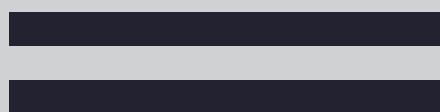


SVENSK STANDARD

SS-EN ISO 20320:2020

Skyddskläder för Snowboardsåkare – Handledsskydd – Krav och testmetoder (ISO 20320:2020)

Protective clothing for use in Snowboarding – Wrist Protectors – Requirements and test methods (ISO 20320:2020)



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Europastandarden EN ISO 20320:2020 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 20320:2020.

The European Standard EN ISO 20320:2020 has the status of a Swedish Standard. This document contains the official version of EN ISO 20320:2020.

EUROPEAN STANDARD

EN ISO 20320

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2020

ICS 13.340.40; 97.220.20

English Version

Protective clothing for use in Snowboarding -
Wrist Protectors - Requirements and test methods
(ISO 20320:2020)

Habillement de protection destinés à la pratique
du surf des neiges - Protecteurs de poignets -
Exigences et méthodes d'essai (ISO 20320:2020)

Schutzkleidung zum Gebrauch beim Snowboard-
Fahren - Handgelenkschützer - Anforderungen
und Prüfverfahren (ISO 20320:2020)

This European Standard was approved by CEN on 25 January 2020.

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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

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13, *Protective clothing*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 162, *Protective clothing including hand and arm protection and lifejackets*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

European foreword

This document (EN ISO 20320:2020) has been prepared by Technical Committee ISO/TC 94 "Personal safety -- Personal protective equipment" in collaboration with Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets" 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 October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.

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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 the relationship with EU Directive see informative [Annex ZA](#), which is an integral part of this document.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 20320:2020 has been approved by CEN as EN ISO 20320:2020 without any modification.

Introduction

Snowboarding are all the pastimes and competitions in which a snowboard is used. The users range from small children to adults of all ages.

The wrist is the most frequently injured body region among snowboarders. The majority of wrist injuries are consequences of falls. The most common injury mechanism is described as a compressive load applied to a hyperextended wrist. Beginners and children have a high incidence of wrist injuries due to snowboarding. One third of injuries among beginner snowboarders are to the wrist.

Studies have shown that the risk of sustaining a wrist injury can be reduced by wearing wrist protection. Wrist protectors in snowboarding are intended to protect the wearer against fractures as well as contusions and sprains.

Wrist protectors will not prevent all wrist, forearm, hand, elbow and shoulder injuries in snowboard accidents.

A wide variety of wrist protectors is commercially available. Consumers can choose between different principal design concepts. One is the “integrated protection concept” in which the protective elements are integrated within a glove. Another one is the “separated protection concept” where the protective elements are individual components (similar to a brace or orthosis) that can be worn with or without a glove. If worn with a glove it can be foreseen to place them underneath or on top of the glove^{[3][4][5][6]}.

Protective clothing for use in snowboarding — Wrist protectors — Requirements and test methods

1 Scope

This document specifies the requirements and test methods for ergonomics, innocuousness, comfort/sizing, restraint, ability to limit wrist extension and attenuate impact force on the palm as well as provisions for marking and instructions supplied by the manufacturer for wrist protectors for all users of snowboard equipment.

It does not apply to protectors used in roller sports, alpine skiing, or other sports. This document does not address protection for the forearm due to axial forces caused by an impact on the fingers or fist. Moreover, this document does not address protection against palmar flexion (terminal flexion) caused by an impact on the dorsal side of the hand.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 21420:2020, *Protective gloves — General requirements and test methods*

ISO 13999-1:1999, *Protective clothing — Gloves and arm guards protecting against cuts and stabs by hand knives — Part 1: Chain mail gloves and arm guards*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

wrist

radio-carpal joint

3.2

dorsal

pertaining to upper side or back of the hand and wrist

3.3

palmar

pertaining to the palm side of the hand and wrist

3.4

wrist protector

wrist guard

device worn on the wrist and extending onto the forearm and the hand, that is intended to reduce the risk of wrist injuries by mechanical impact

3.5

concepts of wrist protectors