



BSI Standards Publication

Safety of toys

Part 4: Activity toys for domestic use

National foreword

This British Standard is the UK implementation of ISO 8124-4:2025. It supersedes BS ISO 8124-4:2014+A2:2019, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CW/15, Safety of toys.

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

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**International
Standard**

ISO 8124-4

**Safety of toys —
Part 4:
Activity toys for domestic use**

*Sécurité des jouets —
Partie 4: Jouets d'activité à usage familiale*

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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 document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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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 Technical Committee ISO/TC 181, *Safety of toys*.

This third edition cancels and replaces the second edition (ISO 8124-4:2014), which has been technically revised. It also incorporates the Amendment(s) ISO 8124-4:2014/Amd. 1:2017 and ISO 8124-4:2014/Amd. 2:2019.

The main changes are as follows:

- the Scope has been modified to exclude pools over 400 mm deep;
- the definition of "activity toy" has been modified to reflect the inclusion of paddling pools;
- the definition of "barrier" has been modified to include the concepts of prevention of passing through or beneath the device;
- the definition of "declined plane" has been added to support requirements for slides;
- definitions for "hand-gripping component" and "hand-grasping component" have been added;
- a definition for "resilient behaviour" has been added;
- a modification has been made requiring conformity with relevant requirements from ISO 8124-1 after testing;
- requirements have been added for materials to be resistant to degradation;
- general requirements for hardware have been added;
- requirements for the diameter of ropes and other means of suspension, including an option for free hanging ropes, have been added;
- a general requirement concerning crush and shear points has been added, and such requirements have been removed from specific component clauses;
- a general requirement concerning hand-gripping and hand-grasping components has been added;

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- the minimum height of barrier for platforms from 1 000 mm to 1 830 mm above the ground has been changed to align with ASTM F1148;^[2]
- references to handrails have been removed in requirements for barriers;
- requirements for handrails for rung ladders, step ladders and stairways have been added;
- head and neck entrapment requirements have been modified to align with EN 71-8;^[1]
- finger entrapment requirements have been modified to align with EN 71-8;^[1]
- the toggle test has been modified to align with EN 71-8;^[1]
- certain declined planes have been removed from slide requirements;
- attachment slides have been removed from stability requirements;
- a lower mass test has been added for slides that are not suitable for children 36 months or over;
- the mass tolerance for stability test load has been modified from 2 kg to 0,5 kg;
- a requirement for a minimum radius on the finishing end of retaining sides on the run-out section of slides has been added;
- the width requirement for the starting section of slides has been modified to be at least the same as the width of the sliding section;
- a requirement for handrails on the starting section of slides has been added;
- a test method for inclination of the sliding section of slides has been added from EN 71-8;^[1]
- a requirement and test method from EN 71-8^[1] for the angle along the sliding section and run-out section on slides have been added;
- a requirement concerning attachment of swing elements to upper body components from ASTM F1148^[2] has been added;
- the testing for stability of swings has been modified to be dependant only on the height of the crossbeam;
- a calculation of number of users in alignment with EN 71-8^[1] has been added for swings and other toys with crossbeams;
- requirements for the geometry and design of swing elements have been added to align with EN 71-8;^[1]
- the testing for impact from swing elements has been modified to align with EN 71-8;^[1]
- the distance from the ground to upper rotation point is now used when determining the minimum distance between suspension points and the minimum clearance between swing elements and the ground;
- a requirement for suspension couplings to be prefixed to the means of suspension has been added;
- requirements for the stability of see-saws have been added;
- requirements concerning pinching and crushing from see-saws have been added;
- requirements for hand supports on see-saws have been added;
- a requirement for anchor points at all external corners of inflatable activity toys has been added;
- requirements concerning operating instructions have been added;
- the warning requirements for paddling pools have been modified to remove symbol options.

A list of all parts in the ISO 8124 series can be found on the ISO website.

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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

This document is largely based upon existing standards in the European Union (EN 71-8^[1]) and in the United States (ASTM F1148,^[2] ASTM F2729^[3] and ASTM F2666^[4]). However, it should not be construed that a toy manufactured in conformity with this document will be in full compliance with relevant national toy safety requirements in the market where the product is intended to be distributed. The user of this document is therefore advised to be aware of relevant national requirements.

Conformance to the requirements of this document will minimize potential hazards associated with toys resulting from their use in their intended play modes (normal use) as well as unintended play modes (reasonably foreseeable abuse).

This document does not, nor is it intended to, eliminate parental responsibility in the appropriate selection of toys. In addition, this document does not eliminate the need for parental supervision in situations where children of various ages potentially have access to the same toy(s).

NOTE See [Annex A](#) for information on the rationale behind the preparation of this document.

