SLOVENSKI STANDARD
SIST EN 17164:2019

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Plezalne/balvanske stene za uporabo na vodnih površinah javnih plavalnih bazenov - Zahteve za varnost in obratovanje

Climbing/bouldering walls for use in the water area of swimming pools of public use - Safety and operational requirements

Kletter-/Boulderwände für den Einsatz im Wasserbereich von öffentlich genutzten Schwimmbädern - Sicherheitstechnische und betriebliche Anforderungen

Murs et blocs d'escalade destinés aux bassins des piscines à usage public - Exigences de sécurité et d'exploitation

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Climbing/bouldering walls for use in the water area of swimming pools of public use - Safety and operational requirements

Murs et blocs d'escalade destinés aux bassins des piscines à usage public - Exigences de sécurité et d'exploitation

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17164:2018) 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of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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.

Introduction

Climbing/bouldering walls for use in the water area are artificial climbing structures which enable climbing above water without rope safeguarding. The climbing process is terminated either by an accidental fall into the water or by an intentional jump or intentional dropping into the water. When specifying the water depths, it is assumed that no more height can be gained from a fall - as opposed to a jump from a diving board - and the splashdown feature is normally a different one.

The European Committee for Standardization (CEN) draws attention to the fact that it is claimed that compliance with CEN-CENELEC Guide 8:2015 may involve the use of a patent concerning climbing/bouldering walls given in Clause 4.

CEN/CENELEC take no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has ensured CEN/CENELEC that he is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with CEN/CENELEC. Information may be obtained from:

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

The market for climbing/bouldering walls for use in the water area of public used swimming pools is specific and still developing. It is impossible to define an all-embracing safety specification, including all dimensions and design requirements as required by a standard, without limiting the design possibilities and preventing innovative and new, but safe products.

This standard is intended to establish safety requirements and design guidance rules to serve anyone involved with climbing/bouldering walls for use in the water area of public used swimming pools, especially designers, manufacturers, operators and users, to ensure largely safe products. Its basic approach is the consciousness that the use of climbing/bouldering walls usually implies for the users a higher risk level than swimming. Consequently, the use of a climbing/bouldering wall requires a certain degree of self-responsibility in terms of sports equipment. These safety requirements should be taken into consideration and be fulfilled in order to avoid danger to users as much as possible.

1 Scope

This document specifies safety requirements for climbing/bouldering walls, which are vertical and/or overhanging towards the water area, for use in the water area of swimming pools for public use in addition to the general safety requirements of EN 13451-1. It is therefore advised to read this document in conjunction with EN 13451-1. Requirements for the use, the operation and the maintenance are also specified.

This standard is applicable to climbing/bouldering walls in classified swimming pools as specified in EN 15288-1.

This standard is not applicable to climbing/bouldering walls in swimming pools for domestic use.

This standard has limited application to water areas which consist of segregated areas of rivers, lakes or the sea. It is advised to follow the design, working methods and operational requirements insofar as they are relevant. This standard is not applicable to artificial climbing structures according to EN 12572 (all parts) and to inflatable climbing/bouldering walls according to EN ISO 25649-6.

In the aspects which overlap with EN 13451-10 the requirements of this EN standard take precedence over the EN 13451-10.

NOTE In this standard, "climbing" and "bouldering" are used synonymously.

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 12572-2:2017, *Artificial climbing structures — Part 2: Safety requirements and test methods for bouldering walls*

EN 12572-3:2017, *Artificial climbing structures — Part 3: Safety requirements and test methods for climbing holds*

EN 13451 (all parts), *Swimming pool equipment*

EN 15288 (all parts), *Swimming pools*

EN ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs (ISO 7010)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15288-1, EN 13451 (all parts) and the following 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
climbing/bouldering wall
artificial climbing structure for climbing above water that enables climbing without rope safeguarding

3.2
main climbing surface
main action surface of a climbing/bouldering wall

3.3
access climbing surface
climbing surface as a possible access to reach the main climbing surface

3.4
climbing surface
area of a climbing/bouldering wall that may consist of a main climbing surface and an access climbing surface and that may be partially situated under water

3.5
climbing zone
defined area within a climbing surface that it is equipped with holds

3.6
falling space
clearance zone above the pool that can be occupied by a user during a fall

3.7
splashdown space
space of the pool in which the user plunges after a fall

3.8
safety space
falling space and splashdown space

3.9
hold
climbing component used for progression on a climbing or bouldering wall

[SOURCE: EN 12572-3:2017, 3.4 — modified: simplified for climbing/bouldering walls used in the water area of swimming pools for public use]

3.10
maximal height of hold
$H_{H\max}$
height of the highest hold above water level

3.11
height of fall related to the water level
H_F
height of fall of a climbing/bouldering wall equals the maximal height of hold ($H_{H\max}$) minus 1,0 m as follows:

$H_F = H_{H\max} - 1{,}0$ m

3.12
water depth
vertical distance between water level and pool bottom

4 Safety requirements

4.1 Dimensions

All dimensions related to the pool walls refer to the pool wall above the standing step (if a standing step is present).

All dimensions related to a hold refer to the centre of the bolt connecting the hold to the wall.

4.2 Water depth and safety space

The minimum dimensions given in Table 1 and Figure 1 shall be complied with.

Table 1 — Minimum safety distances

Dimensions in metres

Maximal height of hold $H_{H\max}$	≤ 2	2 < x ≤ 3	3 < x ≤ 4	4 < x ≤ 5	5 < x ≤ 6	6 < x ≤ 7	7 < x ≤ 8,5
Height of fall H_F	≤ 1	≤ 2	≤ 3	≤ 4	≤ 5	≤ 6	≤ 7,5
A[a]	$0{,}65 \times H_F + 1{,}35$ ≥ 1,80	$0{,}65 \times H_F + 1{,}35$	$0{,}65 \times H_F + 1{,}35$	3,50	3,70	3,90	4,10
B	2,5	2,75	3,00	3,25	3,50	3,75	4,15
C	3,5	4,00	4,50	5,00	5,50	6,00	6,75
D	$H_F + 1{,}00$						
E	$0{,}65 \times H_F + 1{,}25$ ≥ 1,80	$0{,}65 \times H_F + 1{,}25$	$0{,}65 \times H_F + 1{,}25$	3,40	3,60	3,80	4,00
F	1,50	1,50	1,50	1,75	2,00	2,25	2,65
G	$0{,}65 \times H_F + 1{,}25$ ≥ 1,80	$0{,}65 \times H_F + 1{,}25$	$0{,}65 \times H_F + 1{,}25$	3,40	3,60	3,80	4,00
H	2,00	2,50	3,00	3,50	4,00	4,50	5,25

NOTE Key is explained in Figure 1.

[a] No head first entry allowed when depth less than 3,5 m.