

Mountaineering equipment — Rope clamps — Safety requirements and test methods

Licensed Copy: :FULLNAME, : DATE, Uncontrolled Copy, (c) BSI

The European Standard EN 567 : 1997 has the status of a British Standard

ICS 97.220.40

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee SW/136, Sports, playground and other recreational equipment, upon which the following bodies were represented:

Consumer Policy Committee of BSI
 Health and Safety Executive
 Home Office

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

Association of British Mountaineering Equipment Manufacturers
 Association of Consulting Scientists
 British Mountaineering Council
 British Plastics Federation
 Industrial Rope Access Trade Association
 Institute of Trading Standards Administration
 National Caving Association
 National Engineering Laboratory
 Safety Equipment Association

This British Standard, having been prepared under the direction of the Consumer Products and Services Sector Board, was published under the authority of the Standards Board and comes into effect on 15 August 1997

© BSI 1997

First edition 1993

The following BSI references relate to the work on this standard:
 Committee reference SW/136
 Draft for comment 95/570082 DC

ISBN 0 580 27925 1

Amendments issued since publication

Amd. No.	Date	Text affected

Licensed Copy: :FULLNAME, : DATE, Uncontrolled Copy, (c) BSI

Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
Foreword	2
Specification	
1 Scope	3
2 Normative references	3
3 Definitions	3
4 Safety requirements	3
5 Test methods	4
6 Information to be supplied	4
7 Marking	4
Annexes	
A (informative) Standards on mountaineering equipment	5
ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives	6
Table	
A.1 List of standards on mountaineering equipment	5
Figure	
1 Edges of openings	3

National foreword

This British Standard has been prepared by Technical Committee SW/136 and is the English language version of EN 567 : 1997 *Mountaineering equipment — Rope clamps — Safety requirements and test methods*, published by the European Committee for Standardization (CEN). It supersedes BS EN 567 : 1993 which is withdrawn.

EN 567 was produced as a result of international discussion in which the United Kingdom took an active part.

Cross-references

Publication referred to	Corresponding British Standard
EN 564	BS EN 564 : 1997 <i>Mountaineering equipment — Rope clamps — Safety requirements and test methods</i>
EN 892	BS EN 892 : 1997 <i>Mountaineering equipment — Dynamic mountaineering ropes — Safety requirements and test methods</i>

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, an EN title page, pages 2 to 6, an inside back cover and a back cover.

English version

Mountaineering equipment — Rope clamps — Safety requirements and test methods

Équipement d'alpinisme et d'escalade —
Bloqueurs — Exigences de sécurité et méthodes
d'essai

Bergsteigerausrüstung — Seilklemmen —
Sicherheitstechnische Anforderungen und
Prüfverfahren

This European Standard was approved by CEN on 1997-01-27. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 136, Sports, playground and other recreational equipment, the secretariat of which is held by DIN.

This European Standard supersedes EN 567 : 1992.

The text is based on UIAA-Standard L (Union Internationale des Associations d'Alpinisme), which has been developed with international participation.

This standard is one of a package of standards for mountaineering equipment, see annex A.

This European Standard 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 89/686/EEC.

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

Annexes A and ZA of this European Standard are informative.

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 1997, and conflicting national standards shall be withdrawn at the latest by August 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

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

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

- | | |
|--------|-------------------------------------------------------------------------------------------------------|
| EN 564 | <i>Mountaineering equipment — Accessory cords — Safety requirements and test methods</i> |
| EN 892 | <i>Mountaineering equipment — Dynamic mountaineering ropes — Safety requirements and test methods</i> |

3 Definitions

For the purposes of this standard, the following definitions apply:

3.1 rope clamp

Mechanical device which, when attached to a rope or an accessory cord of appropriate diameter, will lock under load in one direction and slip freely in the opposite direction.

3.2 locking mechanism

Mechanism which prevents movement of the rope clamp on the rope or accessory cord in one direction.

3.3 locking device

Device for automatically preventing the rope or accessory cord from slipping out of the rope clamp.

4 Safety requirements

4.1 Design

4.1.1 Rope clamps shall have a locking device or similar mechanism to prevent a single rope or an accessory cord with a diameter within the range marked on the rope clamp (see clause 7) from slipping out of the rope clamp.

4.1.2 Rope clamps shall be designed to lock automatically in one rope or accessory cord direction and to slip freely in the opposite direction.

