal and vertical pivot windows (the present document)*;
- EN 13126-10, *Building hardware — Requirements and test methods for windows and doors height windows — Part 10: Arm-balancing systems*;
- EN 13126-11, *Building hardware — Requirements and test methods for windows and doors height windows — Part 11: Top hung projecting reversible hardware*;
- EN 13126-12, *Building hardware — Requirements and test methods for windows and doors height windows — Part 12: Side hung projecting reversible hardware*;

- EN 13126-13, *Building hardware — Hardware for windows and balcony doors — Requirements and test methods — Part 13: Sash balances*;
- EN 13126-14, *Building hardware — Hardware for windows and balcony doors — Requirements and test methods — Part 14: Sash fasteners*;
- EN 13126-15, *Building hardware — Requirements and test methods for windows and doors height windows — Part 15: Rollers for horizontal sliding and sliding folding windows and doors*;
- EN 13126-16, *Building hardware — Requirements and test methods for windows and doors height windows — Part 16: Hardware for Lift&Slide windows and doors*;
- EN 13126-17, *Building hardware — Requirements and test methods for windows and doors height windows — Part 17: Hardware for Tilt&Slide windows and doors*;
- prEN 13126-18, *Building hardware — Specifications for the fittings for the operation of windows and door height windows — Part 18: Requirements and test procedures for durability, strength, security and functionality of Fan light openers for windows and door height windows*
- EN 13126-19, *Building hardware — Requirements and test methods for windows and door height windows — Part 19: Sliding Closing Devices*.

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.

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EN 13126-9:2013 (E)**1 Scope**

This European Standard specifies the requirements and test methods for durability and strength of hardware for vertical and horizontal pivot windows and door height windows (including pivot hinges and central locking systems).

If the hardware manufacturer would like to classify an integrated restrictor function, the pivot hinges may be tested in accordance with EN 13126-5.

This European Standard does not apply to manoeuvring devices which are covered in EN 13126-2, EN 13126-3, EN 13126-7, EN 13126-14 and prEN 13126-18.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 12519:2004, *Windows and pedestrian doors — Terminology*

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

3 Terms and definitions

SIST EN 13126-9:2013

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

3.1**fastened closed position**

position in which the active sash rests against the frame or compresses the gaskets on all sides, and the central locking system is fully engaged

3.2**closed position**

position in which the active sash rests against the frame or compresses the gaskets on all sides, and the central locking system is not engaged

3.3**opened position**

position in which the active sash is at a predefined opening angle (normally 45°) or the maximum opening travel of the operated window

3.4**reversed position**

position in which the active sash has been rotated past the opening position until the internal and external faces of the active sash are inverted

3.5**limiting restrictor**

device equipped with a maximum opening stop, intended to limit the movement of a sash to a predetermined position

3.6

rest time

time, in seconds, of a stationary period either:

- between two changes of direction of movement;
- between the completion of a movement of the active sash and the subsequent operation of the central locking system;
- between the completion of an operation of the central locking system and the subsequent movement of the active sash;
- between two cycles

3.7

central locking system

hardware used all round or only partially to fasten the active sash

4 Classification

4.1 General

The hardware classification shall be in accordance with the requirements in EN 13126-1.

4.2 Category of use (1 – first digit)

No marking is required for the category of use.

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)

Grades shall be in accordance with EN 13126-1.

4.7 Corrosion resistance (6 – sixth digit)

Grades shall be in accordance with EN 13126-1.

4.8 Security (7 – seventh digit)

Grades shall be in accordance with EN 13126-1.

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EN 13126-9:2013 (E)**4.9 Application (8 – eighth digit)**

Three grades are identified:

- 9/1: hardware for horizontal pivot windows, with braking function;
- 9/2: hardware for horizontal pivot windows, without braking function;
- 9/3: hardware for vertical pivot windows.

4.10 Test sizes (9 - ninth digit)**4.10.1 Window size for horizontal pivot windows**

The window size for horizontal pivot windows is SRW¹⁾ 1 600 mm X SRH²⁾ 1 400 mm or SRD³⁾ Ø 1 400 mm.

In the case of not being capable of manufacturing the specified test size due to the fact that the hardware field of application is smaller than this specified test size, a smaller test size shall be used. In this case the window shall be tested in accordance with the largest possible SRW (or SRH) as specified by the hardware manufacturer's appropriate documentation and a SRH (or SRW) in a ratio of 8:7.

4.10.2 Window size for vertical pivot windows

The window size for vertical pivot windows is SRW¹⁾ 1 400 mm x SRH²⁾ 1 600 mm or SRD³⁾ Ø 1 400 mm.

In the case of not being capable of manufacturing the specified test size due to the fact that the hardware field of application is smaller than this specified test size, a smaller test size shall be used. In this case the window shall be tested in accordance with the largest possible SRW (or SRH) as specified by the hardware manufacturer's appropriate documentation and a SRH (or SRW) in a ratio of 7:8.

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4.11 Example of classification for horizontal and vertical pivot windows

1	2	3	4	5	6	7	8	9
-	4	120	0	1	4	-	9/1	1 600/1 400

This denotes hardware for horizontal and vertical pivot windows, which have:

- Digit 1 category of use - (no requirements)
- Digit 2 durability grade 4 (15 000 cycles)
- Digit 3 mass 120 kg
- Digit 4 fire resistance grade 0 (no requirements)
- Digit 5 safety in use grade 1

1) SRW = Sash Rebate Width.

2) SRH = Sash Rebate Height.

3) SRD = Sash Rebate Diameter.

- Digit 6 corrosion resistance grade 4
- Digit 7 security - (no requirements)
- Digit 8 applicable part grade 9/1 (hardware for horizontal pivot windows with braking function)
- Digit 9 test sizes SRW⁴⁾ = 1 600 mm, SRH⁵⁾ = 1 400 mm

5 Requirements

5.1 General

The hardware requirements shall be in accordance with EN 13126-1.

5.2 Durability

The grades of durability shall be in accordance with EN 13126-1.

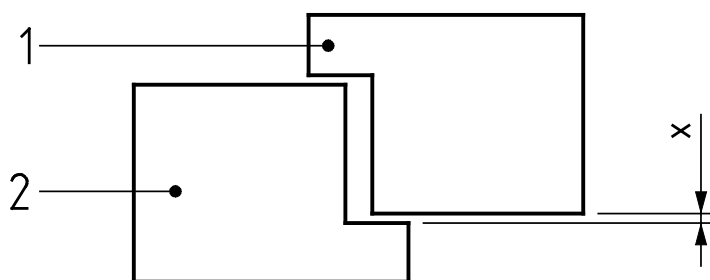
Before, during and after the durability test in accordance with 7.3, the hardware shall continue to function as intended.

5.3 Locking point variable tolerance

Before and after the durability test in accordance with 7.3.1, the distance 'X' between the frame surface and the sash-overlap-begin shall be measured on a locking point in the vicinity of the handle in conjunction with a counteracting force of (20 0/+1) N per locking point.

The results shall not differ by more than 1 mm (see Figure 1).

NOTE The pivot hinges are not considered to be locking points.



Key

1 frame

2 sash

X area of measurement

Figure 1 — Measurement of locking point variable tolerance

4) SRW = Sash Rebate Width.

5) SRH = Sash Rebate Height.