



SLOVENSKI STANDARD

oSIST prEN 1176-10:2020

01-september-2020

Oprema in podloge otroških igrišč - 10. del: Dodatne posebne varnostne zahteve in preskusne metode za zaključene igralne enote

Playground equipment and surfacing - Part 10: Additional specific safety requirements and test methods for fully enclosed play equipment

Spielplatzgeräte und Spielplatzböden - Teil 10: Zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren für vollständig umschlossene Spielgeräte

Équipements et sols d'aires de jeux - Partie 10 : Exigences de sécurité et méthodes d'essai complémentaires spécifiques aux équipements de jeux totalement fermés

oSIST prEN 1176-10:2020
<https://standards.iteh.ai/catalog/standards/sist/1d36cca0-00a4-4587-8a23-5d74fcaa819b/osist-pren-1176-10-2020>

Ta slovenski standard je istoveten z: prEN 1176-10

ICS:

97.200.40 Igrišča Playgrounds

oSIST prEN 1176-10:2020 **en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[oSIST prEN 1176-10:2020](https://standards.iteh.ai/catalog/standards/sist/fd36cca0-00a4-4587-8a23-5d74feaa819b/osist-pren-1176-10-2020)

<https://standards.iteh.ai/catalog/standards/sist/fd36cca0-00a4-4587-8a23-5d74feaa819b/osist-pren-1176-10-2020>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 1176-10

June 2020

ICS 97.200.40

Will supersede EN 1176-10:2008

English Version

Playground equipment and surfacing - Part 10: Additional specific safety requirements and test methods for fully enclosed play equipment

Équipements et sols d'aires de jeux - Partie 10 :
Exigences de sécurité et méthodes d'essai
complémentaires spécifiques aux équipements de jeux
totalement fermés

Spielplatzgeräte und Spielplatzböden - Teil 10:
Zusätzliche besondere sicherheitstechnische
Anforderungen und Prüfverfahren für vollständig
umschlossene Spielgeräte

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Contents

	Page
European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions.....	4
4 Safety requirements.....	6
4.1 General.....	6
4.2 Emergency procedures and fire safety management.....	6
4.2.1 Materials including flammability.....	6
4.2.2 Evacuation.....	6
4.3 Design and manufacture.....	9
4.3.1 Impact protection.....	9
4.3.2 Visibility.....	10
4.3.3 Determination of spaces and areas.....	10
4.3.4 Connections and platforms.....	10
4.3.5 Rope features.....	10
4.3.6 Foam play features.....	10
4.3.7 Lighting.....	11
4.3.8 Signage.....	11
4.4 Specific equipment.....	11
4.4.1 Slides.....	11
4.4.2 Drop slides.....	11
4.4.3 Overhead track rides (rigid).....	12
4.4.4 Spinning Poles.....	13
4.4.5 Ball pool.....	14
4.4.6 Cannons.....	15
4.4.7 Bouncing elements in indoor play structures.....	15
4.4.8 Electrically powered equipment.....	16
5 Inspection and maintenance information to be provided by the manufacturer or supplier.....	16
6 Test reports.....	17
7 Marking.....	17

iTech STANDARD PREVIEW
(standards.itech.ai)

oSIST prEN 1176-10:2020

[https://standards.itech.ai/catalog/standards/sist/id36cca0-00a4-4587-8a23-](https://standards.itech.ai/catalog/standards/sist/id36cca0-00a4-4587-8a23-5d74fca819b/osist-pr-en-1176-10-2020)

[5d74fca819b/osist-pr-en-1176-10-2020](https://standards.itech.ai/catalog/standards/sist/id36cca0-00a4-4587-8a23-5d74fca819b/osist-pr-en-1176-10-2020)

European foreword

This document (prEN 1176-10:2020) 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 European Standard consists of a number of parts as follows:

