SLOVENSKI STANDARD
SIST EN 1176-2:2018+AC:2019

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Nadomešča:
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Oprema in podloge otroških igrišč - 2. del: Dodatne posebne varnostne zahteve in preskusne metode za viseče gugalnice

Playground equipment and surfacing - Part 2: Additional specific safety requirements and test methods for swings

Spielplatzgeräte und Spielplatzböden - Teil 2: Zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren für Schaukeln

Équipement et sols d'aires de jeux - Partie 2: Exigences de sécurité et méthodes d'essai complémentaires spécifiques aux balançoires

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97.200.40	Igrišča	Playgrounds

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

Playground equipment and surfacing - Part 2: Additional specific safety requirements and test methods for swings

Équipement et sols d'aires de jeux - Partie 2: Exigences de sécurité et méthodes d'essai complémentaires spécifiques aux balançoires

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This European Standard was approved by CEN on 6 August 2016 and includes Corrigendum approved by CEN on 6 August 2016.

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

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Contents

Page

European foreword

This document (EN 1176-2:2017+AC:2019) 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of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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 AC EN 1176-2:2017 AC.

This document includes Corrigendum 1 issued by CEN on 23 October 2019.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags AC AC

The main changes are:

a) amended definition of a swing;

b) additional figure for an example of a swing with one rotational axis (see Figure 1);

c) new figure on ground clearance (see Figure 7);

d) new definition and requirements for group swing seats;

e) improved recommendations for fences around swings;

f) revised figure for free height of fall and surfacing requirements beneath a swing (see Figure 10);

g) harmonization of B.4 and B.5 with the measuring device from the EN 1176 series.

This document is part of a series of standards dealing with playground equipment and surfacing which consists of:

— *Part 1: General safety requirements and test methods*;

— *Part 2: Additional specific safety requirements and test methods for swings*;

— *Part 3: Additional specific safety requirements and test methods for slides*;

— *Part 4: Additional specific safety requirements and test methods for cableways*;

— *Part 5: Additional specific safety requirements and test methods for carousels*;

— *Part 6: Additional specific safety requirements and test methods for rocking equipment*;

— *Part 7: Guidance on installation, inspection, maintenance and operation*;

— *Part 10: Additional specific safety requirements and test methods for fully enclosed play equipment*;

— *Part 11: Additional specific safety requirements and test methods for spatial network.*

This part of EN 1176 will be used in conjunction with parts EN 1176-1, EN 1176-7 and EN 1177.

For inflatable play equipment see EN 14960, *Inflatable play equipment — Safety requirements and test methods.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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 the United Kingdom.

1 Scope

This European Standard specifies additional safety requirements for swings intended for permanent installation for use by children. Where the main play function is not swinging, the relevant requirements in this part of EN 1176 may be used, as appropriate.

NOTE Recommendations on the design and siting of swings are given in Annex A.

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

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

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

3 Terms and definitions

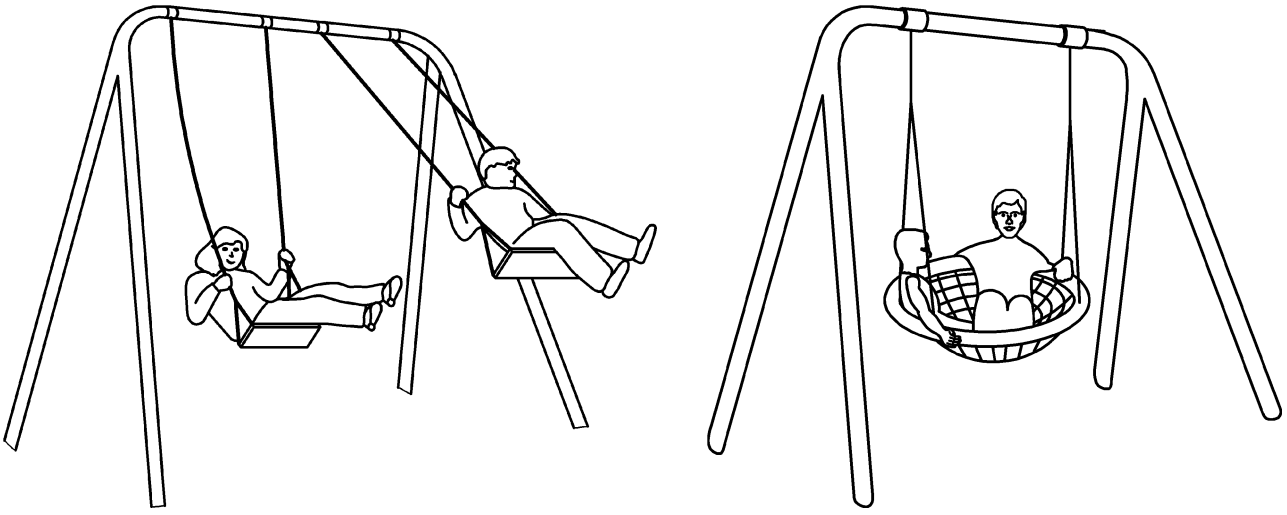
For the purposes of this document, the terms and definitions given in EN 1176-1 and the following apply.

