



SLOVENSKI STANDARD

SIST EN 13158:2018

01-april-2018

Nadomešča:
SIST EN 13158:2009

Varovalna obleka - Varovalni jopiči, ščitniki telesa in ramen za uporabo v konjeništvu, za jahače, voznike vpreg in vse, ki delajo s konji - Zahteve in preskusne metode

Protective clothing - Protective jackets, body and shoulder protectors for equestrian use, for horse riders and those working with horses, and for horse drivers - Requirements and test methods

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Schutzkleidung - Schutzjacken, Körper- und Schulterschützer für den Reitsport, für Reiter, Personen, die mit Pferden arbeiten und für Gespannfahrer - Anforderungen und Prüfverfahren

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Vêtements de protection - Vestes, gilets de protection et protège-épaules pour sports équestres, pour cavaliers, pour personnes travaillant avec des chevaux et pour meneurs d'attelage - Exigences et méthodes d'essai

Ta slovenski standard je istoveten z: EN 13158:2018

ICS:

13.340.10	Varovalna obleka	Protective clothing
97.220.40	Oprema za športe na prostem in vodne športe	Outdoor and water sports equipment

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EUROPEAN STANDARD

EN 13158

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2018

ICS 13.340.10

Supersedes EN 13158:2009

English Version

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This European Standard was approved by CEN on 27 November 2017.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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EN 13158:2018 (E)**European foreword**

This document (EN 13158:2018) has been prepared by 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 August 2018 and conflicting national standards shall be withdrawn at the latest by August 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13158:2009.

The significant technical changes between this document and the previous edition are given in Annex C.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation EU 2016/425.

For relationship with EU Regulation, see informative Annex ZA, which is an integral part of this document.

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

Introduction

Protective jackets, body protectors and shoulder protectors are worn by horse riders, those working with horses, horse drivers and passengers in horse driven vehicles, so that they will have some protection from impacts consequent on falling from horses or vehicles. Such impacts may be against soft or hard ground, or objects such as trees, vehicles, posts or rails. Fallen riders, drivers and passengers, and those working with horses will also have some protection from injury from being kicked, trodden on, or crushed by a horse or vehicle.

Falls from horses and vehicles involve high levels of energy dissipation. Injuries cannot be entirely prevented by material in protective clothing but should be reduced in severity. Injuries will not be prevented by the protective clothing in accidents involving severe torsion, flexion, extension or crushing of the body.

It has been assumed in the drafting of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people, for whose guidance it has been prepared. The apparatus described should only be used by competent persons and requires safeguards to prevent, as far as is reasonably practicable, injury to the operator and other persons.

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1 Scope

This document specifies the requirements and test methods for the coverage, sizing, adaptability and adjustability, restraint, ergonomics, construction, innocuousness, and performance under impact to be provided by protective jackets, body and shoulder protectors to be worn by children, youths and adults of either sex while riding horses, working with horses, driving horses or being a passenger in a horse driven vehicle.

These protectors are intended to provide some protection against impacts due to falls from horses and vehicles, and impacts while on the ground due to a fall, or while working with a horse. Impacts may be against the ground or objects such as trees or vehicles, or impacts may be due to kicks or being trodden on.

The protectors covered by this standard are not intended to provide complete protection against injuries in accidents involving severe torsion, flexion or extension. Requirements for marking and the provision of information are given.

2 Normative references

There are no normative references in this document.

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:

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

3.1 Horse rider's protective clothing

3.1.1

protective jacket

short sleeved or long sleeved item of clothing incorporating materials meeting the requirements for body protectors and shoulder protectors covering the defined areas of the torso, lower back and shoulders and designed to reduce injury from blunt impacts, falls and kicks

3.1.2

body protector

sleeveless item of clothing covering defined areas of the torso and lower back and consisting of one or more layers of material and designed to reduce injury from blunt impacts, falls and kicks

3.1.3

shoulder protector

device considered to be an item of clothing that covers the lateral aspect of the shoulder and defined areas of the front, back and top of the shoulder and is designed to reduce injury from blunt impacts and falls on the shoulder

3.2 Body dimensions

3.2.1

chest girth

maximum horizontal girth measured during normal breathing with the subject standing upright and the tape-measure passed over the scapulae under the armpits and across the chest

3.2.2

bust girth

maximum horizontal girth measured during normal breathing with the subject, wearing normal underclothing, and standing upright and the tape-measure passed over the scapulae under the armpits and across the breasts

3.2.3

under bust girth

maximum horizontal girth measured during normal breathing with the subject, wearing normal underclothing, and standing upright and the tape-measure passing immediately below the breasts

3.2.4

waist girth

maximum horizontal girth measured during normal breathing with the subject standing upright and the tape-measure passed around the body in the plane of the waist, 50 mm above the supra-cristal plane which is at the level of the highest points of the iliac crests

Note 1 to entry: The dimension of 50 mm refers to a subject of 1 780 mm tall and should be scaled *pro rata* with the height of the actual subject.