- a) EN 1176-1, *Playground equipment and surfacing — Part 1: General safety requirements and test methods*;
- b) EN 1176-2, *Playground equipment and surfacing — Part 2: Additional specific safety requirements and test methods for swings*;
- c) EN 1176-3, *Playground equipment and surfacing — Part 3: Additional specific safety requirements and test methods for slides*;
- d) EN 1176-4, *Playground equipment and surfacing — Part 4: Additional specific safety requirements and test methods for cableways*;
- e) EN 1176-5, *Playground equipment and surfacing — Part 5: Additional specific safety requirements and test methods for carousels*;
- f) EN 1176-6, *Playground equipment and surfacing — Part 6: Additional specific safety requirements and test methods for rocking equipment*;
- g) EN 1176-7, *Playground equipment and surfacing — Part 7: Guidance on installation, inspection, maintenance and operation*;
- h) EN 1176-10, *Playground equipment and surfacing — Part 10: Additional specific safety requirements and test methods for fully enclosed play equipment*;
- i) EN 1176-11, *Playground equipment and surfacing — Part 11: Additional specific safety requirements and test methods for spatial network*.

This part of EN 1176 should not be used in isolation, but in conjunction with EN 1176 all relevant parts and EN 1177.

prEN 1176-10:2020 (E)**1 Scope**

This document is applicable to fully enclosed play equipment intended for installation inside and outside buildings, for children up to 14 years old, see 3.1.

The purpose of this document is to provide additional safety requirements covering particulars of these structures.

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 1176-1:2017, *Playground equipment and surfacing — Part 1: General safety requirements and test methods*

EN 1176-3:2017, *Playground equipment and surfacing — Part 3: Additional specific safety requirements and test methods for slides*

EN 1177, *Impact attenuating playground surfacing — Methods of test for determination of impact attenuation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1176-1, EN 1177 and the following apply.

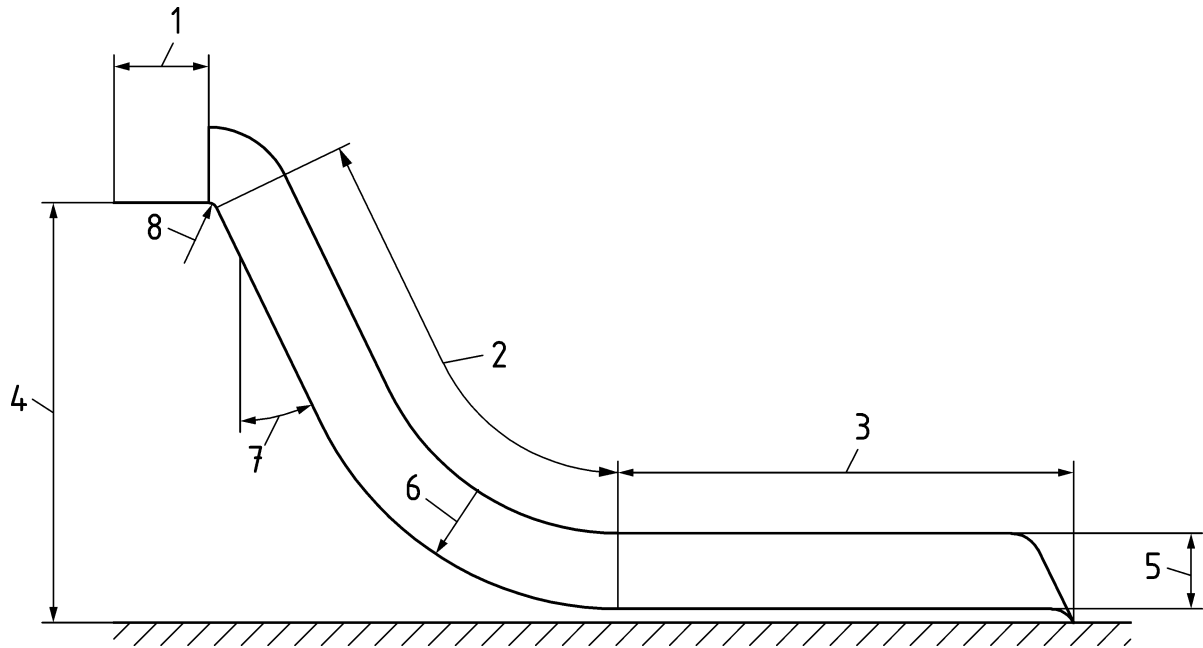
ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