NOTE In order not to confine the application of this European Standard to those items of equipment currently in use and to allow freedom of design for the manufacture of new equipment, only the fundamental forms of equipment and motion are defined.

3.1
swing
moving equipment where the weight of the user is supported below a pivot or universal joint, where the pivot or universal joint is more than 1,3 m above the ground

3.2
swing with one rotational axis (Type 1)
seat that is flexibly suspended individually from a load bearing cross beam that can swing to and fro in an arc at right angles to the cross beam

Note 1 to entry: See Figure 1.



a) b)

Figure 1 — Examples of a swing with one rotational axis (Type 1)

3.3
swing with several rotational axes (Type 2)
seat suspended from one or more load bearing cross beams, supported in such a way that it can move at right angles or longitudinally to the cross beams in as horizontal position as practicable

Note 1 to entry: See Figure 2.

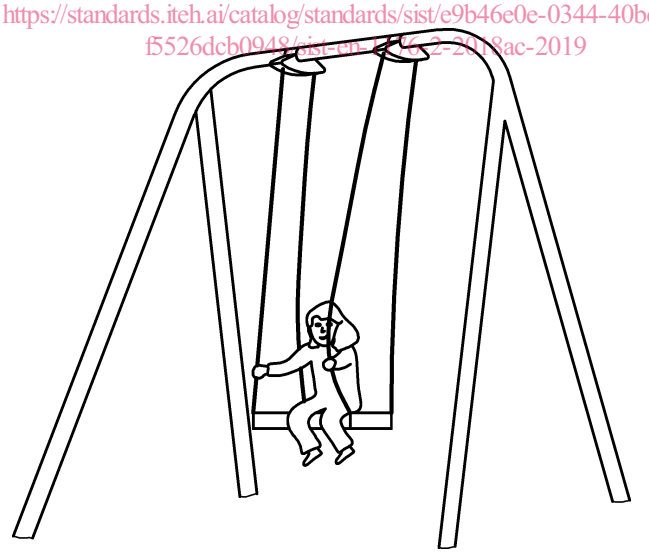
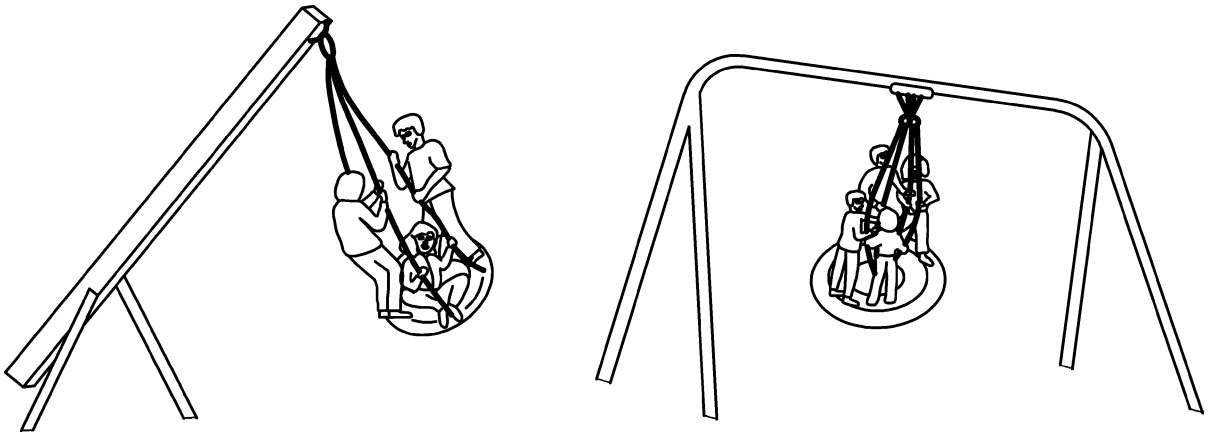