3.2.5

waist to waist over-the-shoulder length

maximum length measured from the plane of the waist on the anterior of the body, as defined in 3.2.4, over the shoulder to the plane of the waist on the posterior of the body

Note 1 to entry: The tape-measure crosses the shoulder at the mid-point between the point of the shoulder and the junction of the shoulder to the neck. Anteriorly the tape measure passes over the chest (or bust) to a point 90 mm lateral to the midline of the body on the plane of the waist. Posteriorly the tape measure follows the shortest distance to a point 90 mm lateral to the midline of the body. The distances of 90 mm refer to a subject with a waist girth of 850 mm and should be scaled *pro rata* with the waist girth of the actual subject. Normal underclothing is worn when measurements are being taken.

3.3 Horse drivers

3.3.1

horse driver

person on a wheeled or skid-mounted vehicle controlling a horse or horses pulling the vehicle

3.3.2

passenger

person on or in a wheeled or skid mounted vehicle pulled by a horse or horses but not controlling the horse or horses

3.3.3

licensed jockey

jockey that earns a living and is registered with a relevant racing authority

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3.4 Levels of performance**3.4.1****performance level**

<equestrian activities> number that designates a particular category or range of performance by which the results of testing can be graded

Note 1 to entry: The performance levels of the protective clothing are defined by the test performance criteria given in 4.6.

Note 2 to entry: The performance levels are identical for protective jackets, body protectors and shoulder protectors.

3.4.2**performance level 1**

<equestrian activities> lowest level of performance for garments worn by licensed jockeys only

3.4.3**performance level 2**

<equestrian activities> category of garments for low risk

3.4.4**performance level 3**

<equestrian activities> category of garments for high risk

4 Requirements**4.1 Requirements for protectors for horse riders, those working with horses, and for horse drivers and passengers**

The requirements in 4.2, 4.3, 4.4, 4.5, 4.6 and 4.7 apply to protectors for horse riders, for those working with horses, and for horse drivers and passengers.

4.2 Coverage to be provided by protective jackets, body protectors, and shoulder protectors, and the dimensions of protective material in the protectors**4.2.1 General**

Protective jackets, body protectors and shoulder protectors for horse riders, those working with horses and for horse drivers and passengers shall provide the coverage, and shall have the minimum and maximum dimensions of protective material given below, measured on the garments as described in 5.4 and 5.7.2. Protective jackets shall contain protective materials meeting the minimum and maximum dimension requirements for both body and shoulder protectors. Certain exceptions to these dimensions which are permitted for ergonomic reasons are given in 4.2.3.

Annex B gives the requirements on body coverage, fitting and sizing of protectors.

4.2.2 Protective material dimensions in protective jackets and body protectors

Protective material in protective jackets and body protectors shall have an area greater than that defined by the dimensions listed below, illustrated in Figure 1b and specified in Table 1. Where garments are made with two or more layers of foam or other impact attenuating material, the defined area is required to contain all the layers at their full thickness. Examination and measurement shall be carried out according to 5.4.

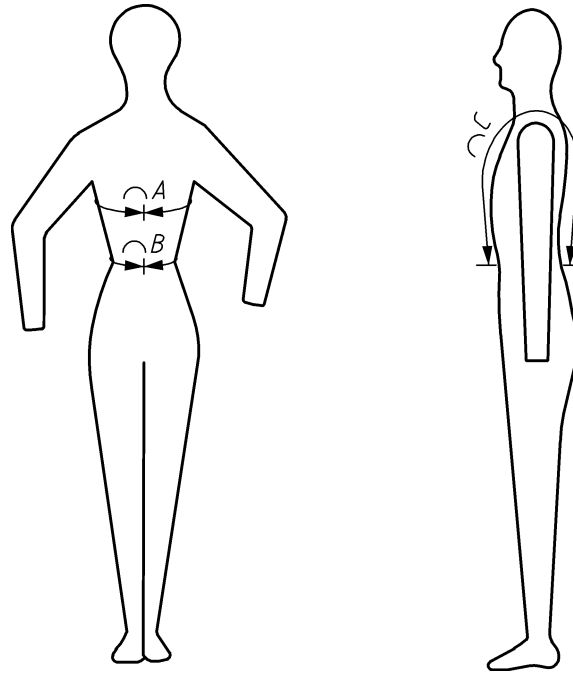
Protective jackets and body protectors that have removable parts such as tail pieces or shoulder protectors shall meet the requirements for coverage of torso protection without the removable parts or shoulder protectors fitted.

The central 200 mm wide section (the value of 200 mm is for a user with dimension A_{\max} of 1 000 mm and shall be scaled *pro rata* for other sizes) of the back panels corresponding to minimum dimension F of body protectors and protective jackets shall be constructed so that they cannot be taken apart or shortened by a user except by the cutting of material or other destructive process not sanctioned by the manufacturer (see Clause 7 l). Removable tail-pieces extending the back beyond the required length of dimension F are permitted providing the garment has a back length exceeding F without the tail-piece fitted.

