



SLOVENSKI STANDARD
SIST EN 13484:2002

01-junij-2002

Čelade za uporabnike sani

Helmets for users of luges

Helme für Benutzer von Rodelschlitten

Casques pour utilisateurs de luges

Ta slovenski standard je istoveten z: EN 13484:2001

[SIST EN 13484:2002](https://standards.iteh.ai/catalog/standards/sist/b5ecdd5f-0f15-4878-8ee1-e247085c2c0c/sist-en-13484-2002)

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ICS:

13.340.20	Varovalna oprema za glavo	Head protective equipment
97.220.20	Oprema za zimske športe	Winter sports equipment

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13484

November 2001

ICS 13.340.20

English version

Helmets for users of luges

Casques pour utilisateurs de luges

Helme für Benutzer von Rodelschlitten

This European Standard was approved by CEN on 3 October 2001.

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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This draft European Standard has been prepared by Technical Committee CEN/TC 158 "Head protection", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by May 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

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.

Annex A is informative.

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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

The intention of helmets is to reduce the risk of injury to the skull and part of the head surrounded by the helmet.

The protection given by a helmet depends on the circumstances of the accident and wearing a helmet cannot always prevent death or long term disability.

In this standard, the concept of optimum level of protection has been taken into account. This means that the protection efficiency is as high as possible, without decreasing the wearer's acceptance to the extent that she/he will not wear it, because of discomfort caused by the increase of the mass and dimensions.

A proportion of the energy of an impact is absorbed by the helmet, thereby reducing the force of the blow sustained by the head. The structure of the helmet can be damaged in absorbing this energy and any helmet that sustains a severe blow should be replaced even if damage is not apparent.

To achieve the performance of which it is capable, and to ensure stability on the head, a helmet should be as closely fitting as possible consistent with comfort. In use it is essential that the helmet is securely fastened, with any chin strap under proper tension at all times.

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1 Scope

This European Standard specifies the minimum performance requirements and test methods for helmets for users of luges in competition in ice channels.

Requirements and the corresponding methods of test, where appropriate, are given for the following:

- construction including field of vision;
- shock absorbing properties;
- resistance to penetration;
- retention system properties;
- marking and information.

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).

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EN 960, *Headforms for use in the testing of protective helmets*

EN 1077:1996, *Helmets for alpine skiers*.

ISO 4892-1, *Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance*.

ISO 4892-2, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc sources*.

ISO 6487, *Road vehicles - Measurement techniques in impact tests – Instrumentation*.

3 Terms and definitions

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

3.1

protective helmet

item to be worn on the head, intended to absorb the energy of an impact, thus reducing the risk of injury to the head

[EN 1077:1996]

3.2

shell

outer layer which provides part of the whole general form of the helmet

[EN 1077:1996]

EN 13484:2001 (E)**3.3****helmet type**

category of helmets which does not differ in such essential respects as the materials or dimensions or construction of the helmet, of the retention system, or of the protective padding

[EN 1077:1996]

NOTE Helmet type can include a range of helmet sizes, provided that the thickness of the protective padding in each size in the range is at least equal to that in the helmet which when subjected to the tests satisfies the requirements of this standard.

3.4**padding**

[according to EN 1077:1996]

3.5**retention system**

complete assembly by means of which the helmet is maintained in position on the head, including any devices for adjustment of the system or to enhance the wearer's comfort

[EN 1077:1996]

3.6**chin-strap**

part of the retention system consisting of a strap that passes under the wearer's jaw to keep the helmet in position

[EN 1077:1996]

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3.7**basic plane of the human head**

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plane at the level of the external ear opening (external auditory meatus) and the lower edge of the eye sockets (orbits)

[EN 1077:1996]

3.8**basic plane of a headform**

plane relative to the headform that corresponds to the basic plane of the human head

[EN 1077:1996]

3.9**reference plane**

construction plane parallel to the basic plane of the headform at a distance from it which is a function of the size of the headform

[EN 1077:1996]

3.10**luge**

equipment guided by runners, without any inside or outside driving power, for using in ice channels and not in natural tracks or downhill gliding

4 Requirements

4.1 Materials

For those parts of the helmet coming into contact with the skin the material used shall be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in cosmetic products. Materials shall not be used which are known to cause skin disorders. Testing according to 5.1.

4.2 Construction

4.2.1 General

The helmet normally consists of means of absorbing impact energy and means of retaining the helmet on the head even in an accident.

The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use.

NOTE Helmets should

- have low weight;
- be easy to put on and take off;
- be usable with spectacles;
- not significantly interfere with the ability of the user to hear;
- have good durability and withstand normal handling;
- permit cleaning.

Testing in accordance with 5.1

4.2.2 Retention system

4.2.2.1 General

Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the system or to the helmet.

NOTE 1 It is recommended that the opening mechanism be marked with red or orange colour.

NOTE 2 The colour of any part of the retention system should not be green, as green is used for helmets with an emergency release system.

Testing in accordance with 5.1.

4.2.2.2 Chin straps

The chin strap shall not include a chin cup.

Any chin strap shall be not less than 15 mm wide.

Chin straps can be fitted with means of enhancing comfort for the wearer.

