

# PÜSIANKURDUSSEADMED JA TURVAKONKSUD

Permanent anchor devices and safety hooks

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 17235:2024 sisaldab Euroopa standardi EN 17235:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.09.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 17235:2024 consists of the English text of the European standard EN 17235:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 18.09.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 13.340.60

English Version

## Permanent anchor devices and safety hooks

Dispositifs d'ancrage et systèmes d'ancrage avec  
crochet de sécurité fixés à demeure

Permanente Anschlageinrichtungen und  
Sicherheitsdachhaken

This European Standard was approved by CEN on 24 June 2024.

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

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## European foreword

This document (EN 17235:2024) 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 NBN.

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of an identical text or by endorsement, at the latest by March 2025, and conflicting national standards shall be withdrawn at the latest by June 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a standardization request addressed to CEN/CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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, Türkiye and the United Kingdom.

## Introduction

A reliable anchor device and safety hook are essential components to attach any personal fall protection equipment.

This document is intended to act as a complementary standard for existing European Standards covering other components used in fall protection systems.

Permanent anchor devices and safety hooks intend to prevent persons from falling and to arrest falls used in and on buildings and civil engineering works. These products meant to be secured in such a way that they are part of the construction work and intended to ensure the safety in use or in the functioning of a construction work.

The purpose and scope of application and the performance characteristics are based on the need that, in the case of fall from height, anchor kits and safety hook kits bear the dynamic force peak value generated by the mass of one or more persons, including any equipment carried.

This document is intended for the testing of new products before placing them on the market and gives only minimum performance characteristics. It is essential that safety hooks and permanent anchor devices are designed and manufactured so that, in the foreseeable conditions of use for which they are intended, the user is able to perform the risk-related activity while being appropriately protected at the highest possible level.

Manufacturers may wish to bear these points in mind when deciding on the actual performance of their products.

These products protect against fatal injury and therefore special characteristics apply.

## 1 Scope

This document specifies assessment of characteristics for anchor devices and safety hooks intended to be used with personal fall protection systems to prevent persons from falling and arrest falls, both permanently fixed on or into buildings and civil engineering works.

The safety hooks covered under this standard are also intended to for the attachment of mobile roof ladders or work platforms and have an opening of not less than 80 mm and not more than 150 mm, see Figure 2. The height  $h$  of the hook is at least 120 mm.

NOTE The personal fall protection systems are used according to EN 363:2018.

This standard also covers the fastening kits used to secure the anchor devices or safety hooks on or into the load bearing structure.

It specifies essential dimensions, materials and criteria to assess the performance of representative load bearing structures.

This standard describes the methods and criteria to assess the performance and durability of the following anchor kits:

- Kit A (Anchor kit incorporating a single anchor device);
- Kit B (Anchor kit incorporating a safety hook);
- Kit C (Anchor kit incorporating a horizontal wire anchor line);
- Kit D (Anchor kit incorporating a horizontal rail anchor line).

The kits described in this standard consist usually of several components. They are intended to be evaluated as a kit in its entirety.

This standard is not applicable to:

- Temporary anchor devices according to EN 795:2012;
- Facilities for roof access according to EN 516:2006;
- Permanently fixed ladders on roofs according to EN 12951:2004.
- Permanent anchor devices and safety hooks fixed with nails.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies.

EN 206:2013+A2:2021, *Concrete — Specification, performance, production and conformity*

EN 338:2016, *Structural timber — Strength classes*

EN 364:1992, *Personal protective equipment against falls from a height — Test methods*

EN 892:2012+A3:2023, *Mountaineering equipment — Dynamic mountaineering ropes — Safety requirements and test methods*

EN 1090-4:2018, *Execution of steel structures and aluminium structures — Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications*

EN 1090-5:2017, *Execution of steel structures and aluminium structures — Part 5: Technical requirements for cold-formed structural aluminium elements and cold-formed structures for roof, ceiling, floor and wall applications*

EN 1396:2023, *Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications*

EN 1993-1-4:2006<sup>1</sup>, *Eurocode 3 — Design of steel structures — Part 1-4: General rules — Supplementary rules for stainless steels*

EN 1999-1-1:2023, *Eurocode 9 — Design of aluminium structures — Part 1-1: General rules*

EN 1999-1-4:2023, *Eurocode 9 — Design of aluminium structures — Part 1-4: Cold-formed structural sheeting*

EN 10025-1:2004, *Hot rolled products of structural steels — Part 1: General technical delivery conditions*

EN 10204:2004, *Metallic products — Types of inspection documents*

EN 10346:2015, *Continuously hot-dip coated steel flat products for cold forming — Technical delivery conditions*

EN 14782:2006, *Self-supporting metal sheet for roofing, external cladding and internal lining — Product specification and requirements*

EN 14783:2013, *Fully supported metal sheet and strip for roofing, external cladding and internal lining — Product specification and requirements*

EN ISO 1461:2022, *Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods (ISO 1461:2022)*

EN ISO 12944-1:2017, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 1: General introduction (ISO 12944-1:2017)*

EN ISO 12944-2:2017, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 2: Classification of environments (ISO 12944-2:2017)*

EN ISO 12944-3:2017, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 3: Design considerations (ISO 12944-3:2017)*

EN ISO 12944-4:2017, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 4: Types of surface and surface preparation (ISO 12944-4:2017)*

EN ISO 12944-5:2019, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 5: Protective paint systems (ISO 12944-5:2019)*

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<sup>1</sup> As impacted by EN 1993-1-4:2006+A1:2015 and EN 1993-1-4:2006+A2:2020.

EN ISO 12944-6:2018, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 6: Laboratory performance test methods (ISO 12944-6:2018)*

EN ISO 12944-7:2017, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 7: Execution and supervision of paint work (ISO 12944-7:2017)*

EN ISO 12944-8:2017, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 8: Development of specifications for new work and maintenance (ISO 12944-8:2017)*

EN ISO 12944-9:2018, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 9: Protective paint systems and laboratory performance test methods for offshore and related structures (ISO 12944-9:2018)*

EN ISO 14713-1:2017, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 1: General principles of design and corrosion resistance (ISO 14713-1:2017)*

EN ISO 14713-2:2020, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 2: Hot dip galvanizing (ISO 14713-2:2019)*

EN ISO 14713-3:2017, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 3: Sherardizing (ISO 14713-3:2017)*

### **3 Terms, definitions, symbols and abbreviated terms**

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

#### **3.1 Terms and definitions**

##### **3.1.1**

##### **permanent anchor device**

anchor device installed to load bearing structure or permanently secured by a roof layer (e.g. green-roof) is intended to remain on or in the structure

##### **3.1.2**

##### **anchor device**

assembly of elements which incorporates one or more anchor points or traveller

##### **3.1.3**

##### **anchor kit**

kit incorporating a permanent anchor device or safety hook and the appropriate fastening kit for the load bearing structure

##### **3.1.4**

##### **load bearing structure**

part of the building and civil engineering work *which is able to carry potential loads*

##### **3.1.5**

##### **anchor point**

dedicated point on an anchor device or safety hook, which is designed for attaching personal fall protection equipment