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Mountaineering equipment – Chocks – Safety requirements and test methods

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Europastandarden EN 12270:2013 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 12270:2013.

Denna standard ersätter SS-EN 12270, utgåva 1.

The European Standard EN 12270:2013 has the status of a Swedish Standard. This document contains the official version of EN 12270:2013.

This standard supersedes the Swedish Standard SS-EN 12270, edition 1.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12270

November 2013

ICS 97.220.40

Supersedes EN 12270:1998

English Version

Mountaineering equipment - Chocks - Safety requirements and test methods

Équipement d'alpinisme et d'escalade - Coinceurs - Exigences de sécurité et méthodes d'essai

Bergsteigerausrüstung - Klemmkeile - Sicherheitstechnische Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 28 September 2013.

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-CENELEC 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-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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Foreword

This document (EN 12270:2013) 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of an identical text or by endorsement, at the latest by May 2014, and conflicting national standards shall be withdrawn at the latest by May 2014.

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

This document supersedes EN 12270:1998.

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.

In comparison with the previous edition EN 12270:1998, the following significant changes have been made:

a) editorial revision;

b) new Annex A “Protection provided by chocks” added;

c) updated Annex B.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies safety requirements and test methods for chocks for use in mountaineering including climbing.

2 Normative references

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

EN 564, *Mountaineering equipment - Accessory cord - Safety requirements and test methods*

EN 565, *Mountaineering equipment - Tape - Safety requirements and test methods*

EN 892, *Mountaineering equipment - Dynamic mountaineering ropes - Safety requirements and test methods*

EN 1891, *Personal protective equipment for the prevention of falls from a height - Low stretch kernmantel ropes*

EN ISO 139, *Textiles - Standard atmospheres for conditioning and testing (ISO 139)*

ISO 7000, *Graphical symbols for use on equipment - Registered symbols*

3 Terms and definitions

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

3.1
chock
non-adjustable body, which is intended to be wedged in cracks or cavities in the rock and which, due to its shape and orientation in the rock, can withstand a load

Note 1 to entry: See Annex A for protection provided by chocks.

3.2
means of attachment
part of a chock which allows the attachment of a connector

Note 1 to entry: Applies to connectors in accordance with EN 12275.

3.3
holding force
force necessary to cause the chock or its means of attachment to break or to be pulled through the test apparatus

Note 1 to entry: The force is determined in the strength test according to 5.4.2.

4 Requirements

4.1 Design

4.1.1 Chocks may be fitted with a means of attachment by the manufacturer.

4.1.2 If a chock is not fitted with a means of attachment, the chock shall be designed such that a means of attachment consisting of tape (according to EN 565) or accessory cord (according to EN 564) or rope (according to EN 892 or EN 1891) can be affixed.

4.1.3 If there is a textile means of attachment, whose strength is dependent on the integrity of the stitching, then the stitching shall contrast with the background in colour or surface appearance.

4.1.4 Any means of attachment shall be large enough to accommodate a pin with a diameter of (15 ± 0,1) mm.

4.1.5 All edges of the chock and/or the means of attachment that can come into contact with fingers or combinable components shall be free from burrs.

4.2 Strength

When tested according to 5.4.2, the holding force shall be at least the one(s) marked on the chock (see Clause 6 b)) and be not less than 2,0 kN.

5 Test methods

5.1 Test samples

For the test, as many test samples shall be provided as there are different chock orientations indicated by the manufacturer in the instructions for use. If a chock model is manufactured in different sizes, each size shall be tested.

5.2 Test apparatus for strength test

5.2.1 Layout

The apparatus consists of two round steel supporting jaws with a radius R = (65 ± 2) mm for the chock and by means of a loading bar with a diameter of (10 ± 0,1) mm for the means of attachment, see Figure 2 and Figure 6.

An apparatus consisting of two round steel supporting jaws with a radius R = (25 ± 1) mm shall be used for testing chocks where b_{max} of the tested position < 10 mm (see Figure 1).

The surface of the supporting jaws shall have a maximum surface roughness of R_{max} = 50 µm.

