



# SLOVENSKI STANDARD SIST EN 813:2024

01-julij-2024

Nadomešča:  
SIST EN 813:2008

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## Osebna varovalna oprema za zaščito pred padci z višine - Sedežni pasovi

Personal fall protection equipment - Sit harnesses

Persönliche Absturzschutzausrüstung - Sitzgurte

Equipement de protection individuelle pour la prévention contre les chutes de hauteur -  
Ceintures à cuissardes

Ta slovenski standard je istoveten z: EN 813:2024

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**ICS:**

13.340.60	Zaščita pred padci in zdrsi	Protection against falling and slipping
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**SIST EN 813:2024**

**en,fr,de**



EUROPEAN STANDARD

**EN 813**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2024

ICS 13.340.60

Supersedes EN 813:2008

English Version

## Personal fall protection equipment - Sit harnesses

Équipement de protection individuelle pour la  
prévention contre les chutes de hauteur - Ceintures à  
cuissardes

Persönliche Absturzschutzausrüstung - Sitzgurte

This European Standard was approved by CEN on 15 January 2024.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

# Contents

Page

European foreword .....	3
<b>1 Scope.....</b>	<b>4</b>
<b>2 Normative references.....</b>	<b>4</b>
<b>3 Terms and definitions.....</b>	<b>4</b>
<b>4 Requirements.....</b>	<b>5</b>
4.1 Ergonomics.....	5
4.2 Design, materials and construction .....	7
4.2.1 Materials .....	7
4.2.2 Attachment points .....	7
4.2.3 Load bearing parts .....	8
4.2.4 Back support.....	8
4.2.5 Fastening and adjustment elements.....	8
4.2.6 Accessibility .....	9
4.3 Dynamic strength.....	9
4.4 Static strength .....	9
4.5 Corrosion resistance.....	9
4.6 Marking and information.....	9
<b>5 Test methods .....</b>	<b>9</b>
5.1 Examination of design and construction.....	9
5.1.1 Examination of ergonomics.....	9
5.1.2 Examination of materials and other aspects of design .....	10
5.1.3 Examination of design and construction for fastening and adjustment elements.....	11
5.2 Dynamic strength.....	12
5.3 Static strength and slippage.....	14
5.4 Corrosion resistance of metal components.....	15
<b>6 Marking .....</b>	<b>16</b>
<b>7 Manufacturer's instructions and information.....</b>	<b>16</b>
<b>Annex A (informative) Safety precautions for the ergonomic test procedure of a sit harness .....</b>	<b>17</b>
A.1 General.....	17
A.2 Safety precautions .....	17
<b>Annex B (informative) Background and rationale for this European Standard .....</b>	<b>18</b>
<b>Annex C (informative) Significant changes between this document and EN 813:2008.....</b>	<b>20</b>
<b>Annex ZA (informative) Relationship between this European Standard and the essential requirements of Regulation (EU) 2016/425 aimed to be covered .....</b>	<b>22</b>
<b>Bibliography .....</b>	<b>24</b>

## European foreword

This document (EN 813:2024) has been prepared by Technical Committee CEN/TC 160 “Protection against falls from height including working belts”, 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 September 2024, and conflicting national standards shall be withdrawn at the latest by September 2024.

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 813:2008.

A list of technical changes between this edition and EN 813:2008 is given in Annex C. Background and rationale about the changes between this edition and EN 813:2008 is given in Annex B.

This document has been prepared under a Standardization Request M/571 given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation 2016/425.

For relationship with Regulation (EU) 2016/425, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Türkiye and the United Kingdom.

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## EN 813:2024 (E)

### 1 Scope

This document specifies requirements, testing, marking and manufacturer's instructions and information for sit harnesses to be used in restraint, work positioning and rope access systems, where a low point of attachment is required. Sit harnesses are not suitable to be used for fall arrest purposes.

### 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.

EN 358:2018, *Personal protective equipment for work positioning and prevention of falls from a height - Belts and lanyards for work positioning or restraint*

EN 363:2018, *Personal fall protection equipment - Personal fall protection systems*

EN 364:1992, *Personal protective equipment against falls from a height - Test methods*

EN 365:2004, *Personal protective equipment against falls from a height - General requirements for instructions for use, maintenance, periodic examination, repair, marking and packaging*

EN 892:2012+A3:2023, *Mountaineering equipment - Dynamic mountaineering ropes - Safety requirements and test methods*

EN ISO 9227:2022, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2022)*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 363:2018 and the following 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 <https://www.electropedia.org/>

#### 3.1

##### **sit harness**

arrangement of straps, fittings, buckles, back supports or other elements in the form of a waist belt with a ventral attachment point and connecting support encircling each leg suitably arranged so that a conscious person can be supported in a sitting position

Note 1 to entry: Sit harnesses may be fitted with shoulder straps.

Note 2 to entry: A sit harness may be incorporated into a garment or in a full body harness.

#### 3.2

##### **attachment point**

connecting point on the sit harness for the load bearing connection to other components, consisting of one or more attachment elements

**3.3****attachment element**

load bearing element provided for the connection of other components

**3.4****load bearing part**

part of the sit harness intended to transmit forces

Note 1 to entry: Attachment elements, leg loops and waist belts are examples of load bearing parts.

