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Vodni tobogani - 1. del: Varnostne zahteve in preskusne metode

Water slides - Part 1: Safety requirements and test methods

Wasserrutschen - Teil 1: Sicherheitstechnische Anforderungen und Prüfverfahren

Toboggans aquatiques - Partie 1 : Exigences de sécurité et méthodes d'essai

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ICS:

97.220.40	Oprema za športe na prostem in vodne športe	Outdoor and water sports equipment

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1069-1

July 2026

ICS 97.220.40

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English Version

Water slides - Part 1: Safety requirements and test methods

Toboggans aquatiques - Partie 1 : Exigences de sécurité et méthodes d'essai

Wasserrutschen - Teil 1: Sicherheitstechnische Anforderungen und Prüfverfahren

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European foreword

This document (EN 1069-1:2026) 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of an identical text or by endorsement, at the latest by January 2027, and conflicting national standards shall be withdrawn at the latest by January 2027.

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 1069-1:2017+A1:2019.

EN 1069-1:2026 includes the following significant technical changes with respect to EN 1069-1:2017+A1:2019:

a) change of scope: “to all water slides installed at open water areas for public use or in swimming pools for public use” → ”open water areas” has been added to open the scope to other water facilities;

b) Clause 2 “Normative references” has been revised;

c) Clause 3 “Terms and definitions”, has been revised;

d) Clause 4, “Classification” has been revised:
deletion of Type 2 and Type 8, Type 9, Type 10, therefore a new subclause 4.8 “Special elements” has been added;

e) subclause 7.5.5, “Protection against falling” has been revised; now applicable to all Types;

f) subclause 7.9.2, “Landing device/Landing area” moved to own subclause 7.10 and has been revised;

g) “Splashdown areas” moved to subclause 7.10.5;

h) Clause 8 “Additional safety requirements for Types 1 to 7 and special elements” has been revised: table for dimensions and falling distance/water depth of Type 1 and Type 2, cross section of Type 6 has been added; Figure 14 has been revised; Figure 15 “Difference in height” has been deleted; new Figure 15 “Clearance dimensions” has been added;

i) the document has been editorially revised.

EN 1069, *Water slides*, consists of the following parts:

— *Part 1: Safety requirements and test methods*

— *Part 2: Instructions*

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.

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Introduction

The market for water slides is extremely wide and specific and still developing. It is impossible to define an all-embracing safety specification, including dimensions and design requirements as required by a standard, without limiting the design possibilities and preventing innovative and new but safe products.

This document is intended to establish safety requirements and design guidance rules to serve anyone involved with water slides, especially designers, manufacturers, operators and users, to ensure safe and more efficient products. Its basic approach is the consciousness that the sliding action usually implies for the users a higher risk level than using a pool. For certain aspects of design, manufacturing, installation, operation and use only specific guidelines, without any technical specification, are given, which should be taken into consideration and be fulfilled in order to ensure safety for operators and users.

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1 Scope

This document is applicable to all water slides installed at open water areas for public use or in swimming pools for public use.

This document specifies general safety requirements for water slides installed at open water areas for public use or in swimming pools for public use and specific requirements for defined types of water slides. These specific safety requirements are also applicable to undefined types as far as possible.

These requirements concern safety and the technical rules for design, calculation and testing.

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 1069-2:2026, *Water slides — Part 2: Instructions*

EN 1990, *Eurocode — Basis of structural and geotechnical design*

EN 1991-1-1, *Eurocode 1 — Actions on structures — Part 1-1: Specific weight of materials, self-weight of construction works and imposed loads for buildings*

EN 1991-1-3:2025, *Eurocode 1 — Actions on structures — Part 1-3: Snow loads*

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

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EN 10088-1, *Stainless steels — Part 1: List of stainless steels*

EN 10088-2, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resistant steels for general purposes*

EN 10204:2004, *Metallic products — Types of inspection documents*

EN 13451-1:2020+A1:2024, *Swimming pool equipment — Part 1: General safety requirements and test methods for equipment installed in pools for public use*

EN 13451-2, *Swimming pool equipment — Part 2: Additional specific safety requirements and test methods for ladders, stepladders and handle bends*