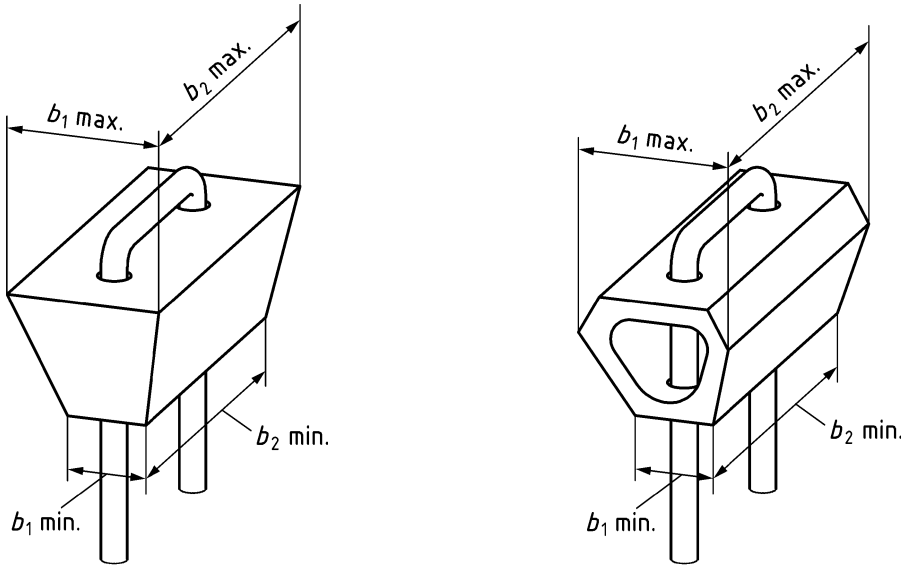
The supporting jaws shall not rotate during the test.

When testing chocks fitted with textile slings, the surface of the steel bar shall have an arithmetical mean deviation of the profile of R_a = 0,8 µm and a maximal surface roughness of R_{max} = 6,3 µm. There are no surface roughness requirements when testing chocks with a means of attachment made of other than textile material.

For chocks with a horizontal non-parallel cross-section according to Figure 3, the supporting jaws shall have a groove adapted to the cross-section of the chock.

For cam-type chocks (according to Figure 4) which attain their wedging effect by swinging to one side when loaded and therefore cannot be clamped into the round steel supporting jaws, the force is transmitted by two plane-parallel steel supporting jaws, one having a step (according to Figure 5) (position 1) and by a loading bar. The surface roughness of the plane-parallel supporting jaws shall be the same as that of the round steel supporting jaws.

When cam-type chocks are used in position 2, test according to Figure 6.

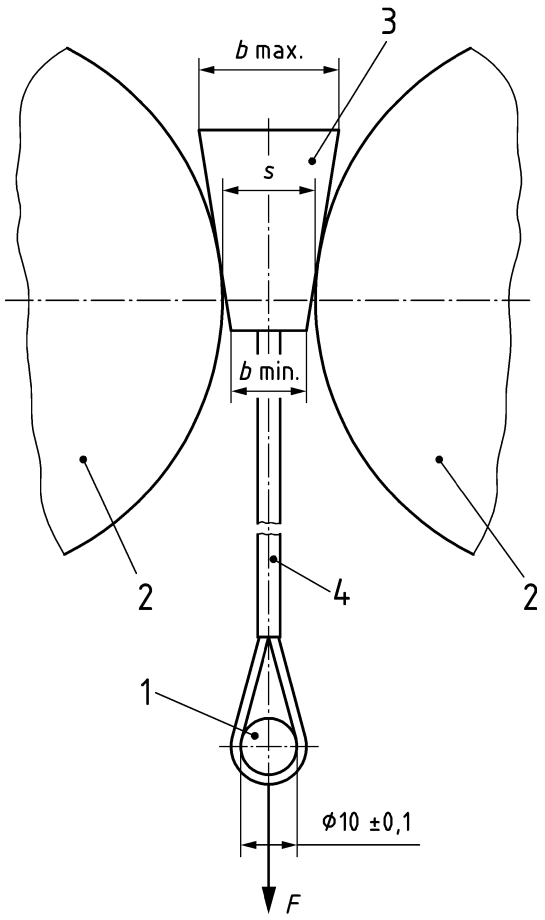


Key

b_{1min}	minimum chock width
b_{2min}	minimum chock length
b_{1max}	maximum chock width
b_{2max}	maximum chock length

Figure 1 — Examples of chocks

Dimensions in millimetres



Key

1 loading bar
2 supporting jaws *R* (65 ± 2) mm or *R* (25 ± 1) mm
3 chock
4 means of attachment
s space between the supporting jaws
F force

Figure 2 — Layout and adjustment of apparatus