



SLOVENSKI STANDARD

SIST EN 1498:1996

01-december-1996

Reševalna oprema - Reševalne zanke

Rescue equipment - Rescue loops

Rettungsausrüstung - Rettungsschlaufen

Equipement de sauvetage - Sangles de sauvetage

Ta slovenski standard je istoveten z: EN 1498:1996

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ICS:

13.340.60	Zaščita pred padci in zdrsi	Protection against falling and slipping
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EUROPEAN STANDARD

EN 1498

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1996

ICS 13.220.10; 13.340.20

Descriptors: personal protective equipment, accident prevention, protection against fall, rescue equipment, webbing, specifications, human factors engineering, mechanical strength, tests, instructions, marking

English version

Rescue equipment - Rescue loopsÉquipement de sauvetage - Sangles de sauvetage **STANDARD PREVIEW** Rettungsausrüstung - Rettungsschlaufen**(standards.iteh.ai)**

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This European Standard was approved by CEN on 1996-03-07. 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.

The European Standards exist 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.

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CEN

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

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

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Foreword

This European Standard has been prepared by CEN/TC 160 "Protection against falls from height including working belts" of which the secretariat 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publication of an identical text or by endorsement, at the latest by October 1996, and conflicting standards shall be withdrawn at the latest by October 1996.

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(s).

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

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 standard specifies requirements, test methods, instructions for use and marking for rescue loops. A rescue loop is not a component of personal protective equipment against falls from a height.

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 362	Personal protective equipment against falls from a height - Connectors
EN 363	Personal protective equipment against falls from a height - Fall arrest systems
EN 364:1992	Personal protective equipment against falls from a height - Test methods
EN 365	Personal protective equipment against falls from a height - General requirements for instructions for use and for marking
prEN 892-1	Mountaineering equipment - Ropes - Part 1: Safety requirements, testing, marking

3 Definitions

For the purposes of this standard the definitions given in EN 363 apply, together with the following.

3.1 Rescue loop: component of personal protective equipment for rescue purposes consisting of elements designed and constructed so that during the rescue process the rescuee is held and kept in a defined position.

3.2 Rescue loop class A: component of personal protective equipment consisting of elements designed and constructed in such a way that, during the rescue process, the rescuee is held by the straps of the loop passing around the back and under the arms (see figure 1).

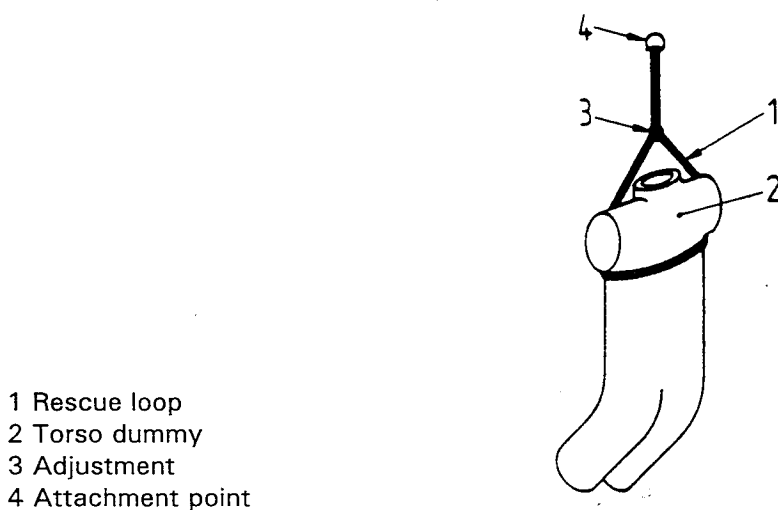
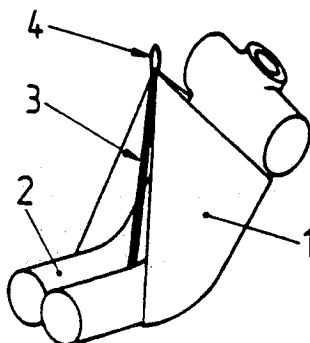


Figure 1: Example of a rescue loop class A

3.3 Rescue loop class B: component of personal protective equipment consisting of elements designed and constructed in such a way that, during the rescue process the rescuee is held sitting in the loop (see figure 2).



- 1 Rescue loop
- 2 Torso dummy
- 3 Central strap
- 4 Attachment point

Figure 2: Example of a rescue loop class B

3.4 Rescue loop class C: component of personal protective equipment consisting of elements designed and constructed in such a way that, during the rescue process the rescuee is held in a position with their head down and with the loop fastened around the ankles (see figure 3).

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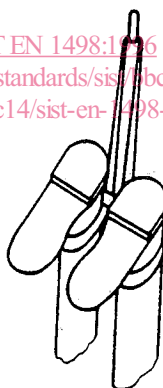


Figure 3: Example of a rescue loop class C

4 Requirements

4.1 Ergonomics

The rescue loop shall be designed so that in the conditions of use for which it is intended and in the foreseeable period of wearing the rescuee is not essentially impaired. The degree of protection provided shall correspond to the risks.

The rescue loop shall not cause any additional risk and it should offer an acceptable degree of comfort. When using the rescue loop the rescuee shall not be endangered or impaired due to a displacement of the straps.

4.2 Materials and construction

4.2.1 Webbing and yarns

Webbing and yarns shall be made of high tenacity filament or multifilament synthetic fibres, suitable for the use intended. The breaking tenacity of the synthetic fibres shall be known to be at least 0,6 N/tex.