Figure 2 — Example of a swing with several rotational axes (Type 2)

3.4
single point swing (Type 3)
seat or platform with cables or chains that meet at one fixing point so that the swing can move in all directions

Note 1 to entry: See Figure 3.

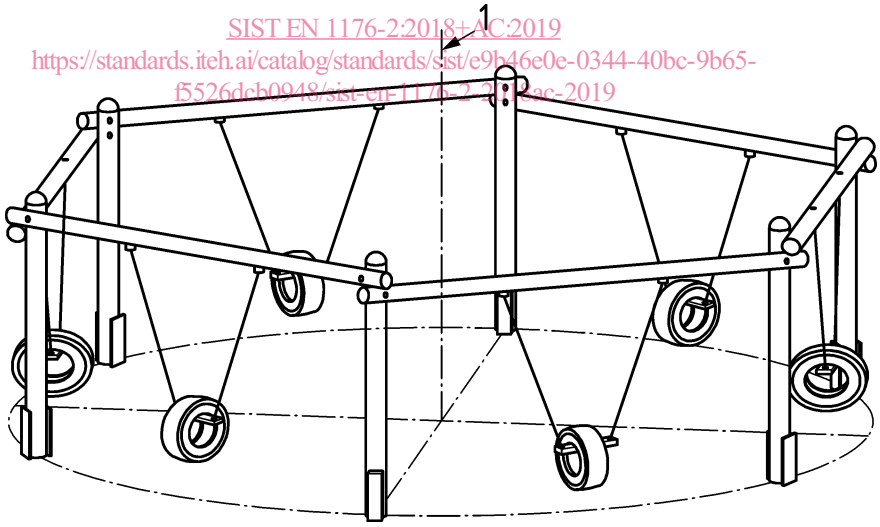


a) b)

Figure 3 — Examples of a single point swings (Type 3)

3.5
contact swing (Type 4)
group of seats flexibly suspended individually from load bearing cross beams, which are arranged around a central axis (a centre point), typically six in number

Note 1 to entry: See Figure 4.



Key
1 central axis

Figure 4 — Example of a contact swing (Type 4)

3.6
swing height
distance between the middle of the fulcrum of the suspension and the playing surface

Note 1 to entry: See Figure 5.

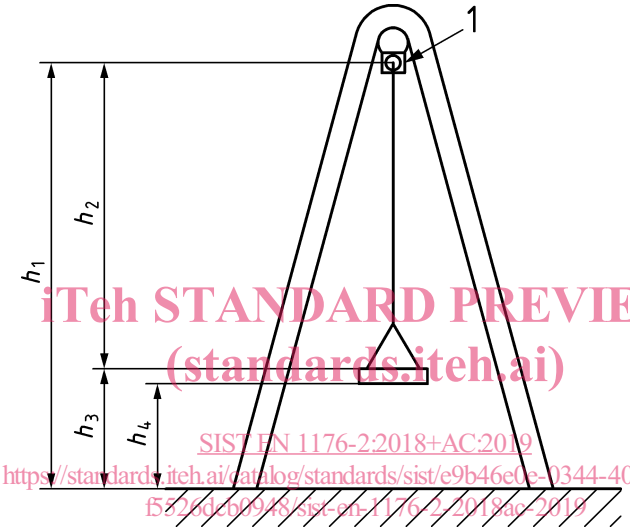
3.7
length of swing suspension member
distance between the middle of the fulcrum of the suspension member and top surface of the seat or platform

Note 1 to entry: Suspension members include chains and ropes.