3.1 fully enclosed play equipment
equipment and structure, including components and constructional elements with, or on which, children can play, that are within a three-dimensional enclosure with specified entrances and exits

3.2 drop slide
open-fronted, near vertical free-fall slide which continues into a concave curve to a near horizontal run-out section

Note 1 to entry: See Figure 1.

**Key**

- | | | | |
|---|----------------------------------|---|----------------------------------|
| 1 | starting section | 5 | lateral protection |
| 2 | sliding section (includes curve) | 6 | concave curve |
| 3 | run-out section | 7 | slide angle to vertical, 15° min |
| 4 | height of slide | 8 | radius, 100 mm min |

Figure 1 — Example for a typical drop slide, side view

oSIST prEN 1176-10:2020

<https://standards.iteh.ai/catalog/standards/sist/fd36cca0-00a4-4587-8a23-5d74feaa819b/osist-pren-1176-10-2020>

3.3**overhead track ride (rigid)**

equipment on which children can travel by self-propulsion along a rigid fixed horizontal or inclined overhead track

3.4**terminus or starting point**

area in which the user can reach the grip and/or “seat” and set the equipment in motion

3.5**area of travel**

area in which the user can travel freely

3.6**overhead track**

part of the structure that supports the traveller

3.7**traveller**

moving part that, by influence of self-propulsion by the user, he/she moves along the overhead track

[SOURCE: EN 1176-4:2017+AC:2019, 3.7 - Modified: "self-propulsion" added and "cable" replaced by "overhead track"]

prEN 1176-10:2020 (E)**3.8****linkage element**

part of the structure between the traveller and the “seat” and which often also provides grip

3.9**end stop**

energy absorbing material positioned to cushion the impact of the traveller at the start and end of the overhead track

3.10**ball pool**

enclosure designed to contain a depth of balls within which children can play

3.11**Adult access route**

path inside the equipment enabling (an) adult(s) access to bring an injured person to an exit

Note 1 to entry: This includes access/egress points.

3.12**bouncing element in indoor play structures**

enclosed bouncing element with a uniform continuous surface, installed in a fully enclosed playground equipment that, due to its flexible characteristics, has the main purpose of allowing users to become airborne by jumping without the aid of other user(s)

3.13**spinning pole**

circular disc with a vertical pole, specifically installed in a fully enclosed playground equipment and designed for use by one or more users, that revolves around a central vertical axis without oscillation

4 Safety requirements**4.1 General**

Fully enclosed play equipment shall conform to all parts of EN 1176 unless specified in this document.

4.2 Emergency procedures and fire safety management**4.2.1 Materials including flammability**

Materials used in the construction of fully enclosed play equipment shall be flame retardant

4.2.2 Evacuation**4.2.2.1 Accessibility for adults**

Equipment should be designed to ensure that adults are able to gain access to any point to assist children within the equipment.

4.2.2.2 Adult access route

Adult access routes shall conform to Table 1.

