



**SLOVENSKI STANDARD**  
**SIST EN 517:2006**  
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**Dodatna oprema za prekrivanje streh – Varnostne strešne kljuge**

Prefabricated accessories for roofing - Roof safety hooks

Vorgefertigte Zubehörteile für Dacheindeckungen - Sicherheitsdachhaken

Accessoires préfabriqués pour couverture - Crochets de sécurité

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**Ta slovenski standard je istoveten z: EN 517:2006**

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English Version

## Prefabricated accessories for roofing - Roof safety hooks

Accessoires préfabriqués pour couverture - Crochets de  
sécurité

Vorgefertigte Zubehörteile für Dacheindeckungen -  
Sicherheitsdachhaken

This European Standard was approved by CEN on 6 January 2006.

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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 Central Secretariat has the same status as the official versions.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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## Foreword

This document (EN 517:2006) has been prepared by Technical Committee CEN/TC 128 “Roof covering products for discontinuous laying and products for wall cladding”, the secretariat of which is held by IBN/BIN.

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of an identical text or by endorsement, at the latest by August 2006, and conflicting national standards shall be withdrawn at the latest by August 2006.

This document supersedes EN 517:1995.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 document applies to roof safety (building products) situated on the surface of pitched roofs and permanently fixed to the load-bearing roof construction. They are intended for the attachment of slaters' ladders, for supporting working platforms and as anchorage points to which personal protective equipment against falls or for restraint are attached.

It specifies essential dimensions, materials to be used, requirements with respect to the load-bearing capacity, of the roof safety hooks fastened to the roof construction including their fastening system and the extent of testing.

This document does not apply to installations which are used exclusively as anchorage points to which personal protective equipment against falls or for restraint are attached (see EN 795).

## 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 355, *Personal protective equipment against falls from a height — Energy absorbers*

EN 364, *Personal protective equipment against falls from a height — Test methods*

EN ISO 1140, *Fibre ropes — Polyamide — 3-, 4- and 8-strand ropes (ISO 1140:2004)*

EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods (ISO 1461:1999)*

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## 3 Terms and definitions

For the purpose of this document, the following definitions apply.

**3.1 roof safety hook**  
building product on a pitched roof surface used for securing persons and fixing loads predominantly used for the maintenance and repair of roof coverings

**3.2 fastening system**  
combination of products which fasten the roof safety hooks to the load-bearing roof construction

**3.3 load-bearing roof construction**  
part of the roof construction which is able to carry potential loads and to transmit them into the building structure

## 4 Symbols

*a* hook opening

*h* hook height

*R* lanyard

$P$  test load

## 5 Materials

Roof safety hooks and their fastening systems shall be of metal and be resistant to corrosion as well as to atmospheric and climatic influences. The material shall be free from faults and inclusions which may impair their performance abilities.

The corrosion resistance shall be at least equivalent to that of hot-galvanized steel with a protective layer of 50  $\mu\text{m}$  as in EN ISO 1461.

Parts of the fastening system beneath the roof covering may be from timber and shall then be protected against atmospheric and climatic influences.

## 6 Dimensions and construction requirements

### 6.1 General

Roof safety hooks are installations for creating higher workplaces by securing a slater's ladder or by attaching working platforms. They can simultaneously be used as anchorage points for personal protective equipment against fall or for restraint.

The type and size of the fastening system shall be specified by the manufacturer.

### 6.2 Roof safety hooks

Roof safety hooks are differentiated as follows (see Figure 1):

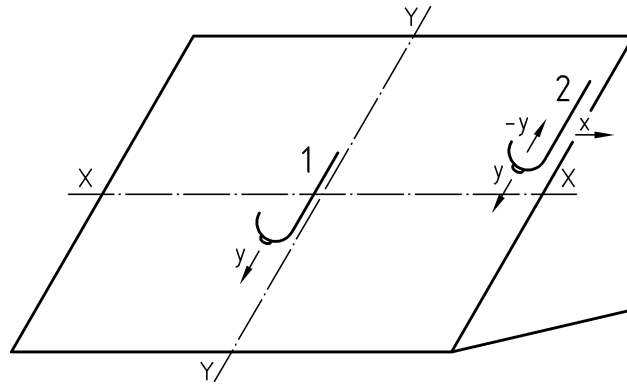
- Type A: Roof safety hooks designed to accept tensile forces in the direction of the slope of the roof ( $y$ -axis).
- Type B: Roof safety hooks designed to accept tensile forces in the direction of the slope of the roof ( $y$ -axis), in the opposite direction ( $y$ -axis) as well as in the perpendicular direction and parallel to the roof surface ( $x$ -axis).

