
**Inflatable play equipment —
Part 3:
Additional safety requirements and
test methods for snappies**

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ISO 20187-3:2022

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by the European Committee for Standardization (CEN), Technical Committee CEN/TC 136, *Sports, playground and other recreational equipment* (as EN 14960-3:2020) and drafted in accordance with its editorial rules. It was assigned to Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment* and adopted, without modification other than those given below, under the "fast-track procedure":

— references to EN documents were replaced with their equivalent ISO standards.

This first edition of ISO 20187-3, together with ISO 20187-1 and ISO 20187-2, cancels and replaces ISO 20187:2016, which has been technically revised.

The main changes are as follows:

- changes with regard to inflatables sited on hard standing;
- minor editing to improve the content accuracy of the document.

A list of all parts in the ISO 20187 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Play is the means by which children discover and understand the world in which they live and is an essential element in a child's physical and mental growth.

It is important for children's rounded development that, through play, they arrive at an understanding of danger, which provides a basis for assessing safety in a variety of situations. The balance between challenge and safety is an important consideration.

The inflatable play equipment referred to in this document can provide different levels of challenge and excitement. This document aims to minimize the level of risk and the possibility of serious injury while allowing children to enjoy themselves when playing in or on inflatable equipment.

This document acknowledges the difficulties of addressing safety issues by age criteria alone because the ability to handle risk is based on the individual user's level of skill and not age. Moreover, users other than the intended age range might make use of the inflatable equipment, in which case, the provisions of this document still apply.

It is not the purpose of the requirements of this document to affect a child's need to play nor to lessen the contribution that inflatable play equipment makes either to the child's development or meaningful play from an educational point of view.

Where inflatable play equipment is combined with other items of children's playground equipment, the relevant standards applying to the other items of equipment should also be consulted.

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Inflatable play equipment —

Part 3: Additional safety requirements and test methods for snappies

1 Scope

This part of ISO 20187 is applicable to inflatable play equipment intended for use by children fourteen years and under, both individually and collectively.

This part of ISO 20187 specifies additional safety requirements for snappies for which the primary activities are climbing and sliding. It sets measures to address risks and also to minimize accidents to users for those involved in the design, manufacture and supply of inflatable play equipment. It specifies information to be supplied with the equipment. The requirements have been laid down bearing in mind the risk factor based on available data.

This part of the ISO 20187 specifies requirements to protect a child from hazards that he or she might be unable to foresee when using the equipment as intended, or in a manner that can be reasonably anticipated.

This part of the ISO 20187 is not applicable to inflatable water-borne play and leisure equipment, domestic inflatable toys, air-supported buildings, inflatables used solely for protection, inflatables used for rescue, or other types of inflatable toys where the primary activity is not bouncing or sliding.

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 1177:2018+AC:2019, *Impact attenuating playground surfacing — Methods of test for determination of impact attenuation*

ISO 20187-1:2022, *Inflatable play equipment — Part 1: Safety requirements and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 20187-1:2022 and the following apply.

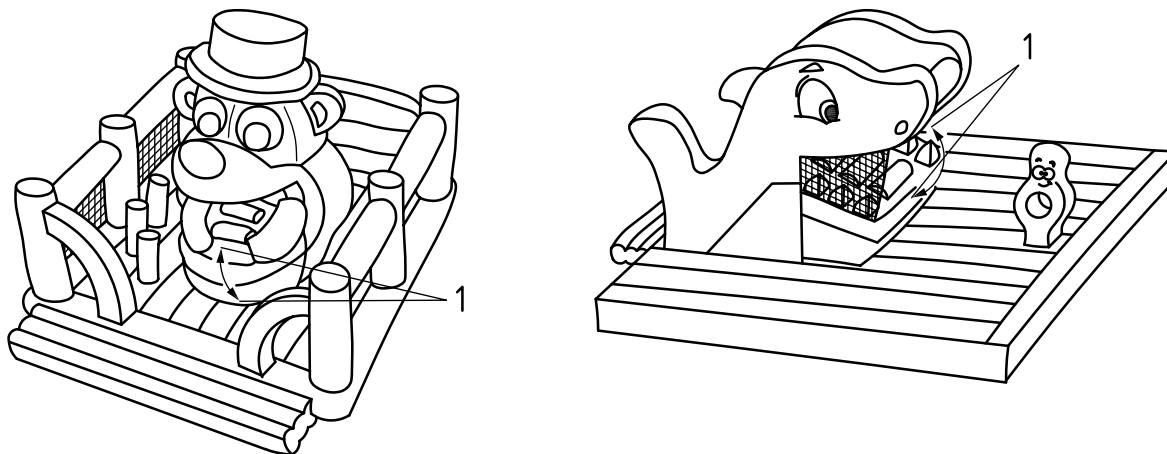
ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

Note 1 to entry In order not to confine the application of this document 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.