Safety of toys —

Part 4: Activity toys for domestic use

1 Scope

This document specifies requirements and test methods for activity toys for indoor and outdoor domestic family use intended for children under 14 years to play on or in.

Products covered by this document include swings, slides, see-saws, carousels, rocking toys, climbing frames, toddler swing seats and other products often intended to bear the mass of one or more children.

Products not included within the scope of this document are:

- a) fitness and sporting equipment unless attached to the activity toy;
- b) equipment intended for use in schools, daycare centres, kindergartens, public playgrounds, restaurants, shopping centres and similar public places;
- c) juvenile care products such as, but not limited to, infant swings, playpens/enclosures, beds or furniture including picnic tables, cradle rockers and products specifically designed for therapeutic use;
- d) pools with maximum depth of water over 400 mm measured, between the overflow level and the deepest point within the pool.

Inflatable activity toys are included in the scope of this document. However, a powered blower used to continuously inflate the toy is not covered by this document. Such equipment is considered to be a household appliance and is covered by requirements given in IEC 60335-2-80.^[5]

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.

ISO 7010:2019, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 8124-1:2022, *Safety of toys — Part 1: Safety aspects related to mechanical and physical properties*

ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8124-1 and the following apply.

ISO and IEC maintain terminology 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/>

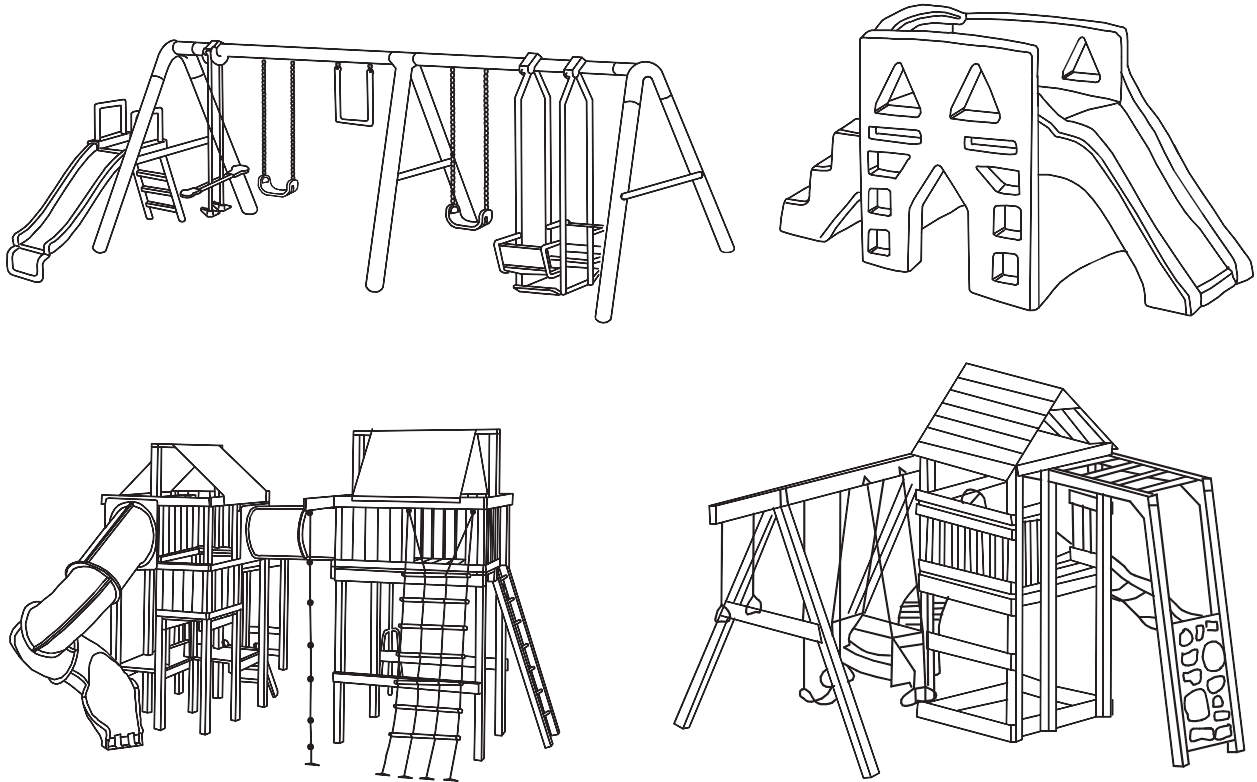
3.1

activity toy

toy intended for domestic use, the support structure of which remains stationary while the activity is taking place and which is intended for the performance by a child of any of the following activities: climbing, swinging, sliding, rocking, spinning, jumping, bouncing, crawling, creeping and paddling, or any combination thereof

EXAMPLE Swings, slides, carousels, climbing frames, rigid playhouses and paddling pools (see [Figure 1](#)).