4.1.3 When tested in accordance with 5.3, rope clamps shall not completely break the rope or accessory cord.

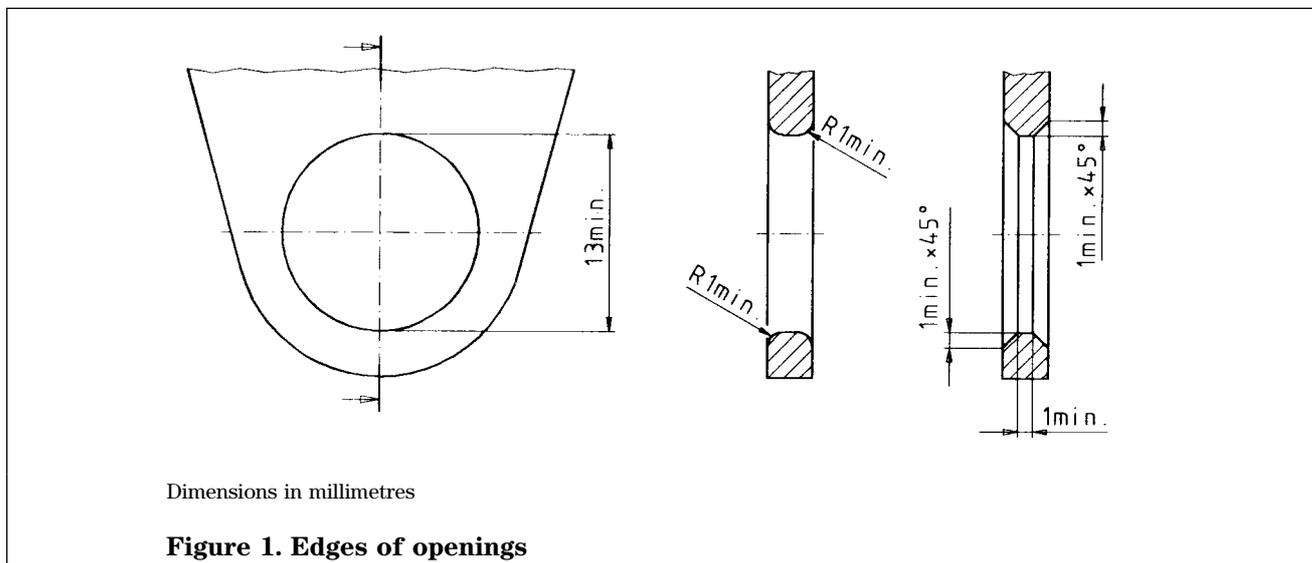
4.1.4 Rope clamps shall have an attachment opening of at least 13 mm. The edges of all openings for handles and connectors or sling attachment shall be as shown in figure 1.

4.1.5 All edges of a rope clamp which can come into contact with the user's fingers shall be free of burrs.

4.2 Strength

4.2.1 When tested in accordance with 5.3, rope clamps with a rope of diameter within the range marked on the rope clamp (see clause 7) attached shall show no visible signs of damage or deformation which can impair its function.

4.2.2 When tested in accordance with 5.3, rope clamps with an accessory cord of diameter within the range marked on the rope clamp (see clause 7) attached shall show no visible signs of damage or deformation which can impair its function.



5 Test methods

5.1 Conditioning

Carry out the tests at a temperature of (23 ± 5) °C.

5.2 Examination of design

5.2.1 With the locking device closed and a rope or accessory cord of maximum diameter, as marked on the rope clamp, check that the rope or accessory cord cannot be removed sideways. Check also, by pulling by hand, that the rope clamp locks in one direction and can slip in the opposite direction. Repeat the checks using a rope or accessory cord of minimum diameter as marked on the rope clamp.

5.2.2 Test by tactile examination that the edges of the rope clamp are free of burrs.

5.2.3 Determine the dimension of the attachment opening (see 4.1.4) by measuring with a bar of $(13^{+0,01}_0)$ mm diameter.

5.3 Determination of strength

Attach a rope in accordance with EN 892 or accessory cord in accordance with EN 564 of maximum diameter, as marked on the rope clamp, to the rope clamp and a connector in the opening of the rope clamp, as specified by the manufacturer. Fix the system in a tensile testing machine and subject it to a force of $(4 \pm 0,1)$ kN, five times in succession, using a test speed of (100 ± 50) mm/min.

