

English Version

Building hardware - Hardware for windows and door  
height windows - Requirements and test methods - Part 7:  
Finger catches

Quincaillerie pour le bâtiment - Ferrures de fenêtres et  
portes-fenêtres - Exigences et méthodes d'essai - Partie  
7 : Verrous de ferme-imposte

Baubeschläge - Beschläge für Fenster und Fenstertüren  
- Anforderungen und Prüfverfahren - Teil 7: Fallen-  
Schnäpper

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 33.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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-CENELEC Management Centre has the same status as the official versions.

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

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Classification</b> .....	<b>5</b>
4.1 <b>General</b> .....	<b>5</b>
4.2 <b>Durability (1 – first box)</b> .....	<b>6</b>
4.3 <b>Mass (2 – second box)</b> .....	<b>6</b>
4.4 <b>Corrosion resistance (3 – third box)</b> .....	<b>6</b>
4.5 <b>Test sizes (4 – fourth box)</b> .....	<b>6</b>
4.6 <b>Example of classification for finger catches (EN 13126-7)</b> .....	<b>6</b>
<b>5 Requirements</b> .....	<b>7</b>
5.1 <b>Dangerous substances</b> .....	<b>7</b>
5.2 <b>Durability</b> .....	<b>7</b>
5.3 <b>Additional requirements</b> .....	<b>7</b>
5.4 <b>Corrosion resistance</b> .....	<b>7</b>
<b>6 Test equipment and preparation for the test</b> .....	<b>8</b>
6.1 <b>Test rig</b> .....	<b>8</b>
6.2 <b>Specimen</b> .....	<b>8</b>
6.3 <b>Mounting of specimen</b> .....	<b>8</b>
<b>7 Test procedure</b> .....	<b>8</b>
7.1 <b>Samples</b> .....	<b>8</b>
7.2 <b>Procedure</b> .....	<b>8</b>
7.3 <b>Static load test</b> .....	<b>9</b>
7.4 <b>Corrosion resistance</b> .....	<b>9</b>
<b>8 Marking</b> .....	<b>9</b>
<b>Annex A (informative) Test assembly</b> .....	<b>10</b>
<b>Annex B (informative) Flowchart of test procedure</b> .....	<b>11</b>
<b>Bibliography</b> .....	<b>12</b>

## European foreword

This document (prEN 13126-7:2020) 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 document is currently submitted to the CEN Enquiry.

This document will supersede EN 13126-7:2007.

With regard to EN 13126-7:2007, the following significant changes were made:

- EN 13126-7 now is independent from EN 13126-1; all necessary information are included without the need of any further information from EN 13126-1;
- several editorial changings in the wording for a better understanding;
- terms under 3.1 'sample', 3.2 'specimen' and 3.3 'test-rig', 3.4 'sash width', 3.5 'sach height' added;
- under 4.1 classification system changed completely; former digits 1 (Category of use), 4 (Fire resistance), 5 (Safety in use), 7 (security) and 8 (Application) deleted; former digit 2 changed into box 1 (Durability), former digit 3 changed into box 2 (Mass), former digit 6 changed into box 3 (Corrosion resistance), former digit 9 changed into box 4 (Test sizes);
- under 4.2 new grades for the number of cycles defined; H1 (5 000), H2 (10 000) and H3 (20 000); see also 5.2;
- under Clause 4.6 new example added for the new classification;
- under 5.2 new grades for the number of cycles defined; H1 (5 000), H2 (10 000) and H3 (20 000) in accordance with 4.2 established;
- under 5.4 clause for corrosion resistance added;
- under 6 headline modified with “...and preparation for the test”;
- subclauses 6.1 'Test rig', 6.2 'Specimen' and 6.3 'Mounting of specimen’ added;
- under 8 new clause added regarding marking with information from the current version of EN 13126-1.

This document is one of a series of European standards for building hardware products for windows and door height windows. This document is independent of EN 13126-1.

EN 13126 consists of the following parts:

- EN 13126-1, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 1: Requirements common to all types of hardware*;
- EN 13126-2, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 2: Window fastener handles*;
- EN 13126-3, *Building hardware — Hardware for windows and door-height windows — Requirements and test methods — Part 3: Handles, primarily for Tilt and Turn, Tilt-First and Turn-Only hardware*;

