



SLOVENSKI STANDARD

SIST-TS CEN/TS 13126-2:2005

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Stavbno okovje, pritrjevalni sistemi za okna in zastekljena vrata – Zahteve in preskusne metode – 2. del: Okenska zapirala

Building hardware, fittings for windows and door height windows - Requirements and test methods - Part 2: Casement fastener handles

Baubeschläge, Beschläge für Fenster und Fenstertüren - Anforderungen und Prüfverfahren - Teil 2: Fenstergriffe

Quincaillerie pour le bâtiment, ferrures de fenestres et portes-fenestres - Exigences et méthodes d'essai - Partie 2 : Poignées a ergot de verrouillage

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
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CEN/TS 13126-2

April 2004

ICS 91.190

English version

**Building hardware, fittings for windows and door height windows
- Requirements and test methods - Part 2: Casement fastener
handles**

Quincaillerie pour le bâtiment, ferrures de fenêtres et
portes-fenêtres - Exigences et méthodes d'essai - Partie 2 :
Poignées à ergot de verrouillage

Baubeschläge, Beschläge für Fenster und Fenstertüren -
Anforderungen und Prüfverfahren - Teil 2: Fenstergriffe

This Technical Specification (CEN/TS) was approved by CEN on 18 August 2003 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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

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CEN/TS 13126-2:2004 (E)

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Foreword

This document (CEN/TS 13126-2:2004) 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.

A full contribution to the preparation of this Technical Specification has been made by the European manufacturers organisation 'ARGE' and National Standards institutions.

This Technical Specification is one of a series of Technical Specifications dedicated to building hardware products. It is divided into seventeen parts to incorporate all types of windows and door height windows.

Informative annex A of CEN/TS 13126-1 gives detailed schedules of the elements of components of the seventeen parts of this Technical Specification.

Normative annex B of CEN/TS 13126-1 gives schedules of the elements of components used on the 21 types of window opening functions.

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Normative and informative annex to all parts of this Technical Specification are indicated in the content of the seventeen parts. (standards.iteh.ai)

Annex A is informative while annex B is normative.

The performance tests incorporated in this Technical Specification 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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CEN/TS 13126-2:2004 (E)**1 Scope**

This Part of Technical Specification 13126 specifies the requirements and test methods for durability, strength, security and function of casement fastener handles. It applies to all face fixed casement fastener handles fitted to hinged or pivoted windows made from any material.

NOTE There are limitations to the size and mass of windows fastened by these components, related to the physical ability of the user. The use of single fasteners should be restricted to windows of 0,9 m² and a maximum height of 1 400 mm. Above that size, additional fasteners are recommended.

The components are not recommended for use on door height windows

2 Normative references

This Technical Specification 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 Technical Specification only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 1670, *Building hardware – Corrosion resistance – Requirements and test methods.*

EN 12519:2004, *Windows and pedestrian doors – Terminology*

CEN/TS 13126-1:2004, *Building hardware, fittings for windows and door height windows – Requirements and test methods – Part 1: Requirements common to all types of fittings*

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3 Terms and definitions

For the purposes of this Technical Specification, the terms and definitions given in EN 12519:2004 for windows and doors apply.

4 Classification**4.1 General**

The classification for casement fastener handles shall be in accordance with the requirements of clause 4 in CEN/TS 13126-1:2004.

4.2 Category of use (first digit)

No requirement

4.3 Durability (second digit)

Grades shall be in accordance with 4.3 of CEN/TS 13126-1:2004.

4.4 Mass (third digit)

Grades shall be in accordance with 4.4 of CEN/TS 13126-1:2004.

4.5 Fire resistance (fourth digit)

Grades shall be in accordance with 4.5 of CEN/TS 13126-1:2004.

4.6 Safety in use (fifth digit)

Grades shall be in accordance with 4.6 of CEN/TS 13126-1:2004.

4.7 Corrosion resistance (sixth digit)

Grades shall be in accordance with 4.7 of CEN/TS 13126-1:2004.

4.8 Security (seventh digit)

Grades shall be in accordance with 4.8 of CEN/TS 13126-1:2004.

4.9 Application (eighth digit)

One grade is identified

- grade 1 : for use as a single fastener on hinged or pivot windows up to 1 400 mm high and/or 0,9 m² maximum

NOTE For windows >1 400 mm and/or 0,9 m², two casement fastener handles of grade 1 should be used.

4.10 Test Sizes – Size limitations (ninth digit)

The maximum designated window size on which the component has been tested as a single fitting shall be stated in accordance with the designated number given in Table 4 and annex B in CEN/TS 13126-1:2004.

