SLOVENSKI STANDARD
SIST EN 13126-1:2022

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Stavbno okovje - Okovje za okna in zastekljena vrata - Zahteve in preskusne metode - 1. del: Zahteve, skupne vsem vrstam okovja

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

Baubeschläge - Beschläge für Fenster und Fenstertüren - Anforderungen und Prüfverfahren - Teil 1: Gemeinsame Anforderungen an alle Arten von Beschlägen

Quincaillerie pour le bâtiment - Ferrures de fenêtres et portes-fenêtres - Exigences et méthodes d'essai - Partie 1 : Exigences communes à tous types de ferrures

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91.190	Stavbna oprema	Building accessories

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EUROPEAN STANDARD

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English Version

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

Quincaillerie pour le bâtiment - Ferrures de fenêtres et portes-fenêtres - Exigences et méthodes d'essai - Partie 1 : Exigences communes à tous types de ferrures

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This European Standard was approved by CEN on 19 December 2021.

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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 13126-1:2022) 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 July 2022, and conflicting national standards shall be withdrawn at the latest by July 2022.

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

This document 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 the other parts of this Standards series, which have been published prior to November 2017, incorporating all types of hardware for windows and door height windows. All other parts of this series, which have been published from November 2017 onwards, are independent of this part 1.

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

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

This document supersedes EN 13126-1:2011.

With regard to EN 13126-1:2011, the following significant changes were made:

— under the European foreword several adjustments to the wording made in order to consider the already revised and thus independent parts of this series of standards; only the parts published before November 2017 are still to be considered dependent on this part 1;

— under 1 “Scope” adjustments to the wording in the last subclause made; Note 1 and Note 2 deleted;

— under 2 “Normative references” adjustments made;

— under 4.1 “General” (first subclause) and 4.3 “Durability” (last sentence) additional information added to consider the already revised and thus independent parts of this series of standards; term code (coding system) changed into classification (classification system);

— under 4.11 “Example of classification…” the example shown was changed;

— under 5.3 “Durability” Note changed to plain text, new Note added;

— under 5.4 “Mass” new wording “If not specified otherwise in the individual parts”; added in the first sentence of the second subclause;

— under 5.5 “Fire resistance” all sentences and Notes deleted;

— under 5.7 “Corrosion resistance” wording in the second subclause modified; last bullet point added;

— under 5.9 “Applicable part” second subclause modified;

— under 6.4.2, 6.4.3 and 6.4.4 “Test specimen…” in each section the last sentence modified to “Unless otherwise specified in the individual parts, a gasket shall not be applied to the specimen.”;

— under 7.1 “General” rules modified for Sample C;

— under 8.2 “Durability” new wording “I not specified otherwise in the individual parts”; added in the first sentence.

This document is one of a series of European Standards for building hardware products for windows and door height windows.

EN 13126 consists 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 — Hardware for windows and door height windows — Requirements and test methods — 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 and Turn, Tilt-First and Turn-Only hardware;*

— EN 13126-4, *Building hardware — Requirements and test methods for windows and door 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 — Hardware for windows and door height windows — Requirements and test methods — 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 — Hardware for windows and door height windows — Part 8: Requirements and test methods for tilt and turn, Tilt-First and Turn-Only hardware;*

— EN 13126-9, *Building hardware — Requirements and test methods for windows and door height windows — Part 9: Hardware for horizontal and vertical pivot windows;*

— EN 13126-10, *Building hardware — Requirements and test methods for windows and door height windows — Part 10: Arm-balancing systems;*

— EN 13126-11, *Building hardware — Requirements and test methods for windows and door height windows — Part 11: Top hung projecting reversible hardware;*

— EN 13126-12, *Building hardware — Requirements and test methods for windows and door height windows — Part 12: Side hung projecting reversible hardware;*

— EN 13126-13, *Building hardware — Hardware for windows and balcony door — Requirements and test methods — Part 13: Sash balances;*

— EN 13126-14, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 14: Sash fasteners;*

— EN 13126-15, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 15: Rollers for sliding and hardware for sliding folding windows;*

— EN 13126-16, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 16: Hardware for Lift and Slide windows;*

— EN 13126-17, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 17: Hardware for Tilt and Slide windows;*

— EN 13126-19, *Building hardware — Requirements and test methods for windows and door height windows — Part 19: Sliding Closing Devices*

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

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

EN 13126 is a multipart product standard which enables the testing of hardware components or sets. The components or sets are tested on a standard test frame independently of the windows to which they should be fitted. The standard test frame is intended to eliminate any test-result inconsistencies that may arise through the variability between different constructions of windows.

NOTE In some cases where the hardware components or sets are tested directly on a test rig or window, a standard test frame is not necessary. The applicable test specifications are listed in the individual parts of this Standards series.

Throughout this document all references to windows mean both windows and door height windows where appropriate.

