



SLOVENSKI STANDARD

oSIST prEN 915:2023

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Nadomešča:
SIST EN 915:2009

Gimnastična oprema - Dvovišinska bradlja - Zahteve in preskusne metode, vključno z varnostjo

Gymnastic equipment - Asymmetric bars - Requirements and test methods including safety

Turngeräte - Stufenbarren - Anforderungen und Prüfverfahren einschließlich Sicherheit

Matériel de gymnastique - Barres asymétriques - Exigences et méthodes d'essai y compris de sécurité

Ta slovenski standard je istoveten z: prEN 915

ICS:

97.220.30 Oprema za dvoranske športe Indoor sports equipment

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EUROPEAN STANDARD
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prEN 915

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ICS

Will supersede EN 915:2008

English Version

Gymnastic equipment - Asymmetric bars - Requirements and test methods including safety

Matériel de gymnastique - Barres asymétriques -
Exigences et méthodes d'essai y compris de sécurité

Turngeräte - Stufenbarren - Anforderungen und
Prüfverfahren einschließlich Sicherheit

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 136.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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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

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European foreword

This document (prEN 915:2023) has been prepared by Technical Committee CEN/TC 136 “Sports, playground and other recreational facilities and equipment”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 915:2008.

This document is to be read in conjunction with EN 913:2018+A1:2021.

In comparison with the previous edition, the following modifications have been made:

- a) addition of Clause 3, Terms and definitions;
- b) dating of the normative reference;
- c) addition of types of stability in Clause 5.3;
- d) addition of requirements to the instructions for use.

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).

This document is one of several standards, each of which deals with a particular type or a particular group of gymnastic equipment.

[osIST prEN 915:2023](https://standards.iteh.ai/catalog/standards/sist/aba988c3-ab80-422c-8e7f-abd22cb96d3d/osist-pren-915-2023)

<https://standards.iteh.ai/catalog/standards/sist/aba988c3-ab80-422c-8e7f-abd22cb96d3d/osist-pren-915-2023>

prEN 915:2023 (E)**1 Scope**

This document specifies functional requirements (see Clause 3) and specific safety requirements in addition to the general safety requirements in EN 913:2018+A1:2021 (see Clause 4).

This document is applicable to 2 types of asymmetric bars (see Table 1) intended for use under supervision of a competent person.

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 913:2018,¹ *Gymnastic equipment — General safety requirements and test methods*

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

4 Requirements**4.1 Classification**

Asymmetric bars shall be classified by the design (types and sizes) as shown in Table 1.

Table 1 — Types

Type	Size	Description
1	-	freestanding asymmetric bar without fixing points
2	1 and 2	asymmetric bar with fixing points

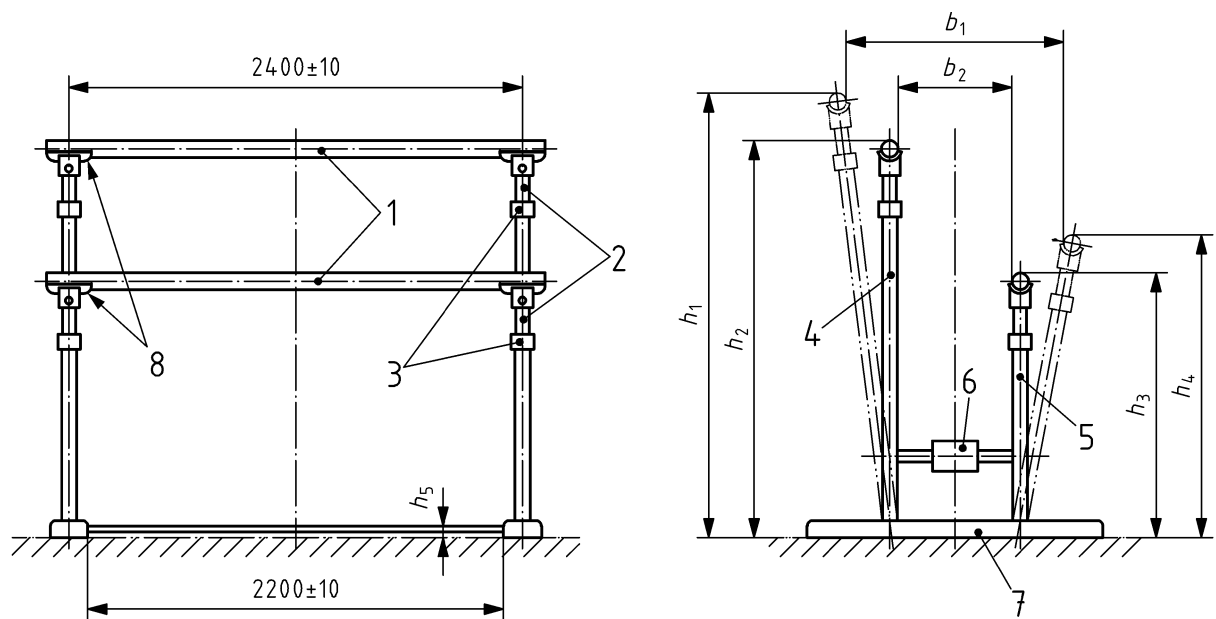
4.2 Dimensions

All asymmetric bars shall comply with the dimensions specified in Table 2 and Figure 1.

The diameter of the bar profile shall be circular (40 ± 1) mm.