Roof safety hooks shall have an opening of not less than 80 mm and not more than 150 mm, see Figure 2. The height  $h$  of the hook shall be at least 120 mm.

A closed loop with an opening of at least 20 mm  $\times$  40 mm, e.g. a closed eyelet welded on (see Figure 2), to which personal protective equipment against falls or for restraint may be attached, shall be fitted to the hook base.

Where roof safety hooks are fastened by nails to the load-bearing roof construction, at least three radially grooved nails (6,0 mm  $\times$  80 mm or 5,0 mm  $\times$  70 mm) shall be used.

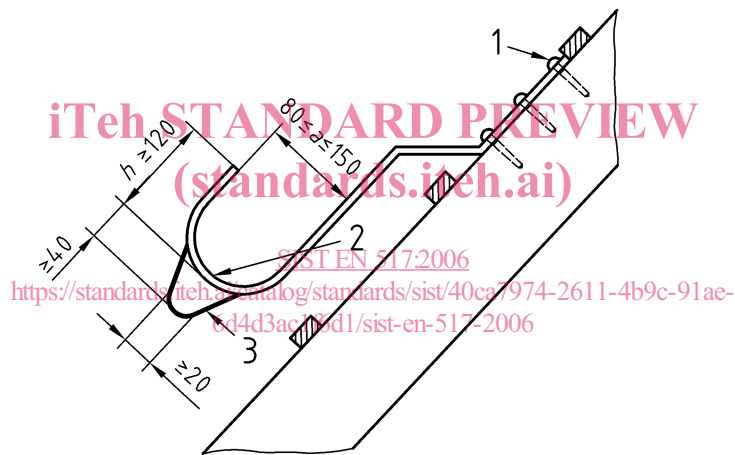
The load-bearing capacity of all fastener systems shall be proved by testing according to Clause 7.



- Key**  
 1 Type A  
 2 Type B

Figure 1 — Roof safety hooks, types

Dimensions in millimetres



- Key**  
 1 Fastening system  
 2 Hook base  
 3 Loop

Figure 2 — Roof safety hook (example)

## 7 Requirements

### 7.1 Static load in the hook base

Roof safety hooks including their fastenings shall be designed for a single load of  $F_v \geq 1,5$  kN in the direction of the y-axis in the hook base, see Figure 2.

Compliance with the requirements shall either be proved by means of a static calculation or, if this is not possible, the product shall be tested according to 8.1.2.

NOTE For further calculations see ENV 1993 and ENV 1999.



Under this load the distortion shall not be more than 5 mm in the direction of the *y-axis*.

The deflections and deviations shall be measured relative to the load-bearing roof construction.

## 7.2 Static load in the anchorage point

Roof safety hooks of Type A including their fastenings shall be designed to accept a single static load at the anchorage point of  $F_{y2} = 10$  kN in the direction of the *y-axis*.

Roof safety hooks of Type B including their fastenings shall be designed to accept a single static load at the anchorage point of  $F_y = 10$  kN in the direction of the *y-axis* (both directions) as well as a single static load of  $F_{x2} = 10$  kN in the direction of the *x-axis*.

Compliance with the requirements shall either be proved by means of a static calculation or, if this is not possible, the product shall be tested according to 8.1.3.

The indicated single loads are test loads which shall at least be specified.

NOTE For further calculations see ENV 1993 and ENV 1999.

The roof safety hooks and their fastenings shall not fail under the single loads as indicated, the single loads shall be held safely.

## 7.3 Fatigue strength

Roof safety hooks including their fastenings shall be designed to withstand the dynamic load of the test according to 8.2 at any point where it is possible to attach personal protective equipment against fall or for restraint (anchorage point).

## 7.4 Reaction to fire and external fire performance

Installations (safety hooks) covered by this document are reaction to fire Class A1 without the need for testing<sup>1)</sup> and are deemed to satisfy external fire performance requirements<sup>2)</sup>.

# 8 Testing

## 8.1 Static load

### 8.1.1 Number of specimens

Each test shall be made once each on three different specimens. All specimens shall pass the tests.

### 8.1.2 Test in the hook base

The specimens (roof safety hooks) shall be fastened to the simulation of the load-bearing roof construction according to the instructions of the manufacturer.

The test load of 1,5 kN shall be applied within one minute and maintained for a period of five minutes.

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1) See Commission Decision 96/603/EC as amended by Commission Decision 2000/605/EC.

2) See Commission Decision 2000/553/EC.