This document applies only to hardware that connects a movable sash to its fixed frame or controls the opening and closing of the movable sash. It does not take fixing devices into account that are used to assemble or install a fixed window or permanently fix a complete window into a building structure.

Where possible, test methods have been unified to accommodate a wide range of window opening types and hardware. In particular, the following are unified for movable sashes:

a) size of the sash;

b) mass of the sash;

c) frequency and total number of test cycles;

d) range of operations during each test cycle.

This document excludes hardware for sliding doors and folding doors in accordance with EN 1527, door and window bolts in accordance with EN 12051 and single axis hinges in accordance with EN 1935.[1]

[1] A standard is under development with regard to multiaxis hinges.

1 Scope

This document specifies performance requirements for the strength and durability of hardware for the operation of movable sashes of windows and door height windows including requirements and test methods common to all hardware.

This document is applicable to the hardware suitable for windows and door height windows in Table 1, whatever the material used for the construction of the window.

Table 1 — Window opening-types

Window opening-type	Description *Description as in EN 12519*	Number of Figure in Annex B
A	Side-hung window inward opening single (and double) side-hung casement, opening inwards	B.1
B	Side-hung window outward opening single (and double) side-hung casement, opening outwards	B.1
C	Bottom-hung window inward opening and outward opening *bottom-hung casement, opening inwards or outwards*	B.2
D	Top-hung window inward opening and outward opening *top-hung casement, opening inwards or outwards*	B.2
E	Tilt and turn, tilt-first *tilt and turn windows*	B.3
F	Horizontal pivot window horizontal pivot casement, centre or off-centre	B.4
G	Vertical pivot window vertical pivot casement, centre or off-centre	B.4
H	Projecting top-hung inward and outward opening window sliding projecting, top-hung casement, opening inwards or outwards	B.5
J	Projecting bottom-hung inward and outward opening window *this type is not separately described in EN 12519*	B.5
K	Projecting reversible top-hung window this type is not separately described in EN 12519	B.6
L	Projecting reversible side-hung window sliding projecting, side-hung casement, open out	B.7
M	Vertical sliding sash *vertical sliding sash*	B.8
N	Horizontal sliding sash *horizontal sliding sash*	B.9
P	Lifting sliding sash *lifting sliding sash*	B.10
Q	Folding window (centre pivot) this type is not separately described in EN 12519	B.11

Window opening-type	Description *Description as in EN 12519*	Number of Figure in Annex B
R	Folding outward opening window (corner pivot) *sliding folding window*	B.12
S	Folding inward opening window (corner pivot) *sliding folding window*	B.12
T	Tilting sliding sash double tilting sliding sash	B.13
U	Top-hung inward opening window multi-light this type is not separately described in EN 12519	B.14
V	Bottom-hung inward opening window multi-light this type is not separately described in EN 12519	B.14
W	Horizontal balanced window this type is not separately described in EN 12519	B.15

This document does not apply to the following:

— fusible links;

— hardware for lifting side-hung windows;

— fixing devices that are used to assemble or install a fixed window;

— devices that are used for the permanent fixing of a complete window into a building structure;

— mechanisms for the pneumatic or hydraulic remote operation of windows;

— single axis hinges (other than those, which provide a pivot-function for windows);

— single axis hinges as covered in EN 1935;

— hardware for sliding doors and folding doors as covered in EN 1527;

— door and window bolts as covered in EN 12051.

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

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
sample
actual hardware components

3.2
specimen
mock-up window or pieces of fictive frame/sashes (i.e. profile pieces) to accommodate hardware components for testing

3.3
test-rig
testing device onto which a sample can be mounted directly, without the need of a specimen

3.4
test equipment
series of various testing rigs, devices and machinery enabling testing to be carried out

3.5
supporting sub frame
supplementary fixing frame surrounding the specimen enabling it to be clamped or screwed while testing

4 Classification

4.1 General

For the purpose of this document, hardware for windows and door height windows shall be classified in accordance with the nine-digit classification system as shown in Table 2, only for all the parts of this series, which have been published prior to November 2017.

This classification system should be used for hardware components or sets, for example a complete set of Tilt and Turn hardware.

Table 2 — Classification of hardware for windows and door height windows

1	2	3	4	5	6	7	8	9
Category of use	Durability	Mass	Fire	Safety in use	Corrosion	Security	Applicable part	Test sizes

4.2 Category of use (1 – first digit)

No marking is required for the category of use in accordance with 5.2.

NOTE For special applications, additional requirements might be specified in the other individual parts of this Standards series.

4.3 Durability (2 – second digit)

Three grades shall be identified, as follows, in accordance with 5.3.

NOTE For special applications, further information regarding the marking of durability is specified in other individual parts of this Standards series.

— grade 3: 10 000 cycles;

— grade 4: 15 000 cycles;