

Building hardware - Hardware for windows and door
height windows - Requirements and test methods - Part
16: Hardware for Lift and Slide windows

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13126-16:2019 sisaldab Euroopa standardi EN 13126-16:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 13126-16:2019 consists of the English text of the European standard EN 13126-16:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 17.04.2019.	Date of Availability of the European standard is 17.04.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.190

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Building hardware - Hardware for windows and door
height windows - Requirements and test methods - Part
16: Hardware for Lift and Slide windows

Quincaillerie pour le bâtiment - Ferrures de fenêtres et
portes-fenêtres - Exigences et méthodes d'essai - Partie
16 : Ferrures pour fenêtres coulissantes à levage

Baubeschläge - Beschläge für Fenster und Fenstertüren
- Anforderungen und Prüfverfahren - Teil 16:
Beschläge für Hebeschiebe-Fenster und -Fenstertüren

This European Standard was approved by CEN on 8 March 2019.

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



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

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

Contents	Page
European foreword.....	4
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions	7
4 Classification.....	9
4.1 General.....	9
4.2 Durability (1 – first box)	9
4.3 Mass (2 – second box).....	9
4.4 Corrosion resistance (3 – third box)	10
4.5 Test sizes (4 – fourth box).....	10
4.6 Example of classification	10
5 Requirements	11
5.1 Dangerous substances.....	11
5.2 Additional requirements.....	11
5.2.1 Handle operation tolerance	11
5.2.2 Sliding operation crash-tests.....	12
5.2.3 Minimum closing device resistance	12
5.2.4 Resistance to additional loading	13
5.2.5 Static endurance test at ambient temperature	13
5.3 Durability	13
5.4 Corrosion resistance	13
6 Test equipment and preparation for the test	14
6.1 Test rig	14
6.2 Specimen	14
6.3 Mounting of specimen	15
7 Test procedure	15
7.1 Samples.....	15
7.2 Procedure.....	15
7.2.1 Genreal.....	15
7.2.2 Adjusting the test mass	16
7.2.3 Lubrication and adjustment of hardware	16
7.3 Durability test.....	16
7.3.1 Description of the cycles.....	16
7.3.2 Acceptance criteria.....	19
7.4 Sliding operation crash-tests.....	19
7.4.1 Procedure – into the closed position.....	19
7.4.2 Procedure – into the opening position	19
7.4.3 Acceptance criteria.....	20
7.5 Minimum closing device resistance test.....	20
7.5.1 Hardware with tilt function.....	20
7.5.2 Hardware with tilt-function with positive control.....	20
7.6 Additional loading test.....	21
7.6.1 Procedure.....	21
7.6.2 Acceptance criteria.....	21

7.7 **Static endurance test at ambient temperature..... 21**

7.8 **Corrosion resistance..... 21**

8 **Marking 21**

Annex A (informative) Test assembly 23

Annex B (informative) Flow chart of test procedures 28

Annex C (informative) Window types..... 29

Bibliography 30

European foreword

This document (EN 13126-16:2019) 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 October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.

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 supersedes EN 13126-16:2008.

With regard to EN 13126-16:2008, the following significant changes were made:

- EN 13126-16 now is independent from EN 13126-1; all necessary information is included without the need of any further information from EN 13126-1;
- several editorial changes in the wording for a better understanding;
- new terms and definitions added under 3.13 - 3.18;
- under 4.1 classification system changed completely; former digits 1 (Category of use), 4 (Fire resistance), 5 (Safety in use), 7 (Security) and 8 (Applicable part) deleted; former digit 2 changed into box 1 (Durability), former digit 3 changed into box 2 (Mass), former digit 6 changed into box 3 (Corrosion resistance) and former digit 9 changed into box 4 (Test sizes);
- under 4.2 new grades for the number of cycles defined; H1 (5 000), H2 (10 000) and H3 (20 000);
- under 4.5 test size changed from SW (sash width) 1 200 mm and SH (=sash height) 2 000 mm into new sizes SW (sash width) 1 440 mm and SH (=sash height) 2 400 mm;
- under 4.6 new example of classification added in accordance with the new classification system; 2 alternative ways (table or alphanumeric) to show the classification defined;
- under Clause 6 “Test equipment and preparation for the test” additional information added for the test rig (6.1), the specimen (6.2) and the mounting of the specimen (6.3);
- under 6.2 “Specimen” the use of gaskets added in the description;
- under 7.2 “Procedure” new subclause 7.2.1 “General”, 7.2.2 “Adjusting the test mass” and 7.2.3 “Lubrication and adjustment of hardware” added with additional information, mainly from the current version of part 1;
- under 7.3 “Durability test” procedure modified to ensure better correlation with the test procedure described in EN 1191:2012;
- under 8 new clause added regarding marking with information from the current version of EN 13126-1.