Move the rope clamp between application of each force, so that the locking force is applied to a previously unloaded point of the rope or accessory cord in each case.

Repeat the procedure using a rope or accessory cord of minimum diameter, as marked on the rope clamp.

Note any visible signs of damage or deformation which can impair its function.

6 Information to be supplied

- a) The name or trademark of the manufacturer, importer or supplier;
- b) the number of this European Standard: EN 567;
- c) the meaning of any markings on the product;
- d) the use of the product;
- e) how to insert and extract the rope or accessory cord;
- f) how the locking device works;
- g) where and how to attach to the rope clamp;
- h) how to choose other components for use in the system;
- i) how to maintain and service the product;
- j) the lifespan of the product;
- k) the effects of chemical reagents and temperature on the product.

7 Marking

Rope clamps shall be marked with at least the following information:

- a) the name or trademark of the manufacturer, importer or supplier;
- b) the range of rope or accessory cord diameters, in millimetres, to the nearest whole number, with which the rope clamp can be used. The symbol \varnothing shall be used as a prefix to indicate the diameter, e.g. $\varnothing 7$ mm to 11 mm.
- c) a pictogram showing the direction of use.

Annex A (informative)
Standards on mountaineering equipment

Table A.1 List of standards on mountaineering equipment		
No	Document	Title
1	EN 892	<i>Mountaineering equipment — Dynamic mountaineering ropes — Safety requirements and test methods</i>
2	prEN 12275	<i>Mountaineering equipment — Connectors — Safety requirements and test methods</i>
3	1)	<i>Mountaineering equipment — Ice-tools — Safety requirements and test methods (00136012)</i>
4	prEN 12277	<i>Mountaineering equipment — Harnesses — Safety requirements and test methods</i>
5	1)	<i>Mountaineering equipment — Safety helmets — Safety requirements and test methods (00136076)</i>
6	EN 564	<i>Mountaineering equipment — Accessory cord — Safety requirements and test methods</i>
7	EN 565	<i>Mountaineering equipment — Tape — Safety requirements and test methods</i>
8	EN 566	<i>Mountaineering equipment — Slings — Safety requirements and test methods</i>
9	prEN 12276	<i>Mountaineering equipment — Frictional anchors — Safety requirements and test methods</i>
10	prEN 12270	<i>Mountaineering equipment — Chocks — Safety requirements and test methods</i>
11	EN 567	<i>Mountaineering equipment — Rope clamps — Safety requirements and test methods</i>
12	EN 958	<i>Mountaineering equipment — Energy absorbing systems for use in klettersteig (via ferrata) climbing — Safety requirements and test methods</i>
13	EN 959	<i>Mountaineering equipment — Rock anchors — Safety requirements and test methods</i>
14	EN 568	<i>Mountaineering equipment — Ice anchors — Safety requirements and test methods</i>
15	EN 569	<i>Mountaineering equipment — Pitons — Safety requirements and test methods</i>
16	prEN 893	<i>Mountaineering equipment — Crampons — Safety requirements and test methods</i>
17	1)	<i>Mountaineering equipment — Descenders — Safety requirements and test methods (00136079)</i>
18	prEN 12278	<i>Mountaineering equipment — Pulleys — Safety requirements and test methods</i>
19	prEN 12492	<i>Mountaineering equipment — Climbers' safety helmets — Safety requirements and test methods</i>
1) In preparation.		

Annex ZA (informative)

Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

This European Standard supports essential requirements of the EU Directive on personal protective equipment (PPE) 89/686/EEC.

WARNING. Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

The following clauses of this standard are likely to support requirements of Directive 89/686/EEC.

EU Directive, Annex II	Clause/subclause of this standard
1.2.1 Absence of risk and other factors	4.1; 4.2
1.4 Information supplied by the manufacturer	6; 7
3.1.2.2 Prevention against falling from heights	4.2

Compliance with the clauses of this standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

List of references

See national foreword.

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: 020 8996 9000. Fax: 020 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: 020 8996 9001. Fax: 020 8996 7001.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre. Tel: 020 8996 7111. Fax: 020 8996 7048.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: 020 8996 7002. Fax: 020 8996 7001.

Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

If permission is granted, the terms may include royalty payments or a licensing agreement. Details and advice can be obtained from the Copyright Manager. Tel: 020 8996 7070.