Note 2 to entry: See Figure 5.

3.8
height of seat
distance between the top of the seat or platform and the playing surface

Note 1 to entry: See Figure 5.



Key
1 rotational axis
h_1 swing height
h_2 length of swing suspension member (h_1-h_3)
h_3 height of seat
h_4 ground clearance

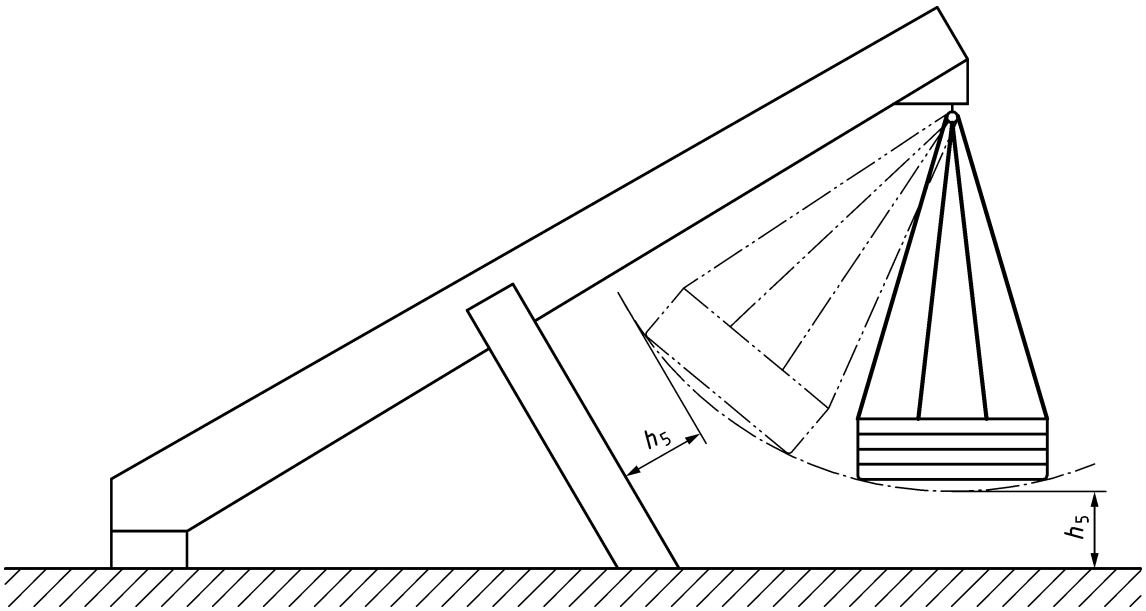
Figure 5 — Height dimensions

3.9
ground clearance
distance between the specified under-part of the seat and the playing surface

Note 1 to entry: The measurement position depends on seat type, see 4.2.

3.10
seat clearance
distance between the lower edge of the seat and any obstacle adjacent to the path of the swing

Note 1 to entry: See Figure 6.



Key

h_5 seat clearance

Figure 6 — Example of a Type 3 swing showing seat clearance

3.11
flat swing seat
seat without back and side protections

3.12
cradle swing seat
seat provided with greater body support for younger or less able users, typically designed so that the user cannot slip through the constructional parts surrounding the seat

3.13
group swing seat
seat with a large surface area intended for several users, typically nest or basket swing seats, single point swing seats, tyre seats, and swinging beds

4 Safety requirements

4.1 General

Swings shall conform to EN 1176-1 unless otherwise specified in this part of EN 1176.

4.2 Ground clearance

The minimum ground clearance for single-use swings (see Figures 5 and 6) at rest position shall be 350 mm.

For group swing seats, the minimum ground clearance at rest position shall be 400 mm.

For group swing seats with a flexible lower part the ground clearance shall be a minimum of 400 mm measured from the underside of the rigid part of the seat in its most onerous position (see Figure 7).

In the case of contact swings with vertical tyres as seats (see Figure 12), the ground clearance may be reduced to 100 mm minimum.