

AS 4685.5:2021



Playground equipment and surfacing

Part 5: Additional specific safety requirements and test methods for carousels (EN 1176-5:2019, MOD)

This national standard is the adoption of EN 1176-5:2019 with national modifications as set out in the Appendix ZZ to take account of Australian conditions with the permission of the European Committee for Standardization – CEN, Rue de la Science 23, B – 1040 Brussels, Belgium.



AS 4685.5:2021

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The following are represented on Committee CS-005:

- Association of Rotational Moulders Australasia
- Australian Industry Group
- Australian Institute of Landscape Architects
- Children's Health Queensland Hospital and Health Service
- Early Childhood Australia
- Engineers Australia
- Institute of Public Works Engineering Australasia
- Kidsafe Australia
- National Association of Testing Authorities Australia
- Occupational Therapy Australia
- Play Australia
- Scouts Australia
- Sports and Play Industry Association
- University of Sydney

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Preface

This Standard prepared by the Standards Australia Committee CS-005, Playground Equipment to supersede AS 4685.5:2014, *Playground equipment and surfacing, Part 5: Additional specific safety requirements and test methods for carousels (EN 1176-5:2008, MOD)*.

If a Standard is referenced in legislation, the legislative instrument or regulation specifies the date on which the Standard or Amendment comes into effect. Regulatory Authorities have indicated 12 months as an appropriate transition period from the date of publication for the application of this Standard. Refer to the relevant regulatory authority for further information.

The objective of this document is to specify additional safety requirements for carousels intended for permanent installation for use by children.

Where the main play function is not rotating, the relevant requirements in this part of the AS 4685 series can be used, as appropriate.

This document is not applicable to motor-driven carousels, fairground carousels or climbing drums.

This document is an adoption with national modifications, and has been reproduced from, EN 1176-5:2019, *Playground equipment and surfacing — Part 5: Additional specific safety requirements and test methods for carousels*. The modifications are additional requirements and are set out in [Appendix ZZ](#), which has been added at the end of the source text.

[Appendix ZZ](#) lists the variations to EN 1176-5:2019 for the application of this document in Australia.

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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European foreword

This document (EN 1176-5:2019) 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 EN 1176-5:2008.

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 EN 1176-1, EN 1176-7 and EN 1177.

For inflatable play equipment see:

- EN 14960 (series), *Inflatable play equipment — Safety requirements and test methods.*

The principal changes from the previous edition of this part of EN 1176 are as follows:

- a) the document covers equipment of all sizes where main function is rotating;
- b) information is presented in Table 1 to improve readability;
- c) entrapment requirements apply to all openings regardless to their heights;
- d) user stations are tested with protrusion ring;
- e) type-specific changes:
 - axis' maximum inclination requirement is given only to type B carousel;

- tolerance is allowed for roundness of the carousel's platform edge;
 - requirements were added for bowl-like carousels;
 - requirements were added for free standing carousels with a diameter of less than 500 mm;
- f) changes concerning layouts:
- layout recommendation is given for type C carousel;
 - impact areas of carousel types D and F are allowed to overlap with other impact areas.

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, 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 document specifies additional safety requirements for carousels intended for permanent installation for use by children.

Where the main play function is not rotating, the relevant requirements in this part of EN 1176 might be used, as appropriate. This document is not applicable to motor-driven carousels, fairground carousels or climbing drums.

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 1176-2:2017, *Playground equipment and surfacing — Part 2: Additional specific safety requirements and test methods for swings*

EN 1176-6:2017+AC:2019, *Playground equipment and surfacing — Part 6: Additional specific safety requirements and test methods for rocking equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1176-1 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 <https://www.iso.org/obp>

3.1

carousel

playground equipment where the main function is to rotate around a central axis

3.2

rotating chairs (type A)

carousel without a closed rotating platform whose user stations are defined by separate seats that are rigidly connected with the central axis via the supporting structure

Note 1 to entry: See Figure 1.