

SVENSK STANDARD

SS-EN 1176-5:2008

Fastställt/Approved: 2008-06-09

Publicerad/Published: 2008-09-19

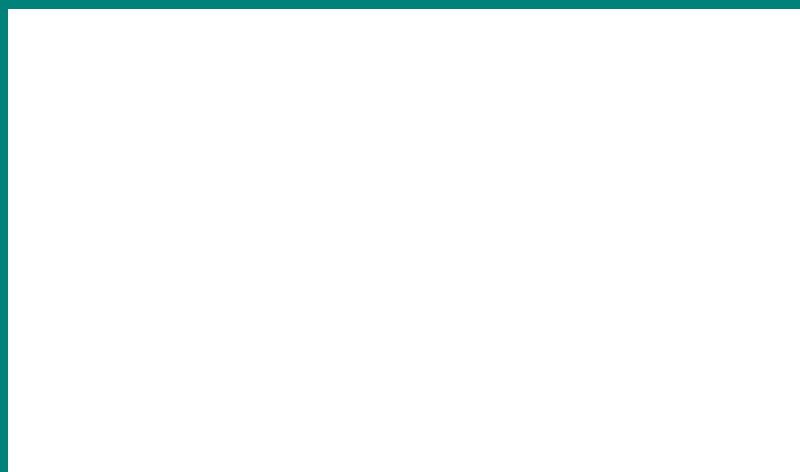
Utgåva/Edition: 2

Språk/Language: engelska/English

ICS: 97.200.40

Lekredskap och stötdämpande underlag – Del 5: Karuseller – Kompletterande säkerhetskrav och provningmetoder

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



SWEDISH
STANDARDS
INSTITUTE

Hitta rätt produkt och ett leveranssätt som passar dig

Standarder

Genom att följa gällande standard både effektiviserar och säkrar du ditt arbete. Många standarder ingår dessutom ofta i paket.

Tjänster

Abonnemang är tjänsten där vi uppdaterar dig med aktuella standarder när förändringar sker på dem du valt att abonnera på. På så sätt är du säker på att du alltid arbetar efter rätt utgåva.

e-nav är vår online-tjänst som ger dig och dina kollegor tillgång till standarder ni valt att abonnera på dygnet runt. Med e-nav kan samma standard användas av flera personer samtidigt.

Leveranssätt

Du väljer hur du vill ha dina standarder levererade. Vi kan erbjuda dig dem på papper och som pdf.

Andra produkter

Vi har böcker som underlättar arbetet att följa en standard. Med våra böcker får du ökad förståelse för hur standarder ska följas och vilka fördelar den ger dig i ditt arbete. Vi tar fram många egna publikationer och fungerar även som återförsäljare. Det gör att du hos oss kan hitta över 500 unika titlar. Vi har även tekniska rapporter, specifikationer och "workshop agreement".

Matriser är en översikt på standarder och handböcker som bör läsas tillsammans. De finns på sis.se och ger dig en bra bild över hur olika produkter hör ihop.

Standardiseringsprojekt

Du kan påverka innehållet i framtida standarder genom att delta i någon av SIS ca 400 Tekniska Kommittéer.

Find the right product and the type of delivery that suits you

Standards

By complying with current standards, you can make your work more efficient and ensure reliability. Also, several of the standards are often supplied in packages.

Services

Subscription is the service that keeps you up to date with current standards when changes occur in the ones you have chosen to subscribe to. This ensures that you are always working with the right edition.

e-nav is our online service that gives you and your colleagues access to the standards you subscribe to 24 hours a day. With e-nav, the same standards can be used by several people at once.

Type of delivery

You choose how you want your standards delivered. We can supply them both on paper and as PDF files.

Other products

We have books that facilitate standards compliance. They make it easier to understand how compliance works and how this benefits you in your operation. We produce many publications of our own, and also act as retailers. This means that we have more than 500 unique titles for you to choose from. We also have technical reports, specifications and workshop agreements.

Matrices, listed at sis.se, provide an overview of which publications belong together.

Standardisation project

You can influence the content of future standards by taking part in one or other of SIS's 400 or so Technical Committees.

Europastandarden EN 1176-5:2008 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 1176-5:2008.

SS-EN 1176-5, utgåva 1 och 2 gäller parallellt t.o.m. 2009-05-31.

The European Standard EN 1176-5:2008 has the status of a Swedish Standard. This document contains the official English version of EN 1176-5:2008.

SS-EN 1176-5, edition 1 and 2 are valid for and run parallel to 2009-05-31.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00.

Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), tel +46 8 555 520 00.

Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

SIS Förlag AB, SE 118 80 Stockholm, Sweden. Tel: +46 8 555 523 10. Fax: +46 8 555 523 11.

