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Windows - Classification of mechanical properties -  
Racking, torsion and operating forces

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 13115:2020 sisaldab Euroopa standardi EN 13115:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 13115:2020 consists of the English text of the European standard EN 13115:2020.
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 26.08.2020.	Date of Availability of the European standard is 26.08.2020.
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EUROPEAN STANDARD

**EN 13115**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2020

ICS 91.060.50

Supersedes EN 13115:2001

English Version

## Windows - Classification of mechanical properties - Racking, torsion and operating forces

Fenêtres - Classification des propriétés mécaniques -  
Charge verticale, torsion et efforts de manoeuvre

Fenster - Klassifizierung mechanischer Eigenschaften -  
Vertikallasten, Verwindung und Bedienkräfte

This European Standard was approved by CEN on 19 July 2020.

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 13115:2020) 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 February 2021, and conflicting national standards shall be withdrawn at the latest by February 2021.

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 13115:2001.

This document is part of a series of standards dedicated to windows.

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.

## 1 Scope

This document provides a means of classifying the performance of opening windows according to their strength in resisting, where appropriate, racking load, static torsion and their manual operating forces. Special aspects such as those of burglar resistance are not covered.<sup>1)</sup>

## 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 14608, *Windows — Determination of the resistance to racking*

EN 14609, *Windows — Determination of the resistance to static torsion*

EN 12046-1, *Operating forces — Test method — Part 1: Windows*

EN 12519, *Windows and pedestrian doors — Terminology*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12519 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 <https://www.iso.org/obp/ui>

## 4 Classification criteria

### 4.1 General

After testing, according to the type of window construction as indicated below, the test specimen shall remain functional in relation to its operating forces (see 4.2). The specimen shall not suffer such damage or deformation, including breakage or loosening of hardware, joints or weather sealing systems, as would render it unfit for its purpose.

### 4.2 Operating forces

Opening windows shall be tested in accordance with EN 12046-1. Tables 1 and 2 list the forces and/or torques to be sustained for the various classes. The highest average value (force/torque) defines the overall classification.

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1) Effects on other criteria, such as air permeability, are not addressed by EN 13115.