

## **Windows - Determination of the resistance to racking**

Windows - Determination of the resistance to racking

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14608:2004 sisaldab Euroopa standardi EN 14608:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.09.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14608:2004 consists of the English text of the European standard EN 14608:2004.</p> <p>This document is endorsed on 23.09.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p><b>Käsitlusala:</b></p> <p>This European Standard specifies the determination of resistance to racking of an open casement or sash expressed as loads and the resulting maximum and residual deformations. This European Standard applies to the opening modes specified in Figure A.1 to Figure A.6 and included in EN 12519.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies the determination of resistance to racking of an open casement or sash expressed as loads and the resulting maximum and residual deformations. This European Standard applies to the opening modes specified in Figure A.1 to Figure A.6 and included in EN 12519.</p>
---	---

**ICS** 91.060.50

**Võtmesõnad:**

ICS 91.060.50; 91.190

English version

## Operating forces - Test method - Part 1: Windows

Forces de manoeuvre - Méthode d'essai - Partie 1:  
Fenêtres

Bedienungskräfte - Prüfverfahren - Teil 1: Fenster

This European Standard was approved by CEN on 1 September 2003.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

## Contents

	Page
Foreword .....	3
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions .....	4
4 Principle of test .....	4
5 Apparatus .....	5
5.1 Test rig .....	5
5.2 Linear motion .....	8
5.3 Rotary motion .....	8
6 Test specimen .....	8
7 Conditioning and preparation of the test specimen .....	9
7.1 Conditioning .....	9
7.2 Preparation .....	9
8 Procedure .....	9
8.1 Test sequence .....	9
8.2 Rate of loading .....	10
8.3 Disengagement of hardware .....	10
8.4 Measurement of the force to start motion of the casement or sash .....	10
8.5 Full engagement of closing and locking hardware .....	10
9 Expression of results .....	10
10 Test report .....	10

## Foreword

This document (EN 12046-1:2003) 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 2004, and conflicting national standards shall be withdrawn at the latest by May 2004.

This European Standard is one of a series of standards for windows.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This European Standard specifies the test method for determining the force required when engaging or releasing the hardware of a window and when commencing the movement of a casement or sash, in both opening and closing directions.

It is applicable to manually operated windows.

This European Standard is applicable to products of any materials.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

prEN 12519:2003, *Windows and pedestrian doors — Terminology*.

## 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in prEN 12519:2003 apply, together with the following.

### 3.1

#### **linear motion**

movement of casement, sash or hardware in a straight line when acted upon by an operating force; also movement through an arc of which the radius is large in proportion to the length of the arc

### 3.2

#### **rotary motion**

movement, usually of hardware but also applicable to a casement or sash; in a circular path when acted upon by an operating torque, e.g. the turning action of the bow of a key

## 4 Principle of test

The principle consists of measuring the minimum static force or torque required

- to release or lock the hardware (locks or handles);
- to commence opening and
- to complete closing of the casement or sash.