SLOVENSKI STANDARD
SIST EN 12046-1:2004

01-september-2004

Sile pri uporabi - Preskusna metoda - 1. del: Okna

Operating forces - Test method - Part 1: Windows

Bedienungskräfte - Prüfverfahren - Teil 1: Fenster

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

Ta slovenski standard je istoveten z: **EN 12046-1:2003**

ICS:

91.060.50 Vrata in okna Doors and windows

SIST EN 12046-1:2004 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12046-1

November 2003

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

Ref. No. EN 12046-1:2003 E

Contents

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of an identical text or by endorsement, at the latest by May 2004, and conflicting national standards shall be withdrawn at the latest by May 2004.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.

5 Apparatus

5.1 Test rig

A surrounding substantial steel frame with movable steel supports[1)] into which the sub-frames containing test specimens of various dimensions can be mounted.

Means for the application of forces and/or torques with an accuracy of ± 5 % uniformly and without shock.

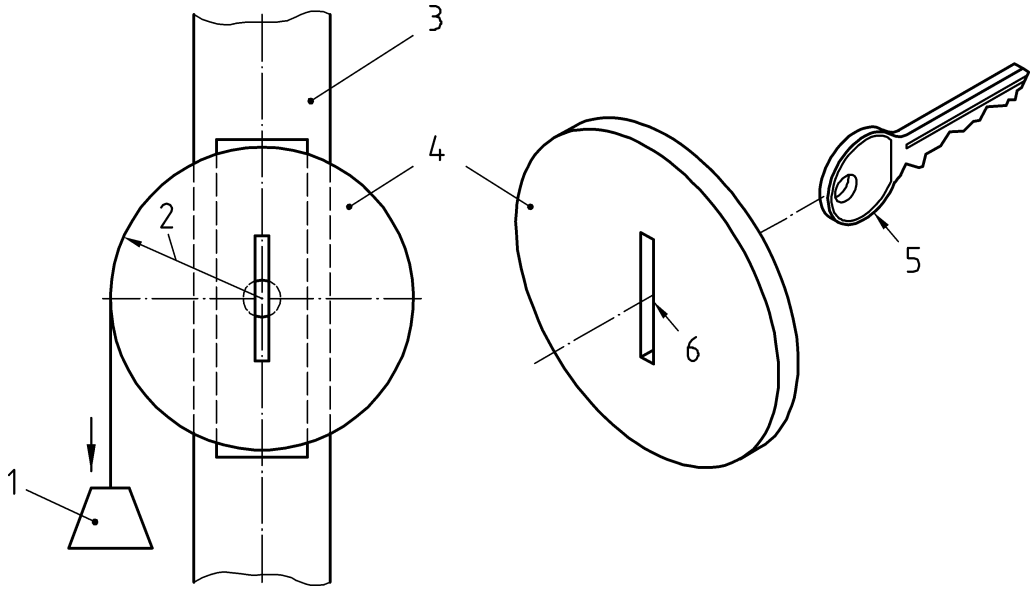
The apparatus shall consist of either

— weights and pulleys (see Figures 1 and 2) or

— an apparatus other than a spring mechanism, with which the required force or torque can be smoothly applied, coupled with an analogue or digital measuring instrument for determining measurements with an accuracy of 0,1 mm, and recording equipment (see Figures 3 and 4).

In neither case shall the apparatus influence the test results.

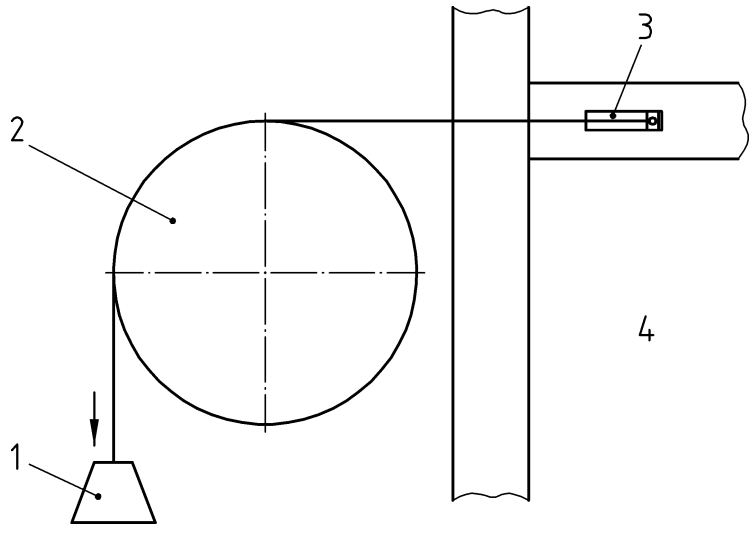
1) A suitable frame would, e.g., be of such stiffness that the mid-span deflection of any member of the frame does not exceed 1/500 of its unsupported length under the action of a force of 1 kN applied at any point or direction perpendicular to the length of that member.



Key

1 Weight
2 Radius r
3 Stile of sash
4 Pulley
5 Bow of key
6 Slot to suit bow of key

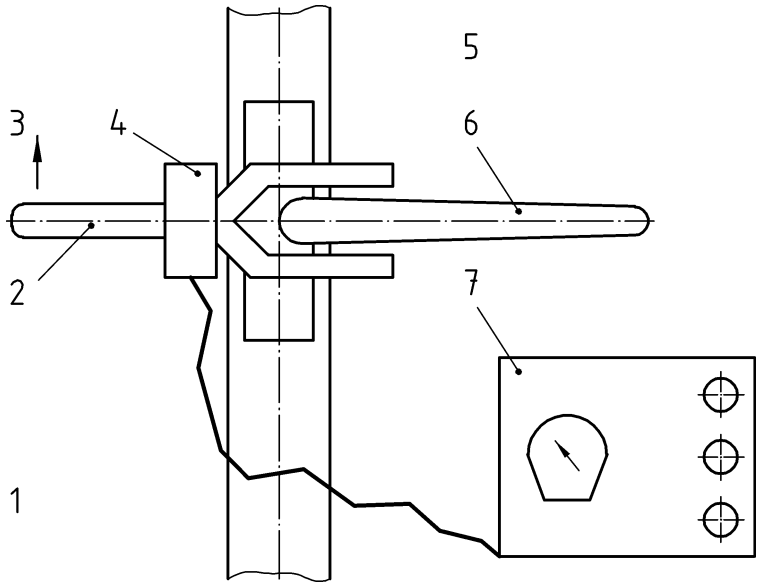
Figure 1 — Weight and pulley mechanism as applied to a key



Key

1 Weight
2 Pulley
3 Lock
4 Part of window

Figure 2 — Weight and pulley mechanism as applied to a lock



Key

1 Torque meter applied to handle
2 Torque meter
3 Torque
4 Load cell
5 Window sash
6 Handle
7 Recording equipment

Figure 3 — Torque mechanism as applied to a handle