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**oSIST prEN 16230-2:2014**  
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**Gokarti za prosti čas - 2. del: Varnostne zahteve za objekte za gokart**

Leisure karts - Part 2: Safety requirements for karting facilities

Freizeitkarts - Teil 2: Sicherheitstechnische Anforderungen für Kartbahnen

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## Leisure karts - Part 2: Safety requirements for karting facilities

Freizeitkarts - Teil 2: Sicherheitstechnische Anforderungen  
für Kartbahnen

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prEN 16230-2:2014 (E)

## Foreword

This document (prEN 16230-2:2014) has been prepared by Technical Committee CEN/TC 354 “Ride-on, motorized vehicles intended for the transportation of persons and goods and not intended for use on public roads - Safety requirements”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

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## Introduction

Karting facilities come in a wide range of types. Such a wide range implies a gradation of the safety requirements, considering the specific level of hazards.

On the basis of regular risk assessment, the operators of karting facilities should take reasonable measures to ensure the safety of users taking into consideration the risks as well as the restrictions imposed by technical and commercial factors.

Karting facilities operators should also consider EN 16230-1, when carrying out risk assessments.

This European Standard includes requirements, guidance and notes. While compliance with requirements is mandatory, guidance, which can be used in accordance with a risk assessment and notes give additional information and/or explanations.

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**prEN 16230-2:2014 (E)****1 Scope**

This European Standard is applicable for karting facilities, according to 3.1, relating to karts that are not intended to be used on public roads.

This European Standard applies to:

- operation of leisure karts only;
- operation of karts propelled by a combustion engine, including LPG combustion engines;
- operation of karts used on indoor and outdoor tracks, permanent or temporary;
- operation of karts used on supervised tracks designed for leisure karting, with a permanent hard surface (such as asphalt, concrete, timber and steel);
- this part 2 does not consider the use of karts on ice or snow.

This European Standard does not apply to:

- operation of karts used for competition organised by and under the responsibility of Commission international of Karting (CIK) Federation International of Automobile (FIA) and/or ASN (a national automobile club or other national body recognised by the FIA as sole holder of sporting power in a country), ensuring through the granting of licenses by an ASN or one of its affiliated members as defined in the International Sporting code, compliance with the safety, sporting, disciplinary and technical rules of the CIK-FIA and/ or ASN;
- operation of karts designed exclusively for competition and toys;
- operation of cross country karts;
- operation of karts with two or more seats;
- operation of karts used on tracks not mentioned above (such as mud, earth);
- operation of karts used in amusement parks.

The requirements related to the hazards of electrical propulsion are not covered in this European Standard.

This European Standard specifies appropriate measures to eliminate or reduce the risks arising from significant hazards, hazardous situations and events (see Clause 6) during operation and maintenance of the karts, when carried out as intended by the manufacturer.

This document is the part 2 covering track design and operation referred to in the scope of part 1.

This document serves to provide guidance for circuit operators regarding the safe operation of karting facilities. It does not remove the participants' responsibility for their own safety, nor does it remove the overriding principle that motorsport, due to its very nature can be dangerous.

**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 1838, *Lighting applications - Emergency lighting*



EN 12193, *Light and lighting - Sports lighting*

EN 16230-1, *Leisure karts – Part 1: Safety requirements and test methods for karts*

### 3 Terms and definitions

For the purposes of this document terms and definitions given in EN 16230-1 and the following apply.

#### 3.1

##### **karting facilities**

areas including kart track, paddock, pits, briefing area, garage/workshop and other facilities directly related to the karting on the track

#### 3.2

##### **karting facilities operator**

designated person/organization responsible for the operation of the karting facilities in terms of health and safety

#### 3.3

##### **mechanical/technical staff**

trained and competent persons responsible for the maintenance of the technical equipment

Note 1 to entry E. g. Mechanics

#### 3.4

##### **kart track operations staff**

trained and competent persons responsible for the safe supervision of participants on the track and pits

Note 1 to entry E. g. race directors and marshals [16230-2:2017](https://standards.iteh.ai/catalog/standards/sist/611cdb33-3f34-438e-94a7-d9172c4fed9/sist-en-16230-2-2017)

#### 3.5

##### **pits**

area with restricted access to and from track where karts are parked and drivers join and leave karts

