

Sports and recreational equipment - Parkour  
equipment - Safety requirements and test methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 16899:2016 sisaldab Euroopa standardi EN 16899:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 16899:2016 consists of the English text of the European standard EN 16899:2016.
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 23.11.2016.	Date of Availability of the European standard is 23.11.2016.
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 97.220.10

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)

English Version

## Sports and recreational equipment - Parkour equipment - Safety requirements and test methods

Equipements de sports et de loisirs - Equipements de  
parkour - Exigences de sécurité et méthodes d'essai

Sport- und Freizeitanlagen - Parkoureinrichtungen -  
Sicherheitstechnische Anforderungen und  
Prüfverfahren

This European Standard was approved by CEN on 17 September 2016.

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, 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: Avenue Marnix 17, B-1000 Brussels**

# Content

Page

European foreword.....	5
Introduction .....	6
1 Scope .....	8
2 Normative references .....	8
3 Terms and definitions .....	8
4 Materials and structural integrity.....	12
4.1 Requirements for materials .....	12
4.1.1 General.....	12
4.1.2 Concrete.....	12
4.1.3 Wood .....	12
4.1.4 Metals .....	13
4.1.5 Rubbers and synthetics.....	13
4.2 Requirements for structural integrity and loading.....	13
4.3 Requirements for foundations and groundwork .....	15
5 Safety requirements.....	15
5.1 Sporting ability.....	15
5.2 Access restrictions .....	15
5.3 Accessible surfaces, profiles and edge chamfers.....	17
5.4 Parkour bars and rails .....	18
5.5 Enclosed passage ways.....	19
5.6 Protection against injuries during movement and falling .....	19
5.7 Clearances.....	19
5.8 Entrapment .....	20
5.8.1 Entrapment of hair and clothing .....	20
5.8.2 Entrapment of the head and neck .....	20
5.8.3 Completely bound openings.....	20
5.8.4 Partially bound and V-shaped openings.....	21
5.8.5 Body and finger clearances .....	21
5.9 Separation from other facilities and activities.....	21
6 Dimensions.....	21
6.1 Landings .....	21
6.2 Impact attenuating surface (IAS) and critical fall height.....	22
6.3 Maximum height of any element or part of equipment.....	22
6.4 Maximum free height of fall.....	22
6.5 Extent of the falling space .....	23
7 Installation, inspection and maintenance.....	24
7.1 Installation .....	24
7.1.1 General.....	24
7.1.2 Information sign/board.....	25
7.1.3 Level mark .....	25
7.2 Inspection .....	25
7.2.1 General.....	25
7.2.2 Inspection of impact attenuating surfacing.....	25
7.2.3 Inspection schedule.....	25
7.2.4 Frequency of inspections .....	26

7.3	Maintenance .....	26
7.3.1	General .....	26
7.3.2	Routine maintenance .....	26
7.3.3	Corrective maintenance .....	27
8	Operation.....	27
8.1	General .....	27
8.2	Specific requirements .....	27
8.2.1	Personnel.....	27
8.2.2	Documentation .....	28
8.2.3	Procedures .....	28
8.2.4	Personnel and public safety.....	29
8.2.5	Equipment alterations.....	29
8.2.6	Supervised settings.....	29
9	Labelling/markings .....	29
10	Information to be provided by the manufacturer/supplier .....	29
10.1	General product information .....	29
10.2	Pre-information .....	30
10.3	Installation information.....	30
Annex A	(normative) Method of determining structural integrity.....	32
A.1	General principle .....	32
A.2	User load .....	33
A.3	Safety factors .....	33
A.4	Self-weight.....	33
A.5	Physical testing.....	33
A.6	Horizontal stability.....	33
Annex B	(normative) Number of users on the equipment.....	34
B.1	General .....	34
B.2	Number of users on a point.....	34
B.3	Number of users on line type elements.....	34
B.4	Number of users on an area .....	34
Annex C	(normative) Impact test method.....	35
C.1	Principle.....	35
C.2	Apparatus .....	35
C.3	Procedure .....	36
Annex D	(normative) Assessment of surface area of a landing.....	37
D.1	Principle.....	37
D.2	Apparatus .....	37
D.3	Procedure .....	38
Annex E	(normative) Test method for entrapment.....	40
E.1	General .....	40
E.2	Head and neck entrapment.....	40

**E.3    Body and finger clearances ..... 46**

**Bibliography ..... 48**

This document is a preview generated by EVS

## European foreword

This document (EN 16899:2016) 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 May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

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.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

This document is primarily intended for manufacturers of parkour equipment, operators and designers of parkour parks and supervisors of parkour lessons who are appropriately qualified and experienced and have sufficient knowledge on parkour as sports.

It is not expected that every scenario has been addressed. Where new designs or concepts are delivered, a risk-benefit assessment should be completed by a competent person.

