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BSI Standards Publication

## Mountaineering equipment - Rock anchors - Safety requirements and test methods

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## National foreword

This British Standard is the UK implementation of EN 959:2018. It supersedes BS EN 959:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee SW/136/5, Sports, Playground and other Recreational Equipment - Mountaineering Equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019  
Published by BSI Standards Limited 2019

ISBN 978 0 580 98221 7

ICS 97.220.40

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2019.

### Amendments/corrigenda issued since publication

Date	Text affected
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EUROPÄISCHE NORM

December 2018

ICS 97.220.40

Supersedes EN 959:2007

English Version

## Mountaineering equipment - Rock anchors - Safety requirements and test methods

Équipement d'alpinisme et d'escalade  
- Amarrages pour rocher - Exigences  
de sécurité et méthodes d'essai

Bergsteigerausrüstung - Bohrhaken -  
Sicherheitstechnische Anforderungen  
und Prüfverfahren

This European Standard was approved by CEN on 29 July 2018.

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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 COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN 959:2018) has been prepared by Technical Committee CEN/TC 136 "Sports, playground and other recreational facilities and equipment", the secretariat of which is held by DIN.

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 June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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 supersedes EN 959:2007.

Changes made in comparison with EN 959:2007:

- a) definition for "eye" added;
- b) definition for "connector" added;
- c) classes for rock anchors added in [4.1](#) "materials" and amendments of [4.1](#);
- d) amendment of [4.2](#) "Design" and change of the overall thickness of the border of the eye;
- e) amendment of [5.3.2](#) "Determination of load-bearing capacity";
- f) amendment of [Clause 6](#) "Marking";
- g) amendment of [Clause 7](#) "Information supplied by the manufacturer";
- h) inclusion of informative [Annex C](#) "Stress corrosion cracking of steel anchors";
- i) [Annex C](#) "General guidance for placing rock anchors" changed to [Annex D](#);
- j) editorial amendments;
- k) introduction of a new class of rock anchor designed especially for the top of a route for lowering/rappelling.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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## Introduction

The text of this document is based on the former UIAA Standard P (Union Internationale des Associations d'Alpinisme), which has been prepared with international participation.

This document is one of a package of standards for mountaineering equipment, see [Annex A](#).

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## 1 Scope

This document specifies safety requirements and test methods for rock anchors for use in mountaineering including climbing.

## 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. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1920-3, *Testing of concrete - Part 3: Making and curing test specimens*

## 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

#### **rock anchor**

anchoring device intended for repeated use after installation, that is inserted into a drilled hole in the rock and held in place by gluing, or expansion forces, or positive locking, and with an attachment point for a connector

### 3.2

#### **connector**

openable device, which enables a mountaineer to link himself directly or indirectly to an anchor or to link parts of the equipment together

[SOURCE: EN 12275:2013, definition 3.1]

### 3.3

#### **eye**

attachment point for a connector

### 3.4

#### **body of the rock anchor**

part of the rock anchor that will be installed in the rock

### 3.5

#### **hanger**

attachment point capable of being separated from the body of a rock anchor

### 3.6

#### **installed length**

distance from the rock surface to the furthest point of the body in mechanical contact with the rock or bonded to the rock, after installation

### 3.7

#### **belay rock anchor**

rock anchors linked together specifically designed to be placed at the top of a pitch (section) of the climbing route, to enable the climbers to belay, be lowered down, or to lower themselves down