



SLOVENSKI STANDARD

SIST-TS CEN/TS 13126-4:2005

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Stavbno okovje, pritrjevalni sistemi za okna in zastekljena vrata – Zahteve in preskusne metode – 4. del: Gonilni zapahi

Building hardware, fittings for windows and door height windows - Requirements and test methods - Part 4: Espagnolette bolts

Baubeschläge, Beschläge für Fenster und Fenstertüren - Anforderungen und Prüfverfahren - Teil 4: Treilriegelverschlüsse

Quincaillerie pour le bâtiment, ferrures de fenetres et portes-fenetres - Prescription et méthodes d'essai - Partie 4 : Crémones-verrous

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
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CEN/TS 13126-4

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ICS 91.190

English version

**Building hardware, fittings for windows and door height windows
- Requirements and test methods - Part 4: Espagnolette bolts**

Quincaillerie pour le bâtiment, ferrures de fenêtres et
portes-fenêtres - Prescription et méthodes d'essai - Partie 4
: Crémones-verrous

Baubeschläge, Beschläge für Fenster und Fenstertüren -
Anforderungen und Prüfverfahren - Teil 4:
Treilriegelverschlüsse

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 13126-4:2004 (E)

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Foreword

This document (CEN/TS 13126-4:2004) 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.

Normative and informative annex to all parts of this Technical Specification are indicated in the content of the seventeen parts.

The performance tests incorporated in this standard 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.

Annex A is informative and annex B is normative.

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 13126-4:2004 (E)**1 Scope**

This part of CEN/TS 13126 specifies the requirements and test methods for durability, strength, security and function of mechanically operated espagnolette bolts and their strike plates / keeps for use on windows and door height windows.

This standard is applicable to the following types of espagnolette bolts

- a) Side bolts that operate transversely to the principal sliding rods;
- b) End bolts that operate in the same direction as the principal sliding rods;
- c) Fittings with both side bolts and end bolts.

This standard does not incorporate door bolts subject to the scope of EN 12051, or multi-point locks subject to the scope of WI 00033250.

2 Normative reference

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 standard 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.*

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EN 12519:2004, *Windows and doors – Terminology*
[http://web.itih.ai/standards/sist/bb49d648-06f2-4eb4-95e8-b84eda590d92/sist-ts-cen-ts-13126-4-2005](#)

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*

CEN/TS 13126-3:2004, *Building hardware – Fittings for windows and door height windows – Requirements and test methods – Part 3: Manoeuvring fittings for espagnolette bolts/sliding button*

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 espagnolette bolts 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.

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4.8 Security (seventh digit)

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

4.9 Application (eighth digit)

In accordance with Table 4 of CEN/TS 13126-1:2004 and the following testing systems,

No requirements.

4.10 Test Sizes – Size limitations (ninth digit)

In accordance with Table 4 of CEN/TS 13126-1:2004 and the following testing systems,

No requirements.

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5 Requirements

5.1 General

The requirements of espagnolette bolts shall be met in accordance with clause 5 of CEN/TS 13126-1:2004

Espagnolette bolts shall be fitted with a suitable manoeuvring fitting which conforms to CEN/TS 13126-3 together with their appropriate strike plates / keeps

5.2 Durability

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

- a) The initial operating torque of the manoeuvring fitting without load shall not exceed $C_1 = 3$ Nm, in accordance with 6.3.2 of CEN/TS 13126-3:2004.
- b) The maximum initial total operating torque of the manoeuvring fitting and bolt when the bolts are engaged with their striking plates / keeps shall not exceed $C_2 = 10$ Nm.

NOTE For bolts with sliding buttons the operating forces should not exceed 50 N when the leaf is open, or 100 N when the leaf is closed and engaged.

After the test the operating forces shall not exceed the maximum values specified above. The bolts shall operate through their normal full range of travel to engage their striking plates / keeps.

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5.3 Wear <https://standards.iteh.ai/catalog/standards/sist/bb49d648-06f2-4eb4-95e8-b84eda590d92/sist-ts-cen-ts-13126-4-2005>

On completion of the wear test, in accordance with 7.3.2, the difference $R_f - R_o$ shall not exceed 1 mm.

6 Test apparatus

The espagnolette bolts under test will be fitted to a test apparatus as specified in clause 6 of CEN/TS 13126-1:2004, in accordance with the manufacturer's fixing instructions. Espagnolette bolts may be fitted to a metal rail of suitable profile, which is then securely attached to the test apparatus. A typical arrangement is shown in Figure 1.

The travel of the bolts and the capacity of their striking plates shall be matched in order to achieve positive fastening.

NOTE The testing of the manoeuvring fitting may be carried out at the same time as the espagnolette bolt tests. If this procedure is adopted it will be necessary to block the manoeuvring fitting spindle for the static test on the follower.

7 Test methods

7.1 Samples

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

- sample A – performance testing
- sample B – corrosion testing
- 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.

7.2 Procedure

Check that the bolt and manoeuvring fittings operate correctly. Set a datum R_0 for the clamping device of the striking plates.

- Measure torque C_1 necessary to operate the manoeuvring fitting without loads on bolts.
- Measure torque C_2 necessary to operate the manoeuvring fitting when the bolts are loaded by engagement with their striking plates.

For bolts operated by means of sliding buttons, measure the operating forces when the leaf is open and when the leaf is closed and engaged.

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7.3 Static resistance tests

7.3.1 Follower strength test

- Block the bolts and/or rods as appropriate and apply a torque $C_2 = 25 \text{ Nm} \begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$ to the operating handle. Maintain this torque for $60 \text{ s} \begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$ s, and remove.

Examine the follower mechanism for any distortion that inhibits normal operation and record accordingly

7.3.2 Bolt resistance test

- Apply a force $F_3 = 1\,000 \text{ N} \begin{smallmatrix} +50 \\ 0 \end{smallmatrix}$ N as shown in Figure 2. Maintain this force for $60 \text{ s} \begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$ s and remove it.

Examine the fittings for any distortion that inhibits normal operation and record accordingly.