

VÕIMLEMISVARUSTUS. ÜLDISED OHUTUSNÕUDED JA  
KATSEMEETODID

Gymnastic equipment - General safety requirements  
and test methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 913:2018 sisaldab Euroopa standardi EN 913:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 913:2018 consists of the English text of the European standard EN 913:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 05.12.2018.	Date of Availability of the European standard is 05.12.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 97.220.30

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:  
Koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

EUROPEAN STANDARD

**EN 913**

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2018

ICS 97.220.30

Supersedes EN 913:2008

English Version

## Gymnastic equipment - General safety requirements and test methods

Matériel de gymnastique - Exigences générales de sécurité et méthodes d'essai

Turngeräte - Allgemeine sicherheitstechnische Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 22 July 2018.

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

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

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<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 Risk assessment</b> .....	<b>5</b>
<b>5 General safety requirements</b> .....	<b>6</b>
<b>5.1 Materials</b> .....	<b>6</b>
<b>5.2 Surface finish</b> .....	<b>6</b>
<b>5.3 Entrapment</b> .....	<b>7</b>
<b>5.3.1 Gaps and shearing/crushing points</b> .....	<b>7</b>
<b>5.3.2 Transport system</b> .....	<b>8</b>
<b>5.3.3 Floor fixings</b> .....	<b>8</b>
<b>5.4 Stability and strength</b> .....	<b>8</b>
<b>5.4.1 General</b> .....	<b>8</b>
<b>5.4.2 Stability</b> .....	<b>8</b>
<b>5.4.3 Strength</b> .....	<b>8</b>
<b>5.5 Adjustment devices</b> .....	<b>8</b>
<b>5.6 Shock absorption of top padding</b> .....	<b>8</b>
<b>5.7 Friction and abrasion</b> .....	<b>9</b>
<b>5.8 Ergonomics</b> .....	<b>9</b>
<b>6 Marking</b> .....	<b>9</b>
<b>7 Manufacturer Instructions</b> .....	<b>9</b>
<b>Annex A (normative) Test methods for entrapment</b> .....	<b>10</b>
<b>Annex B (normative) Mechanical loading for determination of stability and strength</b> .....	<b>20</b>
<b>Annex C (normative) Determination of shock absorption of padding</b> .....	<b>24</b>
<b>Bibliography</b> .....	<b>26</b>

## European foreword

This document (EN 913:2018) 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 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 June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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 913:2008.

This European Standard is one of several standards, each of which deals with a particular type or a particular group of gymnastic equipment. Gymnastic equipment of any type not covered by a relevant European Standard is covered by this general standard.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

The principal changes from the previous edition of EN 913 are as follows:

- a) Scope has been concretised by adding sports equipment;
- b) Term “hazard” modified according to EN ISO 12100:2010;
- c) Term “risk” added according to EN ISO 12100:2010;
- d) References to relevant European Directives added;
- e) Risk of “fire” has been deleted, as it is not relevant for gymnastic equipment;
- f) New Subclause 5.1 “Material” added;
- g) Requirements regarding entrapment have been harmonized with EN 1176-1:2017;
- h) Entrapment requirement for floor fixings has been added;
- i) New Subclause 5.7 “Friction and abrasion” added;
- j) New Subclause 5.8 “Ergonomics” added;
- k) In Clause 6 a reference to the relevant European Standard on Gymnastic equipment was added;
- l) New Clause 7 “Manufactures instructions” has been added;
- m) Body mass for multiple use has been modified according to CEN ISO/TR 7250-2;
- n) New “Bibliography” added.

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, 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.

## 1 Scope

This document specifies general safety requirements and test methods for all pieces of gymnastic and sports equipment and for all pieces of equipment for the use of physical education, training and competition, intended for use supervised by a competent person and not specified in other, individual standards and/or federation rules.

## 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 1991-1-1, *Eurocode 1: Actions on structures - Part 1-1: General actions - Densities, self-weight, imposed loads for buildings*

EN 1991-1-3, *Eurocode 1 - Actions on structures - Part 1-3: General actions - Snow loads*

EN 1991-1-4, *Eurocode 1: Actions on structures - Part 1-4: General actions - Wind actions*

EN 1991-1-5, *Eurocode 1: Actions on structures - Part 1-5: General actions - Thermal actions*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

ISO 6487, *Road vehicles — Measurement techniques in impact tests — Instrumentation*

## 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

#### **hazard**

potential source of harm

[SOURCE: EN ISO 12100:2010, 3.6]

### 3.2

#### **risk**

combination of probability of occurrence of harm and the severity of that harm

[SOURCE: EN ISO 12100:2010, 3.12]

### 3.3

#### **body mass**

mass of the person(s) using the equipment