



SLOVENSKI STANDARD
SIST EN 13115:2002

01-julij-2002

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

Fenster - Klassifizierung mechanischer Eigenschaften - Vertikallasten, Verwindung und Bedienkräfte

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

Ta slovenski standard je istoveten z: EN 13115:2001

ICS:

91.060.50 Vrata in okna Doors and windows

SIST EN 13115:2002 en

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EUROPEAN STANDARD

EN 13115

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2001

ICS 91.060.50

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 9 May 2001.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

EN 13115:2001 (E)**Foreword**

This European Standard 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 January 2002, and conflicting national standards shall be withdrawn at the latest by January 2002.

This standard is part of a series of standards dedicated to 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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

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

2 Normative references

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

prEN 947–1	<i>Resistance to vertical load (racking) – Part 1: Windows.</i>
prEN 948–1	<i>Resistance to static torsion – Part 1: Windows.</i>
EN 12046–1	<i>Operating forces – Test method – Part 1: Windows.</i>

3 Classification criteria

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 3.1). The specimen shall not suffer such damage or deformation, including loosening of hardware, joints or weather sealing systems, as would render it unfit for its purpose.

3.1 Operating forces

Hinged, pivoted or sliding windows shall be tested in accordance with EN 12046–1. Table 1 lists the forces and / or torques to be sustained for the various classes.

Table 1 - Classification of operating forces

Test	Resistance to operating forces	Class 0	Class 1	Class 2
3	a) Casement or sash	–	100 N	30 N
	b) Hardware			
	1) Lever handles (hand operated)	–	100 N or 10 Nm	30 N or 5 Nm
	2) Finger operated	–	50 N or 5 Nm	20 N or 2 Nm

3.2 Resistance to racking load

Hinged, pivoted or sliding windows shall be tested in accordance with prEN 947–1.

The load to be applied shall be selected from the performance levels in Table 2.

¹ Effects on other criteria such as air permeability, are not addressed by this document.

EN 13115:2001 (E)**3.3 Resistance to static torsion**

Hinged or pivoted windows shall be tested in accordance with prEN 948–1.

The load to be applied shall be selected from the performance levels in Table 2.

4 Classification

The classification is shown in Table 1 and 2.

Hinged or pivoted windows shall be subjected, separately, to tests 1, 2 and 3.

Sliding windows shall be subjected, separately, to tests 1 and 3 only.

Secondary sashes/casements, opened only for cleaning purposes, shall be tested to 100 N only for test 1 in the case of sliding sashes and for tests 1 and 2 in the case of hinged casements.

Table 2 - Classification for racking and static torsion² (mechanical strength)

Test	Resistance to:	Class 0	Class 1	Class 2	Class 3	Class 4
Test 1	racking	–	200 N	400 N	600 N	800 N
Test 2	static torsion	–	200 N	250 N	300 N	350 N

² To qualify for a particular class, the requirements of both tests, where relevant, are satisfied

Bibliography

prEN 12519 *Windows and doors – Terminology.*

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