E-mail: sis.sales@sis.se Internet: www.sis.se

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1176-5

May 2008

ICS 97.200.40

Supersedes EN 1176-5:1998

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 25 April 2008.

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 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 Management Centre has the same status as the official versions.

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



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents	Page
Foreword.....	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Safety requirements	8
4.1 General.....	8
4.2 Free height of fall and impact area	9
4.3 Free space/falling space	9
4.4 User stations	11
4.5 Axis	11
4.6 Speed of rotation	11
4.7 Grip handles	11
4.8 Load capacity and stability	11
5 Type specific requirements	11
5.1 Carousel type A (rotating chairs).....	11
5.2 Carousel type B (classic carousel)	12
5.3 Carousel type C (spinning mushrooms, hanging glides).....	15
5.4 Carousel type D (track-driven carousels)	16
5.5 Carousel type E (giant revolving disks)	16
6 Test reports	18
7 Marking	18
Annex A (normative) Method for the determination of attachment strength of supporting structure components to the rotating shaft.....	19
A.1 Principle.....	19
A.2 Procedure	19
Annex B (informative) A–deviations	20

Foreword

This document (EN 1176-5:2008) 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 November 2008, and conflicting national standards shall be withdrawn at the latest by May 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1176-5:1998.

This European Standard consists of a number of parts as follows:

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

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

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

EN 1176- 4, *Playground equipment and surfacing — Part 4: Additional specific safety requirements and test methods for cableways*

EN 1176- 5, *Playground equipment and surfacing — Part 5: Additional specific safety requirements and test methods for carousels*

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

EN 1176- 7, *Playground equipment and surfacing — Part 7: Guidance on installation, inspection, maintenance and operation*

EN 1176-10, *Playground equipment and surfacing — Part 10: Additional specific safety requirements and test methods for fully enclosed play equipment*

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

For inflatable play equipment see:

EN 14960, *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 requirement for speed of rotation is now limited to those carousels that use mechanical advantage to raise speed, whereas in the previous edition the requirement was generally applicable.

SS-EN 1176-5:2008 (E)

- b) The free space/falling space for type C carousels has been increased and requirements for falling height introduced.
- c) Requirements have been introduced for shock absorbing properties for seats of type A carousels.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This document is applicable to carousels that are used as playground equipment for children, as defined in 3.1 to 3.6.

This document specifies additional safety requirements for carousels of diameter greater than 500 mm intended for permanent installation for use by children.

This document is not applicable to equipment where the main play function is not rotating.

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

2 Normative references

The following referenced documents are indispensable for the application 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 1176-1:2008, *Playground equipment and surfacing — Part 1: General safety requirements and test methods*

EN 1176-2:2008, *Playground equipment and surfacing — Part 2: Additional specific safety requirements and test methods for swings*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1176-1:2008 and the following apply.

3.1

carousel

playground equipment intended for more than one user, that rotates around a central vertical axis without oscillation

3.2

carousel type A

rotating chairs

carousels without a closed rotating platform whose user stations are defined by seats or handholds that are rigidly connected with the central shaft via the supporting structure (see Figure 1)

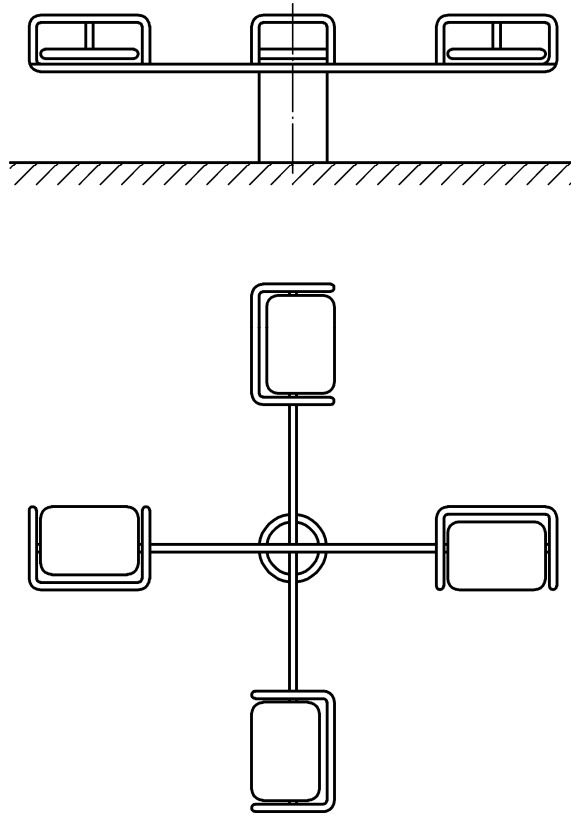


Figure 1 — Example of carousel type A (rotating chair)