EN 13451-3, *Swimming pool equipment — Part 3: Additional specific safety requirements and test methods for inlets and outlets and water/air based water leisure features installed in pools for public use*

EN 15288-1:2018+A1:2024, *Swimming pools for public use — Part 1: Safety requirements for design*

EN 15288-2, *Swimming pools for public use — Part 2: Safety requirements for operation*

EN 22768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1)*

EN ISO 9606-1, *Qualification testing of welders — Fusion welding — Part 1: Steels (ISO 9606-1)*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025)*

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3 Terms and definitions

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

ISO and IEC maintain terminology 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
pool/swimming pool
facility, with one or more water areas, intended for swimming, leisure or other water-based physical activities

[SOURCE: EN 15288-1:2018+A1:2024, 3.1]

3.2
open water area
surface water intended for swimming, leisure without water treatment

Note 1 to entry: Water collected on the ground e.g. lakes, rivers, sea …

3.3
public use
use of an installation open to everyone or to a defined group of users, not designated solely for the owner's/proprietor's/operator's family and guests independently from paying an entrance fee

Note 1 to entry: Pools serving houses rented for private use are not of public use.

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[SOURCE: EN 15288-1:2018+A1:2024, 3.5, modified – Note 1 to entry has been added.]

3.4
water slide
piece of equipment or installation with a sliding surface on which the user slides with water as a friction- and/or speed-reducing medium; the user slides freely or with the use of a ride enhancement device

Note 1 to entry: On some water slides the user can also be pushed e.g. by a water stream.

Note 2 to entry: For classification see Clause 4.

3.5
platform
area providing access to the start section

3.6
start section
area where the user enters the water slide proper and takes the sliding position

3.7
slide proper
area intended for sliding

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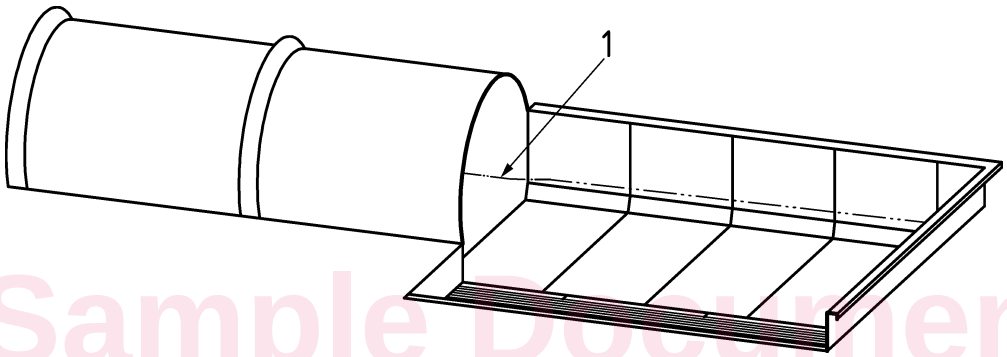
3.8
final part
part of the water slide proper designed to prepare the user for landing

3.9
landing
conclusion of sliding action

Note 1 to entry: Types of conclusion can be fall, being slowed down and stopped in a catch unit or sofa.

3.10
catch unit
integral part of a water slide, which brings the rider to a halt in his sliding position

Note 1 to entry: See Figure 1 as example.



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Key
1 water line

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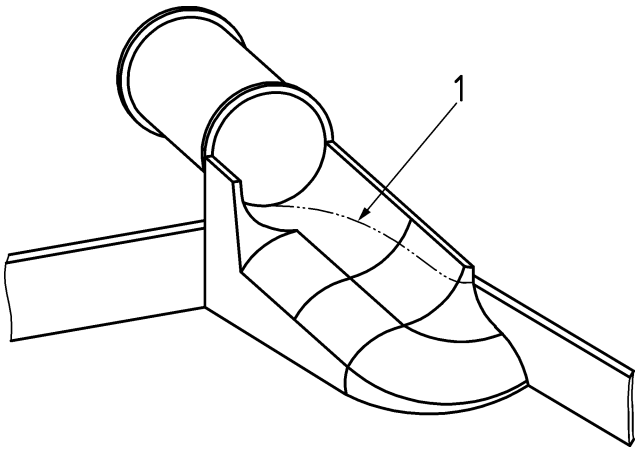
Figure 1 — Example of typical catch unit

3.11
sofa unit
integral part of a water slide, which slows down the rider on the sliding surface and moves him additionally sideways out of the sliding path of the following users

Note 1 to entry: See Figure 2 as example.