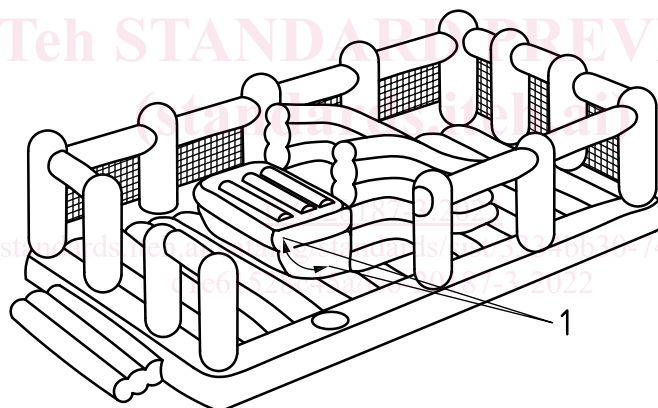
3.1 snappy
inflated play structure built into a base inflatable bed, with a hinged inflatable platform which elevates users to a higher platform from which they may exit by a slide, ramp, steps, or other methods

Note 1 to entry: Examples of snappies are shown in [Figure 1](#).



a) Roofed snappy on a walled inflatable base

b) Roofed snappy on a flat inflatable base



c) Snappy without roof on a walled inflatable base

Key

1 movement of hinged section

Figure 1 — Examples of snappy

3.2 blower
powered machines used to continuously inflate the base inflatable structure and to intermittently inflate the hinged platform of the snappy

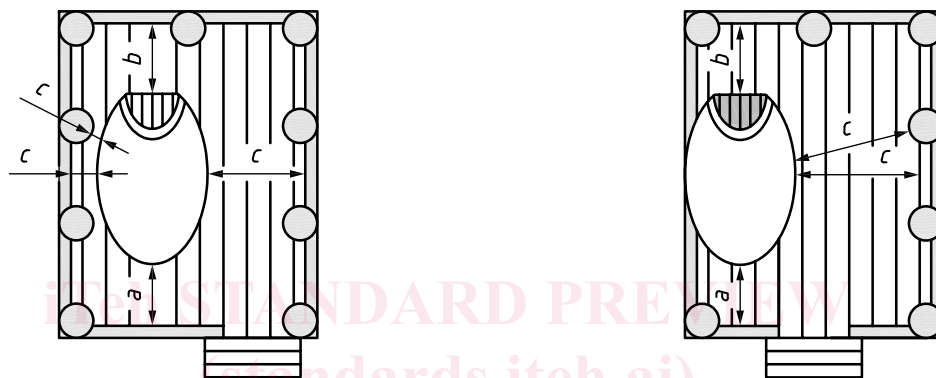
4 Free height of fall

The free height of fall from the hinged platform to the inflated bed below shall be $\leq 3,0$ m, provided that the inflated bed has sufficient impact attenuation properties according to EN 1177:2018+AC:2019.

5 Positioning of snappy structures on base inflatable beds

The clear space requirement around a snappy on a walled inflatable shall be (see [Figure 2](#)):

- Entrance** - $\geq 50\%$ of the height of the highest point of the hinged platform in its fully raised position, measured from the surface of the base inflatable bed, with dimension $a \geq 1,2$ m;
- Exit** - when exiting the snappy structure involves forced movement, e.g. sliding, $\geq 50\%$ of the height of the top platform of the slide, measured from the surface of the base inflatable bed $+0,5$ m;
- Sides** - when one side of the snappy structure is integral with the outside wall of the base inflatable, clear space at the other side shall be sufficient to allow safe, unobstructed evacuation of the users and, in any case, $\geq 1,2$ m; when neither side is integrated with the outside wall of the base inflatable, the clear space at one side shall be $\geq 0,5$ m and at the other side sufficient to allow safe, unobstructed evacuation of the users and, in any case, $\geq 1,2$ m.



- a) snappy structure not integral with outside wall of the base inflatable b) snappy structure integral with outside wall of the base inflatable

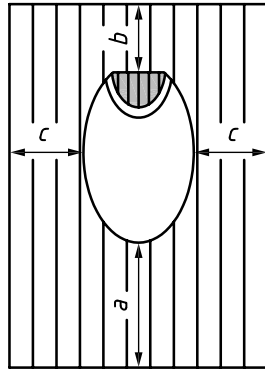
Key

- a minimum distance between the entrance of the snappy and the adjacent wall
 b minimum distance between the exit of the snappy and the adjacent wall
 c minimum distances between the sides of the snappy and the adjacent walls

Figure 2 — Minimum distances to adjacent walls

The clear space requirement around a snappy on an inflatable without walls shall be (see [Figure 3](#)):

- Entrance** - $\geq 50\%$ of the height of the highest point of the hinged platform, measured from the surface of the base inflatable bed $+1,5$ m;
- Exit** - when exiting the snappy structure involves forced movement, e.g. sliding, $\geq 50\%$ of the height of the top platform of the slide, measured from the surface of the base inflatable bed $+1,0$ m;
- Sides** - $\geq 2,0$ m.



Key

- a minimum distance between the entrance of the snappy and the outer edge of the bed
- b minimum distance between the exit of the snappy and the outer edge of the bed
- c minimum distances between the sides of the snappy and the outer edges of the bed

Figure 3 — Minimum distances to the adjacent edge of the bed

All spaces in [Figure 2](#) and [Figure 3](#) shall be clear to the height of the tallest user allowed to use the inflatable.

6 Containment iTeh STANDARD PREVIEW (standards.iteh.ai)

6.1 General

The snappy structure shall not provide a platform which can serve as a step-up towards the top of an exterior wall of the base inflatable.

6.2 Snappy without roof

The hinged platform shall have containing walls of at least the user height on both sides when, in the raised position, any part of it is >1,2 m high, measured from the surface of the base inflatable bed.

7 Entrapment

7.1 General

Entrapment caused by the shearing motion of the hinged platform shall be avoided.

7.2 Snappy with a roof

7.2.1 Internal aperture

The aperture formed inside the snappy structure accessed from the hinged platform shall be in accordance with ISO 20187-1:2022, 4.2.5.5 for body entrapment.

7.2.2 Netting

The mesh size of netting used to contain the user on the hinged platform shall be small enough to prevent the 8 mm finger rod (see ISO 20187-1:2022, 4.1.3) from passing through.