Testing in accordance with 5.1.

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4.2.2.3 Fastening devices

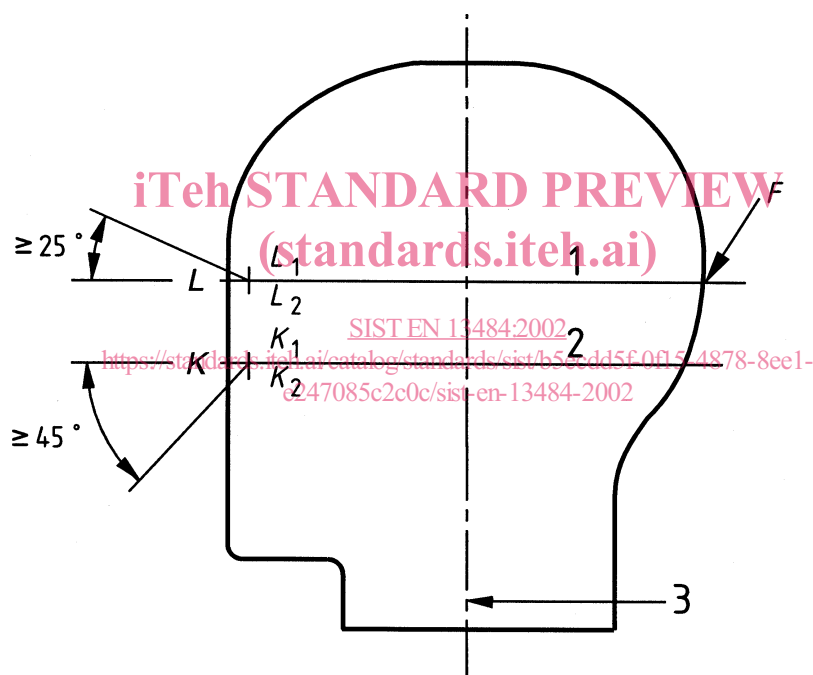
Any chin strap shall be fitted with a device to adjust and maintain tension in the strap.

Testing in accordance with 5.1

4.2.3 Field of vision

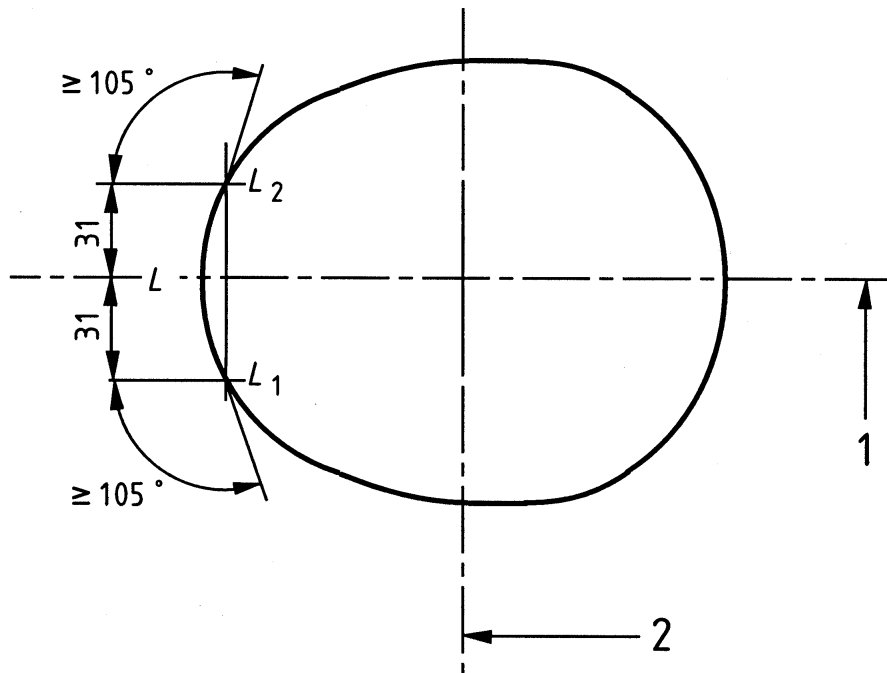
When tested in accordance with 5.5 there shall be no occultation in the field of vision bounded by angles as follows (see Figure 1):

- horizontally 105°
- upwards 25°
- downwards 45°

**Key**

- 1 Reference plane
- 2 Basic plane
- 3 Central vertical axis

a) Section of headform in longitudinal vertical plane



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Key

1 Longitudinal vertical median plane

2 Central transverse vertical plane

b) Section of headform in reference plane

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Figure 1 - Field of vision**4.3 Extent of coverage**

When tested in accordance with 5.5 the helmet shall cover at least the area above the line BCDEA' in Figure 2. Measurements for different headform sizes are given in Table 1.

Table 1 - Extent of coverage for different headform sizes

Code letter (See EN 960)	Stated headform circumference	AC	HD	y	x
A	500	84	89	89,7	24
E	540	88,5	92	96	26
J	570	93	95	102,5	27,5
M	600	97,5	98	107	29
O	620	100	100	110	30

NOTE The dimensions AC and HD correspond to the length of the chords measured with dividers.