¹ as impacted by EN 913:2018+A1:2021

Dimensions in millimetres

**Key**

- 1 Bar
- 2 Upright extension
- 3 Stop, lock and adjustment device
- 4 Higher upright
- 5 Lower upright
- 6 Horizontal adjustment device
- 7 Base
- 8 Supporting cup point (Type 1)

NOTE Type 2 does not have supporting cup points. The bars are connected to the uprights according to the individual manufacturer's design.

Figure 1 — Asymmetric bars**Table 2 — Typical dimensions**

Type	Size	Minimum range of adjustment						h_5 max.
		b_1	b_2	h_1	h_2	h_3	h_4	
1	—	1 150	600	2 350	2 100	1 400	1 600	60
2	1	1 300	600	2 350	2 100	1 400	1 600	60
	2 ^a	1 645	1 025	2 600	2 400	1 600	1 800	10

^a According to the actual rules of FIG (Fédération Internationale de Gymnastique).

5 Safety Requirements

5.1 General requirements

Asymmetric bars shall comply with the requirements of EN 913:2018+A1:2021, except insofar as they are modified by this document.

5.2 Entrapment

The entrapment requirements of EN 913:2018+A1:2021 relate to the uprights, horizontal adjustment devices and connections between them as well as bars but excluding the bar connections.

5.3 Stability

Type 1

When tested in accordance with 5.2, any point of the base shall not raise more than 10 mm from the ground when subjected to a horizontal force representing 40 % of the self weight of the equipment with a minimum of 400 N.

Type 2:

When tested in accordance with 5.2.4

5.4 Vertical stiffness and residual deflection

When each bar is tested in accordance with 5.3 using a force of $1\,350\text{ N} \pm 50\text{ N}$, the deflection of each bar shall be a minimum of 40 mm and a maximum of 100 mm. The residual deflection shall be no greater than 1 mm.

5.5 Strength

When each bar is tested in accordance with 5.4 using a vertical force of $2\,850\text{ N} \pm 50\text{ N}$ the equipment shall show no signs of fracture, rupture or defects.

5.6 Rigidity of framework

For type 1 equipment when tested in accordance with 5.2, the bar at the supporting cup point shall not deflect by more than 20 mm in the longitudinal or the transverse direction when subjected to horizontal forces of $570\text{ N} \pm 20\text{ N}$ in each of these directions. For type 2 equipment when tested in accordance with 5.2, the bar shall not deflect by more than 20 mm at the attachment points in the transverse direction when subjected to a horizontal force of $570\text{ N} \pm 20\text{ N}$ in that direction.

Transverse forces shall be applied to the middle of the bar and perpendicular to its length. Longitudinal forces shall be applied along the axis of the bar.

6 Test methods

6.1 General

All loading tests shall be carried out with the bars set at their maximum useful heights.

6.2 Determination of stability and rigidity

6.2.1 Principle

A horizontal force is applied to the equipment in the specified manner.

6.2.2 Apparatus

A strap (100 ± 1) mm wide.

6.2.3 Test temperature

Condition the equipment for a minimum of 3 h at a test temperature of (23 ± 2) °C.

6.2.4 Procedure

Block freestanding equipment (type 1) on the ground to avoid the sliding. Set the bars to the highest position according to Table 2.

Apply the specified horizontal force to the middle of the upper bar and perpendicular to its length away from the lower bar.

Maintain the force while observing any tipping of the equipment. When required, measure the deflection of the bar supporting cup in the direction of the applied force.

6.2.5 Expression of results

Report whether tipping has occurred. When required, report the deflection of the bar supporting cup in millimetres.

6.3 Determination of stiffness and residual deflection

6.3.1 Principle

A vertical force is applied to the centre of each bar and any deflection is measured. The force is then removed and any residual deflection is measured.

6.3.2 Apparatus

A strap (100 ± 1) mm wide.

6.3.3 Test temperature

Condition the equipment for a minimum of 3 h at a test temperature of (23 ± 2) °C.

6.3.4 Procedure

Apply a vertical force at the centre of the bar for 65 s ± 5 s.

Measure the position of the loaded component from any convenient datum point. Record the deflection at the centre of the bar.

Remove the force. Measure the residual deflection 30 min $_{-0}^{+1}$ min after removal of the force. Record any residual deflection.

6.3.5 Expression of results

Express stiffness as the deflection under load in millimetres. Express the residual deflection as the deflection in millimetres remaining 30 min $_{-0}^{+1}$ min after the removal of the load.

prEN 915:2023 (E)**6.4 Determination of strength****6.4.1 Principle**

The equipment is loaded with a vertical force and examined for fracture or other damage.

6.4.2 Apparatus

A strap (100 ± 1) mm wide.

6.4.3 Test temperature

Condition the equipment for a minimum of 3 h at a test temperature of (23 ± 2) °C.

6.4.4 Procedure

Apply a vertical force at the centre of the bar for 65 s ± 5 s.

Note any fracture, rupture, defects or other damage to the equipment.

6.4.5 Expression of results

Express the strength by whether fracture or other damage has occurred.

7 Instruction for use

An information booklet shall be provided by the manufacturers containing the following:

- a) set up and installation details, if applicable;
- b) transportation details;
- c) assembly details covering method of adjustment (e.g. schematic drawing, photos, assembly plan);
- d) equipment space;
- e) the self-weight of the equipment;
- f) inspection/maintenance details. This shall include at least: inspection guideline, the number of inspectors per year depending on use frequency and age, check of connection points
- g) warning notice that the equipment should be used under controlled supervision and the maximum number of users.

8 Marking

Marking shall comply with EN 913:2018+A1:2021.