- EN 13126-4, *Building hardware — Requirements and test methods for windows and door height windows — Part 4: Espagnolettes*;
- EN 13126-5, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 5: Devices that restrict the opening of windows and door height windows*;
- EN 13126-6, *Building hardware — Hardware for windows and door height windows — Requirements and test methods — Part 6: Variable geometry stay hinges (with or without a friction stay)*;
- EN 13126-7, *Building hardware — Requirements and test methods for windows and door height windows — Part 7: Finger catches*;
- EN 13126-8, *Building hardware — Hardware for windows and door height windows — Part 8: Requirements and test methods for tilt and turn, Tilt-First and Turn-Only hardware*;
- EN 13126-9, *Building hardware — Requirements and test methods for windows and door height windows — Part 9: Hardware for horizontal and vertical pivot windows*;
- EN 13126-10, *Building hardware — Requirements and test methods for windows and door height windows — Part 10: Arm-balancing systems*;
- EN 13126-11, *Building hardware — Requirements and test methods for windows and door height windows — Part 11: Top hung projecting reversible hardware*;
- EN 13126-12, *Building hardware — Requirements and test methods for windows and door height windows — Part 12: Side hung projecting reversible hardware*;
- EN 13126-13, *Building hardware — Hardware for windows and balcony door — Requirements and test methods — Part 13: Sash balances*;
- EN 13126-14, *Building hardware — Hardware for windows and balcony door — Requirements and test methods — Part 14: Sash fasteners*;
- EN 13126-15, *Building hardware — Hardware for windows and balcony door — Requirements and test methods — Part 15: Rollers for sliding and hardware for sliding folding windows*;
- EN 13126-16, *Building hardware — Hardware for windows and balcony door — Requirements and test methods — Part 16: Hardware for Lift and Slide windows*;
- EN 13126-17, *Building hardware — Hardware for windows and balcony door — Requirements and test methods — Part 17: Hardware for Tilt and Slide windows*;
- EN 13126-19, *Building hardware — Requirements and test methods for windows and door height windows — Part 19: Sliding Closing Devices*

## 1 Scope

This document specifies the requirements and test procedures for durability, strength, security and functionality of finger catches for windows and door height windows.

## 2 Normative references

The following documents are referred to in the text in such a way that some of all of their contents constitute requirements 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*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **sample**

hardware component which shall be tested

### 3.2

#### **specimen**

window to accommodate hardware components (samples) for testing

### 3.3

#### **test-rig**

testing device onto which the specimen is mounted

### 3.4

#### **sash width**

total horizontal outer dimension of the sash

### 3.5

#### **sash height**

total vertical outer dimension of the sash

## 4 Classification

### 4.1 General

Finger catches shall be classified in accordance with the four box classification system (see Table 1).

**Table 1 — Clasifcation system of hardware**

box	1	2	3	4
	Durability	Mass	Corrosion resistance	Test sizes

## 4.2 Durability (1 – first box)

The first box shall display the grade applied to the durability test in accordance with 5.2:

- grade H1: 5 000;
- grade H2: 10 000;
- grade H3: 20 000.

## 4.3 Mass (2 – second box)

The second box shall display the maximum tested sash-mass.

The mass range starts from 10 kg and varies in steps of 10 kg in accordance with Table 2. An unlimited number of grades are identified, whereby 010 is the lowest.

**Table 2 — Tested sash mass**

Grade	010	020	030	040	050	060	070	080	090	100	...
Mass (kg)	10	20	30	40	50	60	70	80	90	100	...

## 4.4 Corrosion resistance (3 – third box)

The third box shall display the grade regarding corrosion resistance in accordance with 5.4.

## 4.5 Test sizes (4 – fourth box)

The fourth box shall display the test sizes which were used for testing the hardware as follows:

SW (= sash width) / SH (= sash height) in mm – tolerance =  $\pm 10$  mm

- 700 mm SW / 500 mm SH

The specified sizes are test sizes only. They do not relate to the maximum or minimum sizes to which a window may be fabricated.

The manufacturer shall ensure that with the application of the tested hardware in window sizes deviating from the test sizes (smaller or larger), the forces on the hardware do not exceed those during the durability test. This shall be displayed in the appropriate product documentation.

## 4.6 Example of classification for finger catches (EN 13126-7)

- a) Alternative 1: Table with boxes:

**Table 3 — Example of classification**

	1	2	3	4
EN 13126-7:YYYY	H2	050	2	700/500

In accordance with Clause 8 the information regarding the classification by using a table with boxes shall always be shown together with the number of this standard EN 13126-7.

- b) Alternative 2: Alphanumerical:

**EN 13126-7:YYYY H2-050-2-700/500**

box 1	durability	grade H2 (10 000 cycles)
box 2	mass	50 kg
box 3	corrosion resistance	grade 2
box 4	test sizes	SW = 700 mm / SH = 500 mm

**5 Requirements****5.1 Dangerous substances**

Materials in products should not release any dangerous substances in excess of the maximum levels specified in the European material standards and any National regulations.