Note 2 to entry: Accessory parts and clothing are examples of non-load bearing parts.

**3.5****back support**

part of the sit harness intended to give physical support to the lower back of the wearer

**3.6****fastening element**

element used to close and open the sit harness

**3.7****adjustment element**

element used to adjust the sit harness to fit the user

**3.8****man-made fibre**

fibre obtained by a manufacturing process

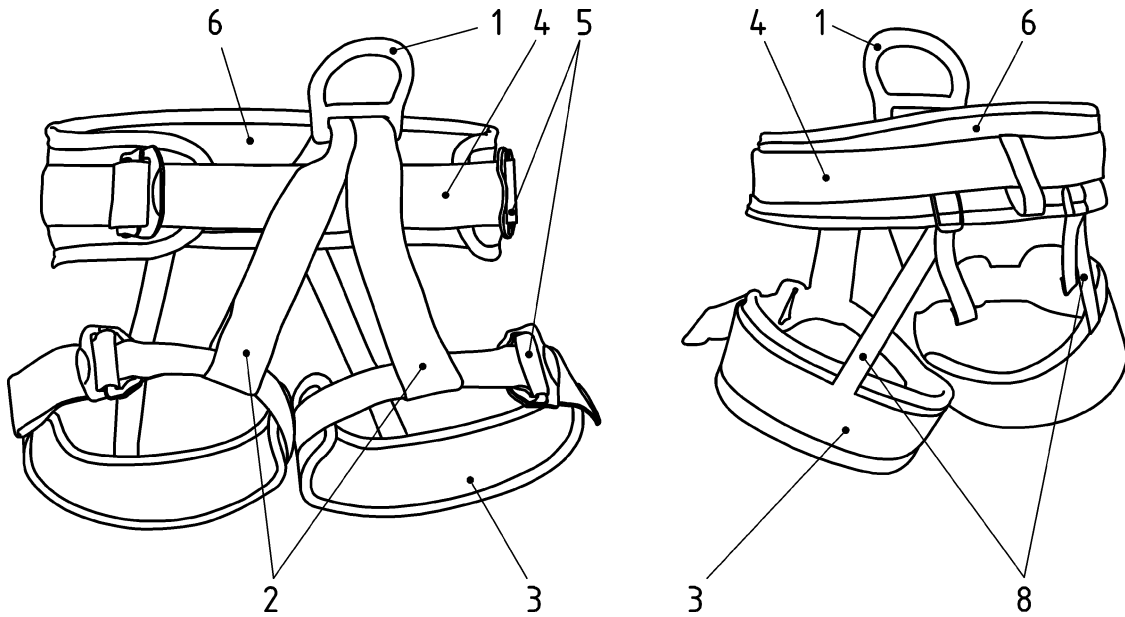
Note 1 to entry: Man-made fibres refer to ISO/TR 11827:2012.

**4 Requirements****4.1 Ergonomics**

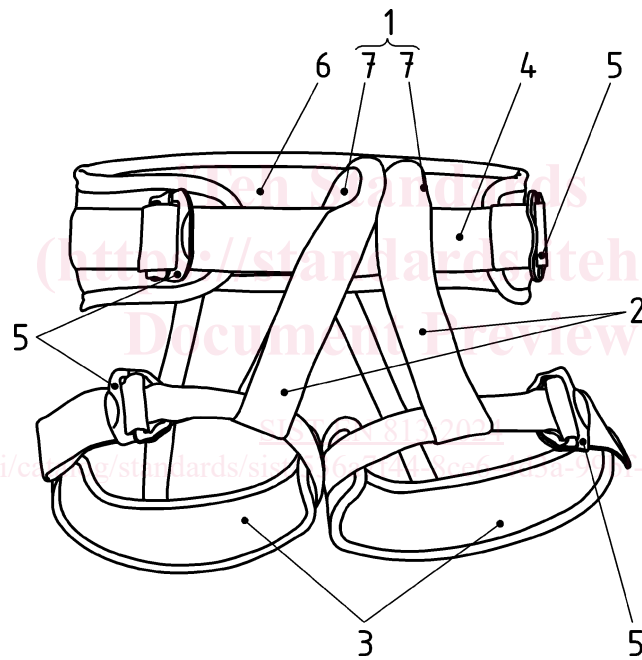
When tested in accordance with 5.1.1, the sit harness shall be shown to:

- a) be capable of adjustment to enable correct positioning on the user;
- b) be able to support the user in an upright sitting position while in suspension;
- c) allow the person wearing the sit harness to undertake a specified range of movements without undue discomfort;
- d) have no fittings with contact with the groin, the inside of the thighs, the armpits or the small of the back;
- e) remain correctly adjusted.