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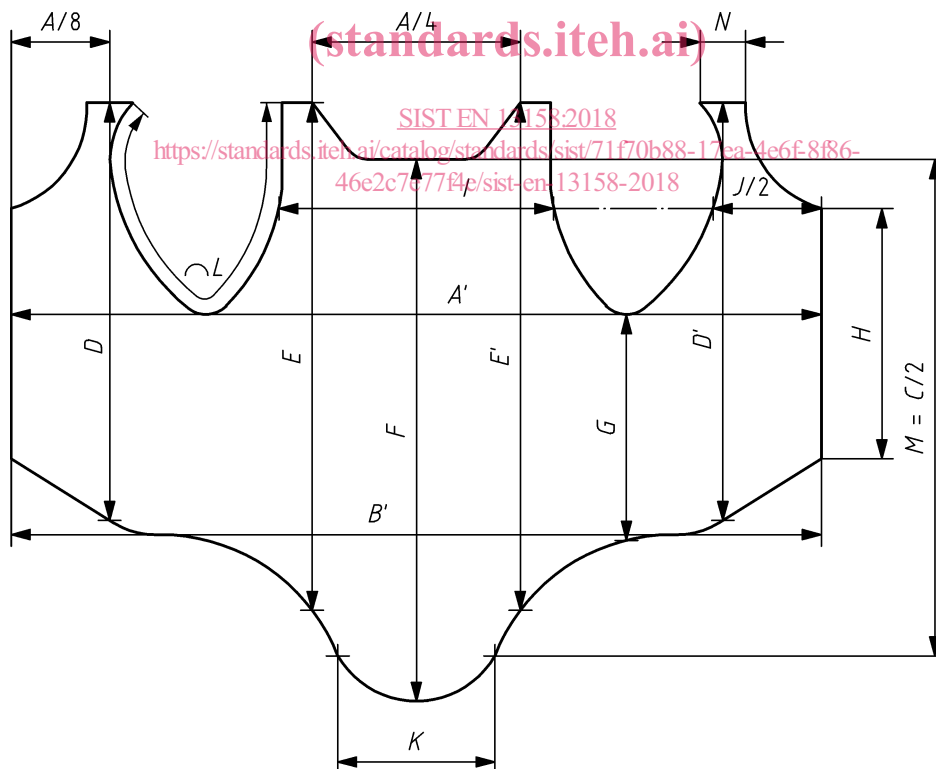
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a) Body dimensions

NOTE 1 The positions for measurement of the control dimensions A , B and C stated by the manufacturer and used in sizing the protective clothing.



b) Diagram of the protective material in a protective jacket or body protector

NOTE 2 The positions for measuring the dimensions of protective material in body protectors and the torso regions of protective jackets. A' , B' and L are measured on the inside of the protective clothing. D to K , M and N are measured on the outside of the protective clothing.

Figure 1 — Body dimensions and dimensions of protective material in the torso region of protective jackets and body protectors

Table 1 — Requirements for dimensions of protective material in protective jackets and body protectors

Values in percentage

Dimension	Control dimension	Requirement, as a percentage of the control dimension	
		Protectors for horse riders and those working with horses	Protectors for horse drivers and passengers
A_{\max}^I	A_{\max}	> 103	> 103
A_{\min}^I	A_{\min}	< 107	< 107
B_{\max}^I	B_{\max}	> 102	> 102
B_{\min}^I	B_{\min}	< 110	< 110
D and D^I	C_{\max}	> 43	> 43
E and E^I	C_{\max}	> 57	> 48
F	C_{\max}	> 52	> 43
G	C_{\max}	> 15	> 15
H	C_{\max}	> 28	> 28
I	A_{\max}	> 27	> 27
J	A_{\max}	> 20	> 20
K	A_{\max}	> 20	No requirement
L	A_{\max}	< 80	< 80
M	C_{\max}	50	No requirement
N	A_{\max}	> 4	> 4
A_{\max}	is the chest girth or bust girth given by the manufacturer for the largest user.		
A_{\min}	is the chest girth or bust girth given by the manufacturer for the smallest user.		
B_{\max}	is the waist girth given by the manufacturer for the largest user.		
B_{\min}	is the waist girth given by the manufacturer for the smallest user.		
C_{\max}	is the over-the-shoulder length given by the manufacturer for the largest user.		
C_{\min}	is the over-the-shoulder length given by the manufacturer for the smallest user.		
A_{\max}^I	is the maximum internal girth of the garment below the armholes.		
A_{\min}^I	is the minimum internal girth of the garment below the armholes.		
B_{\max}^I	is the maximum internal girth of the garment at the lower edge of the protective material.		
B_{\min}^I	is the minimum internal girth of the garment at the lower edge of the protective material.		
D and D^I	are vertical lines on the chest separated by a distance of 25 % of A .		
E and E^I	are vertical lines on the back separated by a distance of 25 % of A .		
F	is the centre back length.		
G	is the height of the side below the armhole.		
H	is the centre front length.		
I	is the width across the back between the armholes measured at a level half-way down the armhole opening.		
J	is the width across the chest between the armholes measured at a level half-way down the armhole opening.		
K	is the width of the back at a distance equal to 50 % of dimension C_{\max} from the neck inlet.		
L	is the circumference of the armhole.		
M	is the distance below the centre of the back of the neck of the garment at which dimension K is measured. ($M = 0,5 C_{\max}$).		
N	is the smallest width of the shoulder strap.		