BS EN 1176-5:2019

BSI Standards Publication

Playground equipment and surfacing

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

Documents
Document Sharing Hub

Full document details: BS EN 1176-5:2019

National foreword

This British Standard is the UK implementation of EN 1176-5:2019. It supersedes BS EN 1176-5:2008, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee SW/65, Children's playground equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019
Published by BSI Standards Limited 2019

ISBN 978 0 580 97766 4

ICS 97.200.40

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2019.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS EN 1176-5:2019

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1176-5

October 2019

ICS 97.200.40

Supersedes EN 1176-5:2008

English Version

Playground equipment and surfacing - Part 5: Additional specific safety requirements and test methods for carousels

Équipements et sols d'aires de jeux - Partie 5: Exigences de sécurité et méthodes d'essai complémentaires spécifiques aux manèges

Spielplatzgeräte und Spielplatzböden - Teil 5: Zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren für Karussells

This European Standard was approved by CEN on 12 August 2019.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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.

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

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

© 2019 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 1176-5:2019 E

Documents
Document Sharing Hub

Full document details: BS EN 1176-5:2019

Contents

Page

European foreword 3
1 Scope 5
2 Normative references 5
3 Terms and definitions 5
4 Safety requirements 9
5 Type specific requirements 12
6 Test reports 17
7 Marking 17
Annex A (normative) Method for the determination of attachment strength of supporting structure components to the rotating shaft 18
Annex B (informative) A–deviations 19

Documents
Document Sharing Hub
Full document details: BS EN 1176-5:2019

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;

Documents
Document Sharing Hub
Full document details: BS EN 1176-5:2019

— 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.

Documents
Document Sharing Hub

Full document details: BS EN 1176-5:2019

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.

Documents
Document Sharing Hub
Full document details: BS EN 1176-5:2019