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Key
1 water line

Figure 2 — Example of typical sofa unit

3.12
splashdown area
specific pool or area which is part of a general purpose pool, in which the user lands from the end of the water slide, and is brought to a halt in the water

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3.13
water level
defined operating water surface in the landing area

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3.14
tube
closed section, not necessarily circular in cross section, of a water slide, with a fully utilisable sliding surface

3.15
cover
device to enclose an open water slide, not intended for sliding

3.16
riser
extension for the water slide proper, intended for sliding

3.17
wave screen
device, placed within the clearance zone, to control spilling water

3.18
ride enhancement device
device to slide on or in, designed for a particular water slide

3.19
barrier
device to restrict users from falling over, under or through it

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3.20
average inclination
inclination x in percent (%) calculated with the formula

$$x = \left(h \times 100\right) / l$$

where

h is the height between start section and beginning of final part, in metres;

l is the developed length of the water slide proper excluding the final part, in metres.

3.21
clearance zone
controlled space around the user on the water slide proper and on the final part, designed to prevent the impact of the users with obstacles

4 Classification

4.1 Type 1

4.1.1 Type 1.1

Straight water slides not exceeding 1 000 mm in height from start section to water level and with an average inclination ≤ 70 %.

NOTE This water slide is typically designed for small children.

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4.1.2 Type 1.2

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Straight slide with an average inclination of ≤ 70 % and a height of 1 000 mm < h ≤ 3 000 mm from start section to water level.

NOTE This water slide is typically designed for children.

4.2 Type 2

Curved single-track water slide with an average inclination of ≤ 70 % and a height of ≤ 3 000 mm from start section to water level.

NOTE This water slide is typically designed for children.

4.3 Type 3

Single-track water slide, with an average inclination of maximum 13 %, excluding the final part. The maximum speed of the users shall be ≤ 8 m/s.

NOTE The average speed of the users is usually ≤ 6 m/s.

4.4 Type 4

Speed single-track water slide with an average inclination between 13 % and 20 %, excluding the final part. The maximum speed of the users shall be ≤ 14 m/s.

NOTE The average speed of the users is usually ≤ 10 m/s.

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4.5 Type 5

High-speed single-track water slide with an average inclination of at least 20 %, excluding the final part. The maximum speed of the users may be > 14 m/s.

4.6 Type 6

4.6.1 Type 6.1

Multi-track water slide with separate parallel tracks, with an average inclination of maximum 13 % excluding the final part, one beside the other over the full length. The maximum speed of the users shall be ≤ 8 m/s.

NOTE The average speed of the users is usually ≤ 6 m/s.

4.6.2 Type 6.2

Multi-track water slide with separate parallel tracks, with an average inclination of between 13 % and 30 %, excluding the final part. The maximum speed of the users shall be ≤ 14 m/s.

NOTE The average speed of the users is usually ≤ 10 m/s.

4.7 Type 7

Wide straight water slide with an average inclination of maximum 35 %. The maximum speed of the users shall be ≤ 8 m/s.

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4.8 Special elements

4.8.1 Bowl

Special element within a water slide where the user exits from a water slide of another type into a circular bowl and descends in a spiral path, before either free falling through a hole at the bottom into the splashdown area or entering an additional slide.

4.8.2 Element that allows lateral oscillation

A special element where the user exits from a water slide of another type into a U-shaped part allowing free transversal oscillating sliding in direction to the end of the element.

EXAMPLE A cone or a halfpipe.

4.8.3 Uphill element

A special element where the user slides upwards, sometimes with the help of jets or a specific device.

4.8.4 Wild river

A combination of water slide elements with various cross sections where the user slides, floats or swims in a volume of water. The slide can divide in multiple tracks of other types which can congregate to a single track.

5 Materials and construction

5.1 General

Any material may be used for the construction of water slides, supports and ride enhancement devices, provided that it fulfils the requirements of this document.

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