



# SLOVENSKI STANDARD

## SIST EN 13126-10:2009

01-april-2009

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SIST-TS CEN/TS 13126-10:2005

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Building hardware - Requirements and test methods for windows and doors height  
windows - Part 10: Arm-balancing systems

Baubeschläge - Anforderungen und Prüfverfahren für Fenster und Fenstertüren - Teil 10:  
Senkkippflügelsysteme

Quincaillerie pour le bâtiment - Exigences et méthodes d'essai des ferrures de fenêtres  
et portes-fenêtres - Partie 10: Compas à projection

Ta slovenski standard je istoveten z: EN 13126-10:2008

### ICS:

91.190 Stavbna oprema Building accessories

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 13126-10**

November 2008

ICS 91.190

Supersedes CEN/TS 13126-10:2004

English Version

## Building hardware - Requirements and test methods for windows and doors height windows - Part 10: Arm-balancing systems

Quincaillerie pour le bâtiment - Exigences et méthodes  
d'essai des ferrures de fenêtres et portes-fenêtres - Partie  
10: Compas à projection

Baubeschläge - Beschläge für Fenster und Fenstertüren -  
Anforderungen und Prüfverfahren - Teil 10:  
Senkklapplügelssysteme

This European Standard was approved by CEN on 5 October 2008.

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 CEN 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 CEN Management Centre has the same status as the official versions.

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## Foreword

This document (EN 13126-10:2008) 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of an identical text or by endorsement, at the latest by May 2009, and conflicting national standards shall be withdrawn at the latest by May 2009.

This document supersedes CEN/TS 13126-10:2004.

This European Standard is one of a series of European Standards dedicated to building hardware products.

A full contribution to the preparation of this European Standard has been made by the European manufacturers’ organization “ARGE” and national standards bodies.

EN 13126 *Building hardware — Requirements and test methods for windows and doors height windows* consists of the following parts:

Part 1: Requirements common to all types of hardware

Part 2: Casement fastener handles<sup>1)</sup>

Part 3: Manoeuvring fittings for espagnolette bolts/sliding button<sup>1)</sup>

Part 4: Espagnolette bolts<sup>1)</sup>

Part 5: Devices that restrict the opening of windows<sup>1)</sup>

Part 6: Variable geometry stay hinges (with or without a friction system)

Part 7: Finger catches

Part 8: Tilt&Turn, Tilt-First and Turn-Only hardware

Part 9: Pivot hinges<sup>1)</sup>

Part 10: Arm balancing systems

Part 11: Top hung projecting reversible hardware

Part 12: Side hung projecting reversible hardware

Part 13: Sash balances<sup>1)</sup>

Part 14: Sash fasteners<sup>1)</sup>

Part 15: Rollers for horizontal sliding and sliding folding windows and doors

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<sup>1)</sup> To be revised, for the time being CEN/TS.

**EN 13126-10:2008 (E)**

Part 16: Hardware for Lift&Slide windows and doors

Part 17: Hardware for Tilt&Slide windows and doors

Part 18: Fan light openers for windows and door height windows

Part 19: Sliding Closing Devices (SCD) for windows and door height windows

Informative Annex A of EN 13126-1:2006 gives detailed schedules of the elements of components of the 17 first parts of this European Standard.

Informative Annex B of EN 13126-1:2006 gives schedules of the elements of components used on the 21 types of window opening functions.

The performance tests incorporated in this European 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.

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

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## 1 Scope

This part of EN 13126 specifies requirements and test methods for durability, strength, security and function of arm-balancing systems for windows and door height windows.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

EN 13126-1:2006, *Building hardware — Requirements and test methods for windows and doors height windows — Requirements common to all types of hardware*

ISO 4520:1981, *Chromate conversion coatings on electroplated zinc and cadmium coatings*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13126-1:2006 and EN 12519:2004 and the following apply.

NOTE The following terms and definitions apply to windows and door height windows made of wood, PVC-u, aluminium or steel and their appropriate material combinations.