**5.2 Durability**

The test specified in 7.2 shall be used to ensure that the finger catch is capable of continued operation after the durability test (with normal maintenance). The 3 grades for the number of cycles are specified following:

- grade H1: 5 000 cycles (+ 1 %);
- grade H2: 10 000 cycles (+ 1 %);
- grade H3: 20 000 cycles (+ 1 %).

**5.3 Additional requirements****Table 4 — Test forces**

Test sequence	Force		
	$F_1$ (N)	$F_2$ (N)	$F_3$ (N)
Before durability test	$\leq 20$	—	$40 \pm 1$
During Durability test:	not measured	—	$20 \pm 1$
After durability test	$\leq 20$	—	$40 \pm 1$
Static load test (force shall be applied for 60 s)	—	$200^{+10}_0$	$300^{+15}_0$

**5.4 Corrosion resistance**

Hardware shall conform to the grades listed in EN 1670.

Unless already stated with a test report by the manufacturer, the hardware shall be tested in accordance with EN 1670.

## 6 Test equipment and preparation for the test

### 6.1 Test rig

The test shall be on a test rig which corresponds in function and shape to the sash of the specimen.

### 6.2 Specimen

The finger catch shall be installed on the specimen in accordance with the manufacturer's instructions (see Annex A, Figure A.1). If there is no positioning location in the manufacturer's installation instructions, mount the sample in the centre of the top horizontal sash profile.

The tolerance for the specimen (test sizes) is  $\pm 10$  mm.

The specimen to be tested shall correspond in function, shape and material for which the hardware is intended. The specimen shall be infilled with an adequately rigid timber-based panel, PVC, steel or timber-composite material; this substitutes the glazing.

The specimen shall be installed in a supporting sub-frame using common-practice building procedures.

The general tolerance in this standard is + 5 % unless otherwise specified.

The hardware manufacturer shall provide complete test specimens for the testing institute. A drawing of the profile cross-section with relevant information should be enclosed in the test application, which also contains the necessary information for the installation of the hardware.

### 6.3 Mounting of specimen

The supporting sub-frame with the specimen to which the finger catch is fastened during the test, shall be fixed to the test rig. The mounting of the supporting sub-frame on the test rig shall represent a typical application and not impair its performance during the durability test.

Instructions for the application of additional stays and other devices in the specimen shall be observed.

## 7 Test procedure

### 7.1 Samples

Three test samples shall be used for testing in accordance with this document as follows:

sample A	performance tests, durability test	(complete specimen)
sample B	corrosion test	(finger catch);
sample C	retained for reference control	(finger catch)

Sample B should only be necessary if no test report can be supplied by the manufacturer regarding the testing of the hardware components in accordance with EN 1670.

Sample C should be retained by the test institute. Alternatively, the test institute should substitute sample C by a comprehensive documentation (description, photos etc.) of all tested components.

### 7.2 Procedure

Before the durability test measure the force  $F_1$  necessary to operate the finger catch whilst maintaining a force  $F_3 = (40 \pm 1)$  N at the centre of the top horizontal sash profile (see Table 4 and Annex A, Figure A.1).

Reduce force  $F_3$  to  $(20 \pm 1)$  N (see Table 4) at the centre of the top horizontal sash profile and maintain throughout the test.



Operate the sash, without shock, for the defined number of cycles in accordance with the grades shown in 4.2 and cycles at a rate of  $(250^{+25}_0)$  cycles/h.

After the test, measure and record the force  $F_1$  required to operate the finger catch, while maintaining a force  $F_3 = (40 \pm 1)$  N, at the centre of the top horizontal sash profile (see Table 4 and Annex A, Figure A.1).

Hardware shall be lubricated in accordance with the manufacturer's installation and maintenance instructions unless the hardware is claimed to be maintenance-free.

### 7.3 Static load test

(See Table 4)

Apply static load  $F_2 = (200^{+10}_0)$  N for  $(60^{+10}_0)$  s and release (see Annex A, Figure A.1).

After the static load test with  $F_2$  the hardware shall function correctly.

Apply load  $F_3 = (300^{+15}_0)$  N for  $(60^{+10}_0)$  s and release (see Annex A, Figure A.1).

After the static load test with  $F_3$  the hardware shall function correctly.

### 7.4 Corrosion resistance

NOTE If no test report in accordance with EN 1670 can be supplied by the manufacturer, a test is necessary.

All corrosion tests shall be carried out on original new samples in accordance with 5.4. Any frangible positioning lugs holding components together shall be broken.

## 8 Marking

The product and/or its literature, packaging etc., shall be marked with the following:

- a) manufacturer's name or trademark, or other means of positive identification;
- b) number of this document;
- c) the classification in accordance with Clause 4;
- d) year and calendar-week of production.