#### 3.6

##### **barrier**

means by which track is defined offering impact absorption and/or kart deflection so as to minimise the risk to drivers

#### 3.7

##### **kart track**

defined area within which kart can be driven up to the deemed maximum speed of the track concerned

#### 3.8

##### **paddock**

area with access to pits or controlled access to track where karts are stored and/or maintained and/or serviced may also contain other ancillary facilities

#### 3.9

##### **garage/workshop**

area with access to pits or controlled access to track where karts are stored and/or maintained and/or serviced

#### 3.10

##### **briefing area**

area or room used to brief participants before driving a kart

**prEN 16230-2:2014 (E)****3.11****public areas**

all other areas of the karting facilities, where the public have unrestricted access

**3.12****run off area**

area separating the edge of the track from the final stop barrier

**3.13****control measures****3.13.1****Physical kart control measures**

any physical measure taken to restrict kart movement not dependent on driver action

Note 1 to entry: Such measures include but are not confined to barriers, tyre walls, chicanes, gravel traps etc.

**3.13.2****Final physical kart control measures**

physical measures taken to ensure karts remain within defined areas not dependent on driver action

**3.13.3****Interim physical kart control measures**

physical measures taken to impede kart progress so as to prevent contact with or reduce the impact speed on contact with final physical kart control measures

**3.14****marshal**

person trained and appointed to deal with incident or procedures that can reasonably be expected to occur within the confines of the track and pits

**3.15****short-cut**

feature of a track enabling faster recovery and removal of karts, comprising access from one part of the track to another and designed to prevent straight-line use with a visually continuous barrier

**3.16****outdoor track**

a karting facility where the kart track is open to the elements

**3.17****indoor track**

a karting facility in which the kart track is covered and enclosed

**4 Classification****4.1 Slow track**

Track designed and operated to minimise risk of driving karts up to 70 km/h.

**4.2 Fast track**

Track designed and operated to minimise risk of driving karts up to 110 km/h.

## 5 Safety requirements

### 5.1 General

The karting facilities operator shall ensure a specific risk assessment shall be performed for every karting facility before its first opening to the user and shall be maintained and reviewed in any case every time there is a major technical change, an accident or a series of incidents. An example of a risk assessment process is provided in Annex A.

Kart safety is dependent on five critical factors:

- Kart manufactures,
- kart selection,
- operation,
- driver briefing and information and
- driver responsibility.

The karting operation shall be designed and managed such as to minimise risk to the participants. Such risk cannot be completely eliminated from the kart sporting environment.

The track shall have appropriate barriers minimising the probability of and/or risk arising from a participant driving against walls, pillars or other obstacles. The operation shall comprise the following areas:

- Pits;
- Track;
- paddocks and/or garages

### 5.2 Pits

#### 5.2.1 Requirements

All drivers shall access the pits from the public areas solely on the instruction of staff and join a kart promptly. On return to the pits drivers shall leave the karts on staff instruction and leave the pits promptly.

The karts shall enter the track from the pits and shall be able to return to the pits again after the end of the ride. The pits shall provide sufficient free space for the number of karts in use.

#### 5.2.2 Access pits to track

The karts shall enter the track in the general direction of traffic flow. There shall be procedures on the basis of the risk assessment to minimise the risk arising.

#### 5.2.3 Access track to pits

The entrance to the pits shall be located at a position where unhindered exit from the track is possible.

Drivers should not exceed walking speed to ensure the safety of the marshals and other drivers in the pits. The design of the pits entrance can assist in these objectives by the provision of speed calming measures, e. g.:

- construction of a chicane within the pit lane to avoid straight line access

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- stop-box;
- electronic measures;
- pit entrance gate.

The entrance area shall be kept clear to permit drivers to leave the track and enter the pits at any time. Should calming measures include the use of a pit entrance gate alternative safe areas shall be available for drivers to access in an emergency.

**5.2.4 Parking area**

Procedures shall be in place to ensure that unoccupied karts cannot roll directly to the track.

**5.2.5 Pit dimensions**

The minimum dimensions of the pits shall be such as to permit the free flow of karts to and from the track and drivers to and from the karts without requiring re-arrangement of parked karts.

The assessment of necessary pits dimensions shall take into account the following:

- maximum number of karts accommodated;
- the length/width of the used karts;
- the number of possible parallel formation rows;
- adequate driver access; and
- adequate marshal work space.

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