### 3.1

#### **hinge assembly**

assembly connecting sash and frame to limit movement of sash during opening

### 3.2

#### **support arm**

arm connecting sash and frame to control direction of opening

## 4 Classification

### 4.1 General

The classification for arm-balancing systems shall be in accordance with the requirements of Clause 4 EN 13126-1:2006.

### 4.2 Category of use (1 – first digit)

No marking is required for the category of use in accordance with 4.2 of EN 13126-1:2006.

### 4.3 Durability (2 – second digit)

Grades shall be in accordance with 4.3 of EN 13126-1:2006.

**EN 13126-10:2008 (E)****4.4 Mass (3 – third digit)**

Grades shall be in accordance with 4.4 of EN 13126-1:2006.

**4.5 Fire resistance (4 – fourth digit)**

One grade shall be identified in accordance with 4.5 of EN 13126-1:2006.

— grade 0: no requirements.

**4.6 Safety in use (5 – fifth digit)**

One grade shall be identified in accordance with 4.6 of EN 13126-1:2006.

— grade 1: hardware shall conform to the requirements of EN 13126-1 and EN 13126-10.

**4.7 Corrosion resistance (6 – sixth digit)**

Grades shall be in accordance with 4.7 of EN 13126-1:2006.

**4.8 Security (7 – seventh digit)**

No marking is required for the category of security in accordance with 4.8 of EN 13126-1:2006.

**4.9 Application (8-eighth digit)**

The eighth digit shows “10/1”, “10/2” or “10/3” indicating the part of the standard which was used for testing the arm-balancing systems and their common application for top hung or bottom hung windows in accordance with 4.9 of EN 13126-1:2006. Three grades are identified:

- grade 10/1: for use only on projecting top hung windows (type H);
- grade 10/2: for use only on projecting bottom-hung windows (type J);
- grade 10/3: for use on both projecting top-hung and bottom hung windows (type H and / or J).

**4.10 Test sizes (9 – ninth digit)**

The ninth digit shows the test sizes in accordance with 4.10 of EN 13126-1:2006 as follows:

S.W. <sup>2)</sup> in mm / S.H. <sup>3)</sup> in mm.

EXAMPLE 1 200 mm S.R.W. × 900 mm S.R.H.

The specified size is a test size only. It does not relate to the maximum size to which a window may be fabricated.

For instances where an arm-balancing system is available in a range of sizes to suit differing window sizes it shall be tested at the size which gives the most severe impact on the hardware, as recommended by the hardware manufacturer. This size is then recorded as the ninth digit.

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<sup>2)</sup> S.R.W. = sash rebate width

<sup>3)</sup> S.R.H. = sash rebate height



#### 4.11 Example of classification for arm-balancing systems

Table 1 — Example of classification for Arm-balancing Systems

1	2	3	4	5	6	7	8	9
-	4	050	0	1	3	-	10/1	1 200/1 200

This denotes arm-balancing systems, which have:

Digit 1	category of use	- (no requirements);
Digit 2	durability	grade 4 (15 000 cycles);
Digit 3	mass	50 kg;
Digit 4	fire resistance	grade 0 (no requirements);
Digit 5	safety in use	grade 1;
Digit 6	corrosion resistance	grade 3;
Digit 7	security	- (no requirements);
Digit 8	applicable part	tested in accordance with part 10 of this standard for a projecting top hung window;
Digit 9	test sizes	S.R.W. <sup>1)</sup> = 1 200 mm, S.R.H. <sup>2)</sup> = 1 200 mm.

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## 5 Requirements

### 5.1 General

The requirements of arm-balancing systems shall be in accordance with Clause 5 of EN 13126-1:2006.

### 5.2 Durability test

The test specified in 7.2 shall be used to ensure the hardware is capable of continued operation after cycling in accordance with grades specified in 7.2, with regard given to normal maintenance.

On completion of the durability test in accordance with 7.2.

— Arm-balancing system shall continue to function normally.

### 5.3 Static load test

The test specified in 7.3 shall be used to ensure the mechanical strength of the hardware is appropriate for its intended use.

On completion of the static load test in accordance with 7.3.

— Arm-balancing system shall continue to function normally.