

SLOVENSKI STANDARD

SIST EN 13538-1:2003

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Determination of dimensional characteristics of sleeping bags - Part 1: Internal dimensions

Bestimmung der Maßhaltigkeit von Schlafsäcken - Teil 1: Innenmaße

Détermination des caractéristiques dimensionnelles des sacs de couchage - Partie 1: Dimensions internes

Ta slovenski standard je istoveten z: **EN 13538-1:2002**

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ICS:

97.200.30

Oprema za taborjenje in
tabori

Camping equipment and
camp-sites

SIST EN 13538-1:2003

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13538-1

August 2002

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English version

**Determination of dimensional characteristics of sleeping bags -
Part 1: Internal dimensions**

Détermination des caractéristiques dimensionnelles des
sacs de couchage - Partie 1: Dimensions internes

Bestimmung der Maßhaltigkeit von Schlafsäcken - Teil 1:
Innenmaße

This European Standard was approved by CEN on 29 May 2002.

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 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 Management Centre has the same status as the official versions.

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document EN 13538-1:2002 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 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2003, and conflicting national standards shall be withdrawn at the latest by February 2003.

The text is based on an earlier draft prepared by CEN/TC 222 "Feather and down".

This European Standard consists of a number of parts as follows:

EN 13538-1, *Internal dimensions*;

EN 13538-2, *Thickness and elastic recovery*;

EN 13538-3, *Volume under load and easiness of packing*.

Annex A is normative.

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

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1 Scope

This European Standard specifies a procedure for the determination of the internal dimensions of sleeping bags as specified in prEN 13537.

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 (including amendments).

EN 20139, *Textiles — Standard atmospheres for conditioning and testing (ISO 139:1973)*.

3 Terms and definitions

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

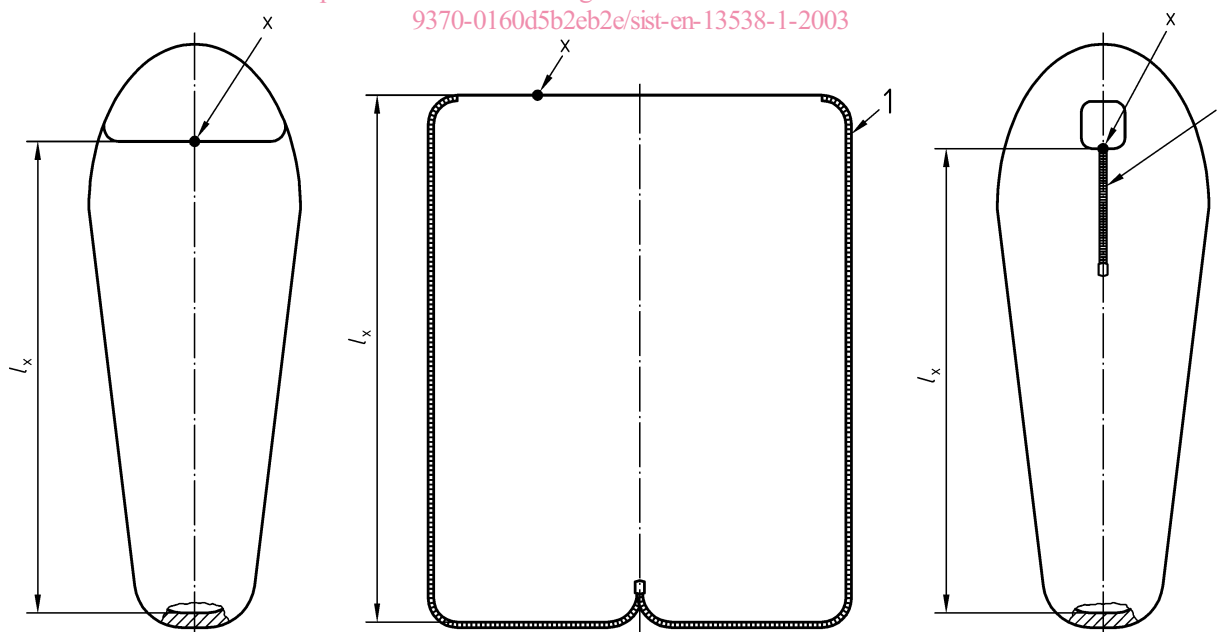
3.1

inside length

dimension from the foot to point x (see Figure 1)

In the case of blanket-shaped sleeping bags the foot end is formed by the row of teeth of the zip fastener in the foot area and in the case of mummy-shaped sleeping bags by the inner seam at the bottom of the foot area

NOTE In the case of blanket-shaped sleeping bags an unclosed rounding of the upper corners up to 5 cm is not taken into account for the determination of the inside length.