## EN 813:2024 (E)



a) front view with attachment point consisting of one attachment element and back view



b) front view with attachment point consisting of two attachment elements

## Key

1	attachment point	5	fastening and/or adjustment element
2	straps connecting leg loops to waist belt	6	back support
3	leg loop	7	attachment element
4	waist belt	8	back connection between waist belt and leg-loops

Figure 1 — Examples of sit harnesses



## 4.2 Design, materials and construction

### 4.2.1 Materials

**4.2.1.1** When checked in accordance with 5.1.2.1, materials used in sit harnesses that may come into contact with the skin of a user shall not be known to cause irritating or sensitization effects when used as intended.

**4.2.1.2** When checked in accordance with 5.1.2.1, webbing and sewing threads shall be known to be made from man-made fibres suitable for their intended use and the breaking tenacity of the man-made fibres shall be known to be at least 0,6 N/tex.

**4.2.1.3** When checked in accordance with 5.1.2.1, the shade of the thread used for sewing shall be such as to contrast with the shade of the webbing to facilitate visual inspection.

**4.2.1.4** When checked in accordance with 5.1.2.1, metal and other parts shall be free from sharp edges and burrs that could cause injury.

### 4.2.2 Attachment points

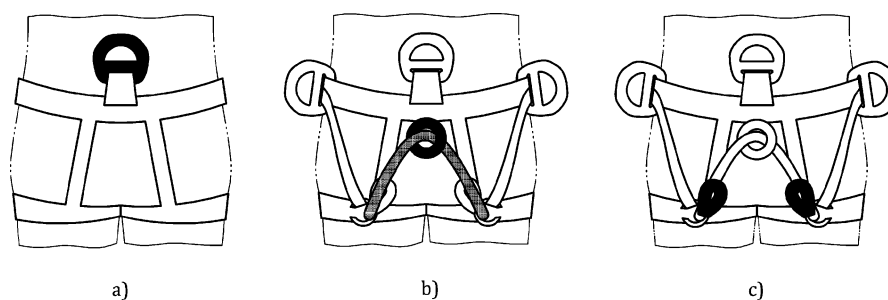
**4.2.2.1** When checked in accordance with 5.1.2.1, the sit harness shall have at least one attachment point located at the front and to the centre. (see Figure 2a)). The front attachment point may be movable (see Figure 2b)).

NOTE The front attachment point can consist of two attachment elements (e.g. loops) which are designed to be linked into a single attachment point as described in the manufacturer's instructions and information (see Figure 2c) and Figure 1b)).

**4.2.2.2** When checked in accordance with 5.1.2.1, if the sit harness has additional side or back work positioning or restraint attachment point(s), it shall comply with EN 358:2018.

**4.2.2.3** If shoulder straps are fitted to the sit harness, they shall not contain attachment points, when checked in accordance with 5.1.2.5, except if it is incorporated into a full body harness conforming to EN 361.

NOTE An attachment to fix a progression equipment on a shoulder strap (e.g. rope clamp) is not considered as an attachment point.



**Figure 2 — Examples of attachment points (front view)**

**EN 813:2024 (E)****4.2.3 Load bearing parts**

**4.2.3.1** When checked in accordance with 5.1.1.7, it shall be determined where load bearing parts exert pressure on the body.

**4.2.3.2** When checked in accordance with 5.1.2.3, the width of the zones identified under 5.1.1.7 shall be a minimum of 43 mm.

**4.2.4 Back support**

Waist belts shall have a back support. When checked in accordance with 5.1.2.4 the minimum length of the back support shall be 50 mm longer than half the circumference of the waist belt when adjusted to the maximum radial length (waist size) specified by the manufacturer. The back support shall have a minimum width of 100 mm and shall cover a minimum overall surface area of 200 cm<sup>2</sup> symmetrically arranged on the spine of the user and shall have a minimum width of 60 mm elsewhere.

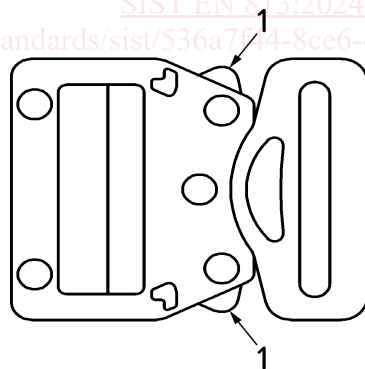
**4.2.5 Fastening and adjustment elements**

**4.2.5.1** When checked in accordance with 5.1.3.2, fastening elements shall be so designed and constructed that, when fastened in accordance with the manufacturer's instructions and information, they can be opened only by at least two different deliberate manual actions.

NOTE The example in Figure 3 can be considered as a fastening element which can be opened by two different deliberate manual actions.

**4.2.5.2** When checked in accordance with 5.1.3.3, fastening elements shall be so designed and constructed that, when fastened in accordance with the manufacturer's instructions and information, they cannot unintentionally open.

**4.2.5.3** If fastening elements are so designed and constructed that they can be opened by pushing two buttons, e.g. see Figure 3, when fastened in accordance with the manufacturer's instructions and information, the buttons have to go back in their original position when checked in accordance with 5.1.3.4. The fastening element shall not release when checked in accordance with 5.1.3.5.

**Key**

1 button

**Figure 3 — Example for design of fastening elements with buttons**