3.3 carousel type B
classic carousel

carousels with a closed rotating platform whose user stations are defined by the upper side of the platform itself and/or by additional seats or handholds that are rigidly fixed on the platform and/or the central shaft (see Figure 2)

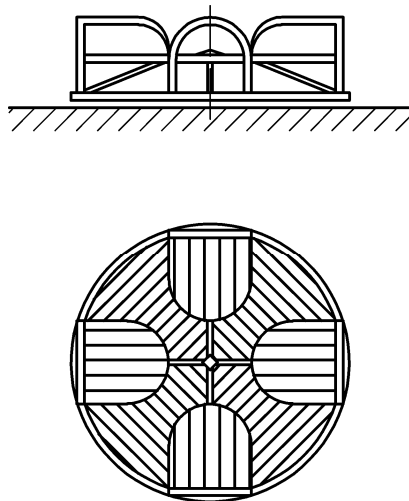


Figure 2 — Example of carousel type B (classic carousel)

3.4

carousel type C

spinning mushrooms, hanging glides

carousels whose user stations are rigidly (spinning mushrooms) or flexibly (hanging glides) fixed to the under side of the supporting structure (see Figure 3)

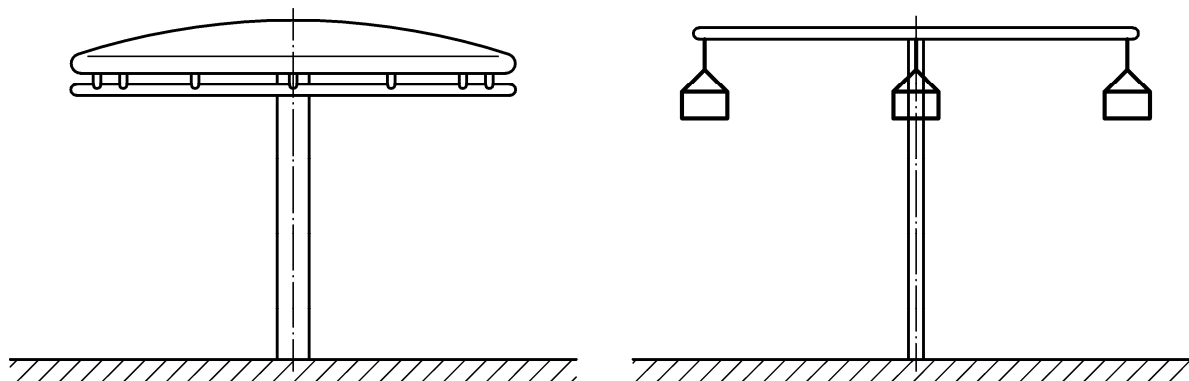


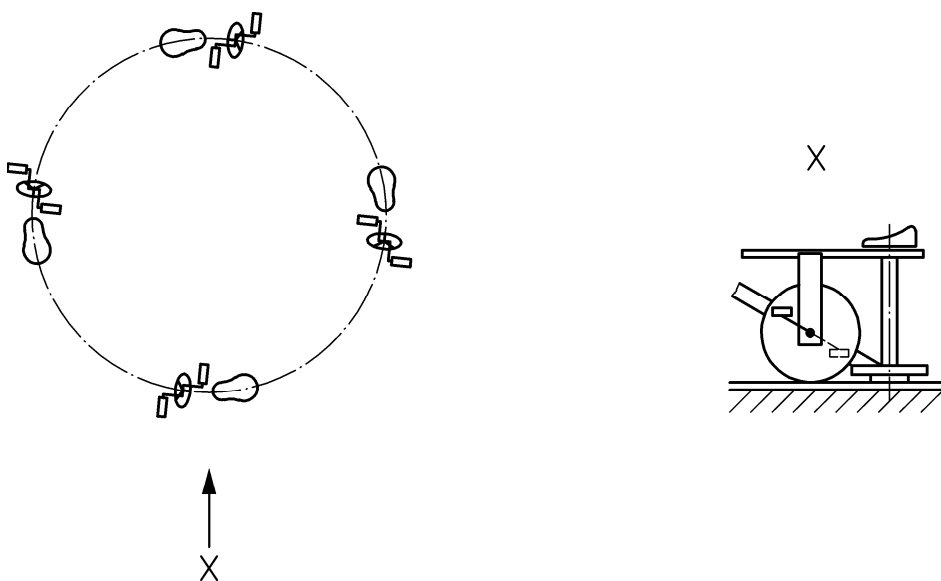
Figure 3 — Example of carousel type C (spinning mushrooms, hanging glides)

3.5

carousel type D

track-driven carousel

carousel structures that are set in rotation around flat or undulating circular tracks by muscle power (from the hands or feet) transmitted to drive wheels (see Figure 4)



Key

view on X (enlarged)

Figure 4 — Example of carousel type D (track-driven carousel)