Key

1 Zip fastener

l_x Inside length of mummy-shaped sleeping bags, blanket-shaped sleeping bags and mummy-shaped sleeping bags with integrated head part

Figure 1 — Inside length of various sleeping bags

3.2

inside width

transverse dimension measured inside the sleeping bag perpendicular to its longitudinal axis

4 Principle

Following the specific procedure described in this standard the inside length and various widths are measured.

5 Apparatus

The measuring apparatus is described in annex A. Any measuring device giving the same results as the one described in annex A can be used.

6 Conditioning of test specimen

The conditioning shall be done in accordance with EN 20139.

The sleeping bag shall be conditioned for at least 12 h in ambient conditions of the test at a temperature of $(20 \pm 2) ^\circ\text{C}$ and a relative humidity of $(65 \pm 5) \%$.

7 Procedure

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The measurement shall be carried out on at least one test specimen in accordance with annex A.

8 Test results

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The test results are the inside length and the inside widths (foot zone, knee zone and shoulders zone).

9 Test report

The test report shall include at least the following information:

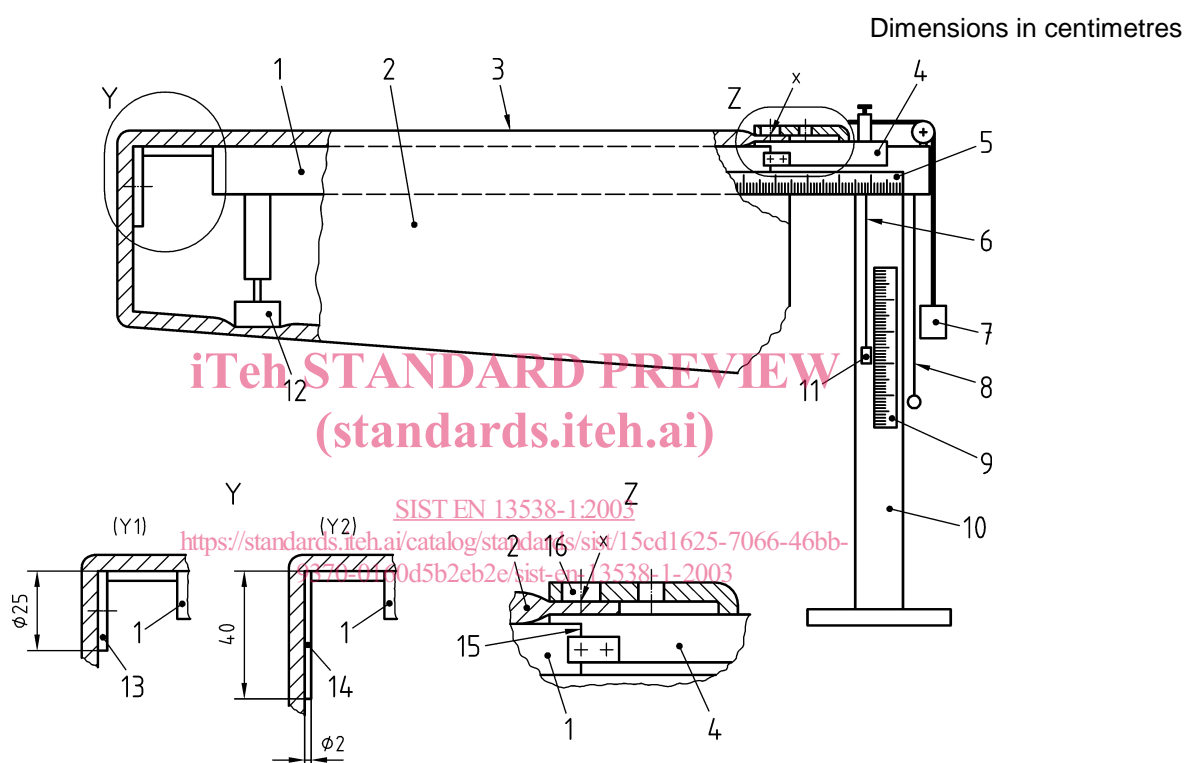
- a) reference to this European Standard;
- b) description of the measuring device if it is different from the device described in annex A;
- c) date and place of the test;
- d) identification of the sample;
- e) results rounded to the nearest centimetre;
- f) any deviation from this standard.