Threads used for sewing shall be physically compatible with the webbing and their quality shall be comparable to that of the webbing. They shall, however, be of a contrasting shade in order to facilitate visual inspection.

4.2.2 Construction

The width of the body-supporting parts shall be at least 40 mm. It shall be possible to visually inspect every component of a rescue loop.

The rescue loop shall be designed so that, when tested in accordance with 5.3.2.1 inadvertent release of the rescuee from the rescue loop is prevented.

4.2.3 Attachment

The rescue loop shall have at least one attachment point. The eye of the attachment point shall be designed so that a mandrel of a diameter of at least 25 mm can pass through it.

4.2.4 Connectors

Connectors shall conform to EN 362. [SIST EN 1498:1996
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4.3 Dynamic strength

Two drop tests shall be carried out according to 5.3.2. The torso dummy or the test mass shall be held and no body-supporting part of the rescue loop shall break or rupture; the elements of the rescue loop shall not become detached.

If the rescue loop has more than one attachment point the two tests shall be carried out on each attachment point.

NOTE: Additional rescue loops should be supplied for this purpose.

4.4 Static strength

When tested in accordance with 5.4 with a force of 15 kN applied for a period of at least 3 min, no body-supporting part of the rescue loop shall break or rupture; the elements of the rescue loop shall not become detached.

If the rescue loop has more than one attachment point, the tests shall be carried out on each attachment point.

NOTE: Additional rescue loops should be supplied for this purpose.

5 Test methods

5.1 Sampling

At least two test samples, each supplied with an unused sample of mountaineering rope (lanyard) according to prEN 892-1 with a nominal diameter of 11 mm and an approximate length of 4000 mm shall be provided for the tests.

5.2 Visual inspection

Check that the specifications of 4.2.1 and 4.2.2 are met.

5.3 Dynamic test

5.3.1 Test apparatus

The test apparatus for the dynamic test of rescue loops classes A and B shall conform to 4.2, 4.4, 4.5 and 4.6 of EN 364:1992.

The test apparatus for the test of the rescue loop class C shall conform to figure 4.

This shall be a rigid structure having a hard and smooth surface.

Dimensions in millimetres

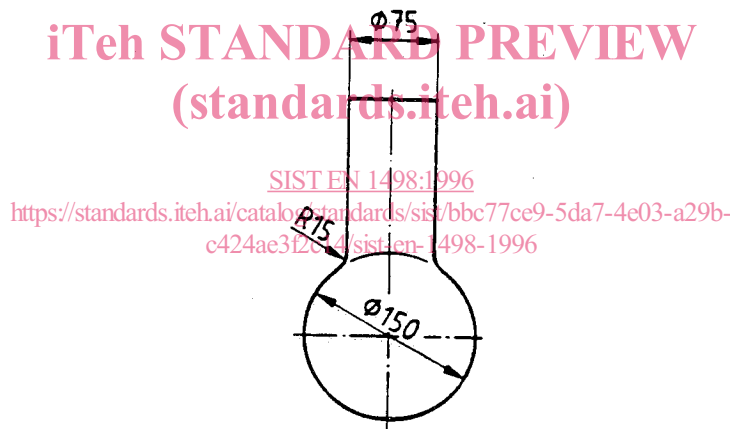


Figure 4: Test apparatus for the test of a rescue loop class C

5.3.2 Dynamic test procedure

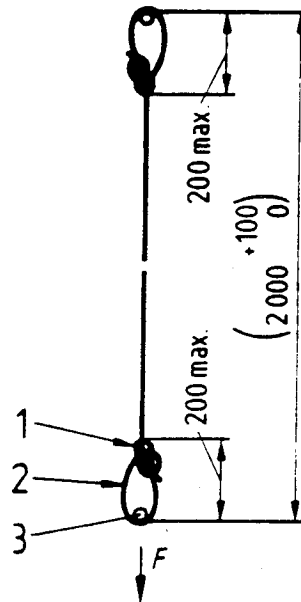
5.3.2.1 Dynamic test for rescue loops classes A and B

Fit the rescue loop to the torso dummy in accordance with the instructions for use. To ensure that the test is carried out correctly, additional fixings may be used to retain the torso dummy during the test. These shall not affect the test results.

Connect one end of the rope to the attachment point of the rescue loop and the other to the anchorage point of the test apparatus.

Prepare the rope so that, under the load of the torso dummy, the length of the rope including the loops to be formed at the two ends, is (2000 ± 100) mm, (see figure 5).

Dimensions in millimetres

F Force: $1 \text{ kN} \pm 10 \text{ N}$

1 Bowline knot

2 Termination loop

3 Attachment point

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Figure 5: Rope for the dynamic test

Terminate the rope in eyes produced by tying bowline knots (see figure 6) and ensure the length of the termination eyes is a maximum of 200 mm.

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Suspend the torso dummy by means of the rescue loop, then raise it by $(1000 + 50)$ mm with a maximum distance of 300 mm from the centre line (see figure 7). Hold it with the quick release device.

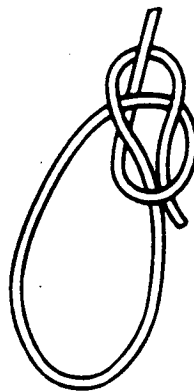


Figure 6: Bowline knot