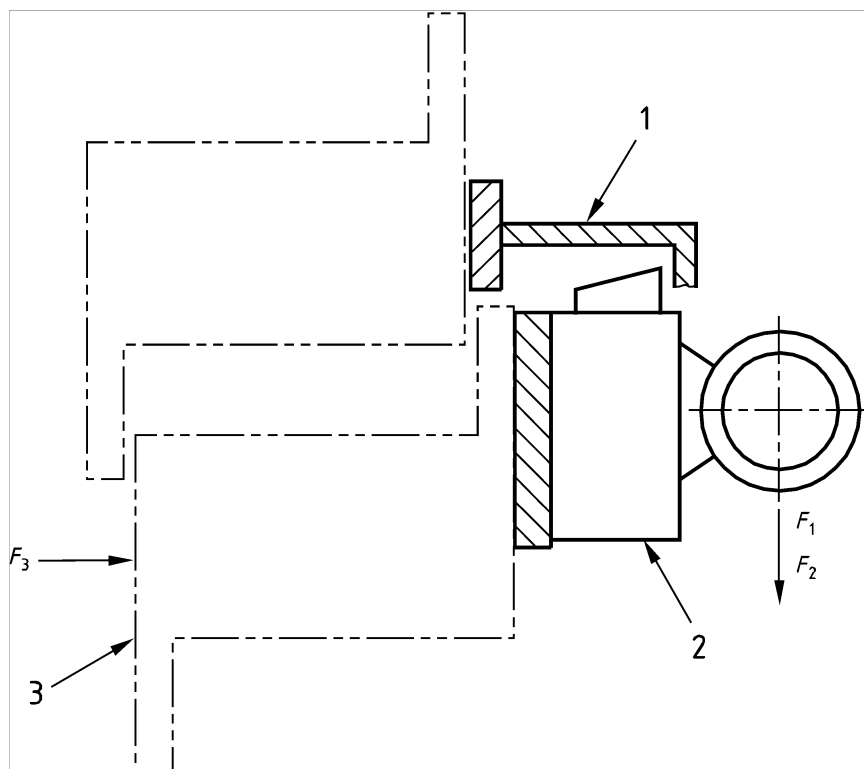
The information for d) may be in a coded form.

The marking shall be quoted using one or more of the following methods:

- hardware manufacturer's technical documentation (catalogue);
- accompanying documents;
- on the product label or packaging;
- by marking the product itself.

## Annex A (informative)

### Test assembly



#### Key

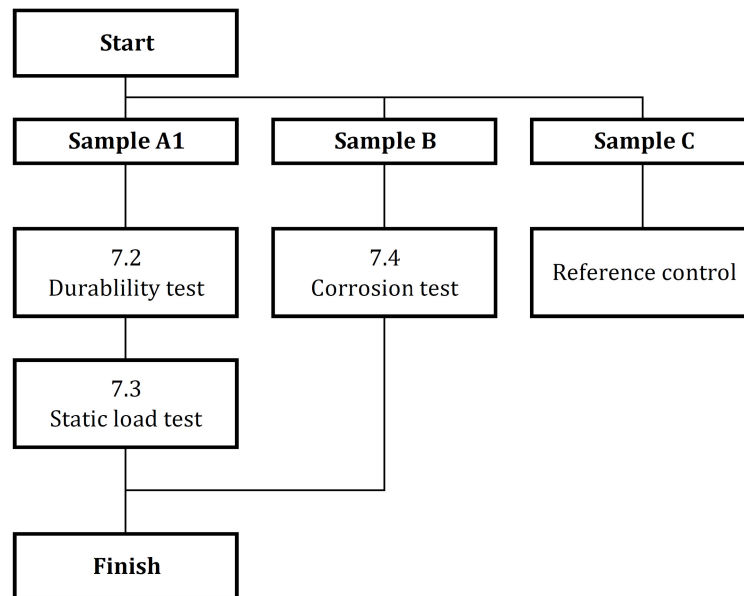
- 1 strike plate / keep
- 2 finger catch
- 3 section through specimen (showing dotted, part of simulated frame and window casement or sash and direction of forces applied during tests)

**Figure A.1 — Mounting of finger operated catch**

## **Annex B**

(informative)

### **Flowchart of test procedure**



**Figure B.1 — Flowchart of test procedure**

## Bibliography

- [1] EN 1191, *Windows and doors — Resistance to repeated opening and closing — Test method*
- [2] EN 12400, *Windows and pedestrian doors — Mechanical durability — Requirements and classification*
- [3] EN 12519, *Windows and pedestrian doors — Terminology*