Annex A (normative)

Method of measurement for the determination of inside length and inside widths

A.1 Measuring apparatus

Measuring shall be performed with the measuring apparatus shown in Figure A.1. This apparatus shall be supplemented by the measuring plate (Y1) for the measurement of mummy-shaped sleeping bags and by a measuring bar (Y2) for blanket-shaped sleeping bags.



Key

- 1 Arm of apparatus
- 2 Sleeping bag
- 3 Central line of the sleeping bag top
- 4 Length measuring rule with a fixing device for the sleeping bag
- 5 Scale on the arm of the apparatus
- 6 Measuring cord for movable weight
- 7 Pretension weight 0,5 kg
- 8 Pull cord for movable weight
- 9 Measuring rule
- 10 Stand of apparatus
- 11 Reading cylinder
- 12 Movable weight (see Figure A.2)
- 13 Measuring plate for mummy-shaped sleeping bags
- 14 Measuring bar for blanket-shaped sleeping bags
- 15 Measuring edge for length measurement
- 16 Bore for checking the positioning of point x
- x Transition of the seam edge to the filled area of the sleeping bag covering on the centre line of the sleeping bag

Figure A.1 — Measuring apparatus for inside length and inside widths

A.2 Positioning of the sleeping bag on the arm of the apparatus

Mummy-shaped sleeping bags shall be pulled onto the arm of the apparatus in such manner that the centre line of the sleeping bag top lies centrally on the arm of the apparatus, i. e. the mummy-shaped sleeping bag is measured in the position as used.

Blanket-shaped sleeping bags shall be pulled onto the arm of the apparatus in such manner that the lateral edge, i. e. the seam on the side, lies centrally on the arm of the apparatus, i. e. the blanket-shaped sleeping bag is measured in lateral position. Zip fasteners in the lateral edges of blanket-shaped sleeping bags shall be placed on the arm of the apparatus. Zip fastener coverings, if available, shall be in the position as used.

When pulling the sleeping bag onto the arm of the apparatus it shall be observed that the measuring plate (13) of the measuring bar (14) has a flush fit in the foot zone.

The length measuring rule (4) shall be fixed to the seam of the sleeping bag thus that the marked point of measurement x is within the check bore of the length measuring rule.

After pulling the sleeping bag onto the arm of the apparatus and fixing the prestressing weight (7), the sleeping bag shall be brought into an outstretched position, free of folds, by repeated slight lifting along its supporting line. Lifting shall be started at the foot zone. The procedure is continued up to the shoulder zone.

A.3 Measuring

Measuring of the sleeping bags as manufactured and after washing shall be carried out in the same way.

Actual length and actual widths shall be given as the arithmetic mean value from three measurements independent of each other. Reading of the measuring scales shall be done in cm. Intermediate values $> 0,5$ cm shall be rounded up and $\leq 0,5$ cm rounded down.

In order to adjust the measurement of inside length and inside widths to the different sizes of the sleeping bags the measuring plate (13) or the measuring bar (14) and the movable weights (12) of the foot and knee zones shall be brought to the respective required lengthening or shortening position.

A.3.1 Measurement of inside length

After positioning the sleeping bag according to A.1 the inside length of mummy-shaped and blanket-shaped sleeping bags shall be read on the measuring edge of the length measuring rule.

In cases where blanket-shaped sleeping bags have a neckline which leads to shortening of the inside length, the measurement of the length shall be carried out as projection to the lowest point of the neckline.

A.3.2 Measurement of inside width

Measurements of the widths are carried out in combination with each measurement of length in the same position.

The inside widths of mummy-shaped and blanket-shaped sleeping bags W_1 to W_3 are measured at the measuring points according to Figure A.2. The measuring leads are brought to their final measuring position by falling freely three times from approximately 10 cm height over the edge of the sleeping bag. Reading of the inside widths shall be done at the upper edge of the reading cylinder. When measuring the widths of blanket-shaped sleeping bags allowances of 10 cm shall be taken into account at the measuring point L_1 and L_2 .