This European standard is one of a series of European standards for building hardware products for windows and door height windows. This European standard is independent of EN 13126-1.

EN 13126 consists of the following parts:

- *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 1: Requirements common to all types of hardware;*
- *Building hardware — Requirements and test methods for windows and doors height windows — Part 2: Window fastener handles;*
- *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;*
- *Building hardware — Requirements and test methods for windows and doors height windows — Part 4: Espagnolettes;*
- *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;*
- *Building hardware — Requirements and test methods for windows and doors height windows — Part 6: Variable geometry stay hinges (with or without a friction stay);*
- *Building hardware — Requirements and test methods for windows and door height windows — Part 7: Finger catches;*
- *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;*
- *Building hardware — Requirements and test methods for windows and door height windows — Part 9: Hardware for horizontal and vertical pivot windows;*
- *Building hardware — Requirements and test methods for windows and doors height windows — Part 10: Arm-balancing systems;*
- *Building hardware — Requirements and test methods for windows and doors height windows — Part 11: Top hung projecting reversible hardware;*
- *Building hardware — Requirements and test methods for windows and doors height windows — Part 12: Side hung projecting reversible hardware;*
- *Building hardware — Hardware for windows and balcony doors — Requirements and test methods — Part 13: Sash balances;*
- *Building hardware — Hardware for windows and balcony doors — Requirements and test methods — Part 14: Sash fasteners;*
- *Building hardware — Hardware for windows and doors height windows — Requirements and test methods — Part 15: Rollers for horizontal sliding and hardware for sliding folding windows;*
- *Building hardware — Hardware for windows and doors height windows — Requirements and test methods — Part 16: Hardware for Lift and Slide windows;*

- *Building hardware — Hardware for windows and doors height windows — Requirements and test methods — Part 17: Hardware for Tilt and Slide windows;*
- *Building hardware — Requirements and test methods for windows and door height windows — Part 19: Sliding Closing Devices.*

The performance tests incorporated in this European standard 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.

A full contribution to the preparation of this European standard has been made by the European manufacturer's organization 'ARGE' and National Standards institutions.

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

1 Scope

This document specifies requirements and test methods for durability, strength, security and function of hardware for Lift and Slide windows and door height windows in accordance with common application as shown in Figures C.1 and C.2 in informative Annex C, regardless of whether the hardware enables an additional tilt position.

NOTE 1 This document is also applicable to hardware systems, whereby the sash itself is not lifted but a gasket mechanism is moved.

NOTE 2 This document is also applicable to hardware systems, whereby the sash itself is not lifted but the sash is being moved parallel to the plane of the frame.

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 <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

The following terms and definitions apply to hardware for Lift and Slide windows and door height windows made of timber, PVC-U, aluminium or steel and their appropriate material combinations.

3.1 roller

assembly of one or more rolls in a single or multiple casing which supports Lift and Slide windows and door height windows; these may be aligned in a straight line or rotate about an axis for Lift and Slide windows and door height windows (otherwise known as a bogey)

3.2 roll

singular wheel in a roller

3.3 lateral guide

hardware component which guides the lateral movement of the Lift and Slide windows and door height windows

3.4 guide track

track fixed on the top (top guide track) or bottom (bottom guide track) which enables a lateral guide to run