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5 Requirements**5.1 General**

The requirements of casement fastener handles shall be met in accordance with clause 5 of CEN/TS 13126-1:2004

5.2 Other requirements

The following operating forces shall be applied for the duration of the test :

- a) When tested in accordance with 7.3, the torque required to turn the casement fastener handle to the fully engaged position shall not exceed 10 Nm or a maximum tangential effort of 100 N.
- b) When tested in accordance with 7.4, there shall be no breakage of any component.
- c) When tested in accordance with 7.5 and 7.6, the maximum permanent deformation shall not exceed 1 mm measured at the point of contact on the spur. A maximum of 5 mm permanent deformation measured at any part of the handle shall be allowed after test.
- d) When tested in accordance with 7.7, the pull-in shall be correct to 0,5 mm, and the vertical position of the cross beam relative to the fixed base shall not have altered by more than 1 mm. When measured in accordance with 7.3 (Figure 1) the operating torque shall not exceed 10 Nm or a maximum effort of 100 N.

CEN/TS 13126-2:2004 (E)**6 Test apparatus**

The casement fastener handle shall be fitted to a test apparatus as specified in clause 6 of CEN/TS 13126-1:2004 and shown in Figures A.1, A.2 and A.3, in accordance with the manufacturer's fixing instructions

7 Test Methods**7.1 Samples**

Three samples shall be used for testing to this Technical Specification:

- sample A – performance test
- sample B – corrosion test
- sample C – retained for reference control

If a specimen fails to meet the appropriate acceptance requirements, two further specimens shall be tested. A pass of the second test shall be accepted but failure shall be recorded accordingly.

There shall be no breakage of any part

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7.2 Procedure

Right-hand and left-hand fasteners for both inward and outward opening sashes shall be mounted in the same position but inverted to engage with the appropriate wedge.

7.3 Operating torque test

Partially engage the spur of the casement fastener handle with the wedge plate. Apply a force 'A' of $40 \text{ N} \pm 1 \text{ N}$ to the floating base cross beam (Figure.A.1) without shock in the direction tending to separate fixed and floating bases so that their relative movement is restricted to a direction perpendicular to the applied force.

Apply an increasing force to the handle and measure the torque required to effect fastening.

7.4 Additional torque test

Apply a force of $300 \text{ N} \begin{smallmatrix} +15 \\ 0 \end{smallmatrix}$ N at a point 50 mm from the end of the handle and maintain for $60 \text{ s} \begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$ s

in accordance with Figure A.2.

7.5 Wind gust test (closed position)

With the spur fully engaged, apply a force 'A' = $700 \text{ N} \pm 35 \text{ N}$ without shock to the floating base cross beam (see Figure A.1), attempt to separate the floating and fixed bases, and maintain for $60 \text{ s} \begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$ s.

7.6 Additional operating force test

Apply a force 'A' = $300 \text{ N } \begin{smallmatrix} +15 \\ 0 \end{smallmatrix}$ N for $60 \text{ s } \begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$ s without shock to the casement fastener handle parallel to its axis (see Figure A.2) and away from the fixed base at a point $50 \text{ mm } \pm 10 \text{ mm}$ from the end of the handle.

After removing the load, measure the permanent deformation of the specimen according to the deflection of the cross beam.

When tested in accordance with 7.2.2 (see Figure A.2) the maximum operating torque shall be $30 \text{ Nm } \begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$ Nm static loading, or a maximum force of $300 \text{ N } \begin{smallmatrix} +15 \\ 0 \end{smallmatrix}$ N.

After removing the load, measure the permanent deformation of the specimen according to the deflection of the cross beam.

When testing the locking or physical stops, a static force of $500 \text{ N } \begin{smallmatrix} +25 \\ 0 \end{smallmatrix}$ N shall be applied without shock, at a point $50 \text{ mm } \pm 10 \text{ mm}$ from the end of the handle.

7.7 Wear test

A force of $40 \text{ N } \pm 1 \text{ N}$ shall be applied in the directions indicated in Figure 3.

A stop shall be provided to resist a force of $20 \text{ N } \pm 1 \text{ N}$ applied to the cross beam. The stop is positioned so that when the casement fastener handle is rotated through $60^\circ \pm 5^\circ$ from its fully engaged position the 20 N force acts against the stop. When the casement fastener handle is returned to the fully engaged position the force acts through the casement fastener handle and its fittings. A reciprocating mechanism shall be attached to the casement fastener handle to drive it through an angle of $60^\circ \pm 5^\circ$ from its fully engaged position.

Measure the vertical movement of the cross beam (the pull-in) when the casement fastener handle is rotated through $60^\circ \pm 5^\circ$ to its fully engaged position.

Remove the 40 N force applied to the casement fastener handle and measure the vertical position of the cross beam relative to the fixed base.

7.8 Durability test

Operate the manoeuvring fitting at the rate of $250 \text{ cycles/h } \begin{smallmatrix} +25 \\ -0 \end{smallmatrix}$ cycles/h, according to the

number of cycles for the required grade.

— grade 3 : $10\,000 \text{ cycles } \begin{smallmatrix} +500 \\ 0 \end{smallmatrix}$ cycles

— grade 4 : $15\,000 \text{ cycles } \begin{smallmatrix} +750 \\ 0 \end{smallmatrix}$ cycles

— grade 5 : $25\,000 \text{ cycles } \begin{smallmatrix} +1000 \\ 0 \end{smallmatrix}$ cycles