An adult access route shall have a height of at least 1 300 mm and a width of at least 700 mm.

subject to national variations

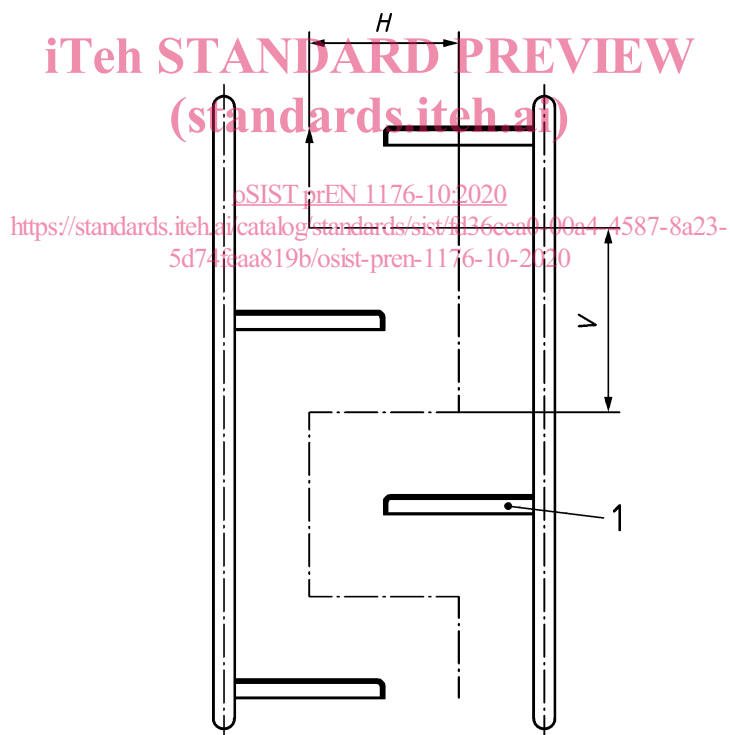
Play equipment can be placed inside the Adult Access Route only if it meets the following requirements:

- a) Play equipment that is placed along the vertical or horizontal surfaces of the Adult Access Route shall not impede exit.
- b) Moving play equipment hanging in the evacuation route, for example punching bags, shall allow easy passage through when using a manual pushing action.
- c) Play equipment in the evacuation route shall not reduce the route to a width of less than 700 mm or a height of less than 1 300 mm.
- d) Surface mounted Items of play equipment placed inside the Adult Access Route shall have a depth and height of no more than 400mm and there shall be a distance of at least 1 000 mm between any pieces of such play equipment which reduce the dimensions of the Adult Access Route

4.2.2.3 Distance to the exit

The distance from any point in the equipment to the nearest exit shall be no greater than 18 m. There are some special cases for calculation of this distance:

- a) for a slide, the distance is half the length of the sliding surface;
- b) for a climbing tower, add vertical and horizontal distances between the geometric centres of the openings (see Figure 2).



Key

- 1 platform
- H horizontal distance
- V vertical distance

Figure 2 — Measuring distances within a climbing tower

prEN 1176-10:2020 (E)

4.2.2.4 Access and egress

The number of access and egress points shall conform to Table 1.

Access/egress points shall be located so as to distribute evacuation through different zones of the play equipment (see Table 1).

Table 1 — Adult access routes, access and egress points

Capacity ^a	Highest platform	Minimum number of access and/or egress points	Maximum distance from any point to an adult access route ^b
1 to 0	0 m < x ≤ 2 m	2	10
	> 2 m < x ≤ 4 m	2	10
	> 4 m < x ≤ 6 m	2	10
	> 6 m	2	10
21 to 50	0 m < x ≤ 2 m	2	10
	> 2 m < x ≤ 4 m	2	10
	> 4 m < x ≤ 6 m	3	10
	> 6 m	3	10
51 to 100	0 m < x ≤ 2 m	2	10
	> 2 m < x ≤ 4 m	2	10
	> 4 m < x ≤ 6 m	3	5
	> 6 m	4	5
101 to 200	0 m < x ≤ 2 m	3	5
	> 2 m < x ≤ 4 m	3	5
	> 4 m < x ≤ 6 m	4	5
	> 6 m	4	5
≥ 201	—	In accordance with Formula (1)	5

^a Number of users, calculated according to 4.2.2.4

^b If the maximum distance is sufficient to reach the exit, an adult access route is not necessary inside the equipment.