The design and layout of parkour facilities requires a good understanding of the sport and the interrelationship of equipment and “flow” routes. To ensure the safety of equipment it is recommended that design advice is obtained from a competent person and that appropriate risk-benefit assessments are carried out.

NOTE National federations/governing bodies, if exist, can provide advice on suitable competent persons.

Compliance with this European Standard cannot confer immunity from legal obligations.

### Parkour as sports

Parkour, also known as “freerunning” and “Art du Déplacement”, is the non-competitive sport of training to move freely over and through any terrain using only the abilities of the body, principally through running, jumping, climbing and quadrupedal movement. In practice, it focuses on developing the fundamental attributes required for such movement, which include functional strength and fitness, balance, spatial awareness, agility, coordination, precision, control and creative vision.

It is a sport that encourages self-improvement on all levels, revealing one’s physical and mental limits, while simultaneously offering ways to overcome them. It is a method of training one’s body and mind in order to be as completely functional, effective and liberated as possible in any environment.

The sport aims to build confidence, determination, self-discipline and self-reliance, and responsibility for one’s actions. It encourages humility, respect for others and for one’s environment, self-expression and community spirit, and emphasizes the importance of discovery and safety at all times.

### Founding of parkour

The sport, originally termed l’Art du Déplacement, was founded in France in the 1980s by a group of nine young men who called themselves “The Yamakasi”. “Yamakasi” is a Lingala word loosely meaning “strong man, strong spirit”, and summed up the core aim of the sport: to be a strong individual: physically, mentally and ethically.

The Yamakasi founders are Yann Hnautra, Chau Belle, David Belle, Laurent Piemontesi, Sebastien Foucan, Guylain N’Guba Boyeke, Charles Perriere, Malik Diouf and Williams Belle.

The term “parkour” was first introduced by David Belle in 1998. “Parkour” derives from the French word “parcours” meaning “route” or “course”.

The term “freerunning” was coined by Guillaume Pelletier, a representative of a group of French practitioners involved in the production of the 2003 Channel 4 documentary, Jump London, to communicate this new sport to an English-speaking audience.

### Grounds for requirements of this European Standard

According to national product safety laws, products complying with standards are assumed to be safe. However operators, manufacturers, designers and the working group of this European Standard need to make observations and implement necessary changes to products as well as to the future revisions of this standard in order to provide safe environments for users.



This European Standard covers the design of equipment for the practice and development of the principle techniques/movements of the sport of parkour by those new to parkour and by experienced practitioners, known as traceurs (or freerunners).

Parkour facilities can comprise a combination of items of equipment permitting flowing movement of the user. Equipment is usually installed permanently, but for temporary use, equipment may also be portable.

The use of facilities as parkour equipment is connected with sporting risks. Sporting skills and the use of appropriate equipment can reduce the risk of accident, but it is important to recognize that traceurs and/or users are not required to wear personal protective equipment. Because parkour movements are self-controlled, it is expected that injuries resulting from falls/misjudgement can occur, just like in any sport.

It is not the intention of this European Standard to specify every possible shape and construction of facilities for traceurs and/or users. Parkour is a new, developing sport and the standard does not specify requirements that affect the design of the overall parkour facility.

It is also anticipated that sites might be used by/for non-parkour activities.

## 1 Scope

This European Standard specifies requirements for parkour equipment for use mainly by users starting from 8 years of age. This European Standard recognizes that parkour movement is personally determined by users, using controlled physical exertion from, to and through equipment elements and structures; both permanently installed and portable.

The requirements are intended to protect users from hazards that they might be unable to foresee when using the equipment as intended, or in a manner that can be reasonably anticipated.

This European Standard also specifies requirements for the installation and maintenance of parkour equipment, including area, height, flow, location and separation from other facilities, including children's playgrounds and multi-use games areas (free access multi-sports equipment).

**NOTE** As listed above, this European Standard is only applicable to parkour equipment, installation and maintenance, but not for example to parkour activities.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 206, *Concrete - Specification, performance, production and conformity*

EN 335:2013, *Durability of wood and wood-based products - Use classes: definitions, application to solid wood and wood-based products*

EN 350-2:1994, *Durability of wood and wood-based products - Natural durability of solid wood - Part 2: Guide to natural durability and treatability of selected wood species of importance in Europe*

EN 351-1:2007, *Durability of wood and wood-based products - Preservative-treated solid wood - Part 1: Classification of preservative penetration and retention*

EN 636, *Plywood — Specifications*

EN 1177, *Impact attenuating playground surfacing - Determination of critical fall height*

## 3 Terms and definitions

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

### 3.1 clearance

dimension that allows the opportunity of passing from, to and through equipment elements and structures and during a flow of movements

### 3.2 competent person

individual with sufficient training, experience or knowledge of this standard and understanding parkour as sports and/or particular qualifications, who is able to carry out a task properly

**Note 1 to entry:** The required level of competence is dependent upon the task involved whether it is assessing the layout, safety, materials or separation from other activities.