Note 1 to entry: Aquatic toys and non-inflatable trampolines are not considered as activity toys in the context of this document.



NOTE Images are not to scale.

Figure 1 — Examples of activity toys

3.2

anchor

device used to fix the toy to the standing surface

3.3

attachment slide

slide for which access to the starting section is possible only by passing via other equipment or parts of other equipment

3.4

barrier

enclosing device around an elevated surface intended to prevent children from falling and that prevents both inadvertent and deliberate attempts to pass through or beneath the device

3.5

crossbeam

bar or beam which forms a main load-bearing part of certain activity toys

3.6

declined plane

surface, which can be used for gliding downward in a sitting or lying position

3.7

entrapment

condition in which a body, part of a body or clothing becomes caught and impedes withdrawal

3.8

forced movement

movement where the direction and the extent of the child's movement is determined by the operation of the equipment, for example swinging, sliding, rocking or revolving

3.9

free height of fall

greatest vertical distance from the intended body support, for example from the seat of a swing to the impact area below

3.10

free space

space in, on or around the activity toy that can be occupied by a user undergoing a forced movement by the equipment, for example swinging, sliding, rocking or revolving

Note 1 to entry: The definition of free space does not include the three-dimensional area in which a falling movement takes place.

3.11

handrail

rail intended to assist the users in balancing or steadying themselves

3.12

hand-grasping component

component intended to be grasped by the hand to steady a user

EXAMPLE Handrail.

3.13

hand-gripping component

component intended to be gripped by the hand to support the full body weight

EXAMPLE A rung of a horizontal ladder or trapeze bar.

3.14

impact area

area of a swing element that comes into contact with the test mass during an impact test

Note 1 to entry: The impact test is specified in [6.5](#).

3.15

infant swing

stationary unit with a frame and a powered mechanism enabling an infant to swing in a seated position

Note 1 to entry: An infant swing is intended for use with infants from birth until the child is able to sit upright unassisted.

3.16

inflatable activity toy

activity toy, with a structure made of flexible material, inflated by air, intended for children to play on or in

EXAMPLE Bouncy castle, inflatable slides (see [Figure 2](#)).

Note 1 to entry: There are two types of inflatable activity toys: one is kept inflated by a closure (valve) once inflated; the other is kept inflated only by the continuous input of air from a blower.

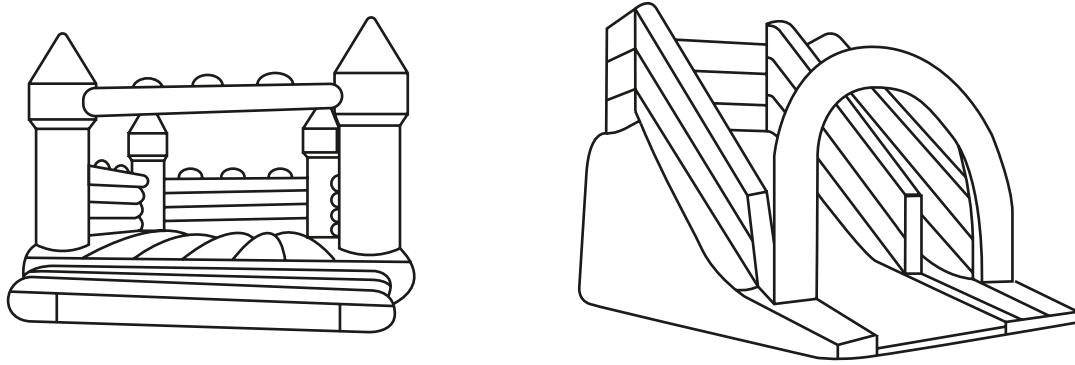


Figure 2 — Examples of inflatable activity toys

3.17

paddling pool

pool with a maximum depth of water of 400 mm measured between the overflow level and the deepest point within the pool

Note 1 to entry: A permanently installed pool is not considered to be a toy.

Note 2 to entry: Examples of typical paddling pools can be found in Guidance Document No. 8 on the application of the European directive on the safety of toys (2009/48/EC).^[6]

3.18

platform

any elevated substantially horizontal surface intended to be used by a child as a place for play or as a transition between components

Note 1 to entry: Slide starting sections measuring less than 129 000 mm² are not considered platforms.

3.19

resilient behaviour

capability of regaining an original shape or of absorbing shock after bending, stretching, compression, impact or other actions

EXAMPLE Representative examples of materials with a resilient behaviour include thermoplastic, textile, ethylene vinyl acetate (EVA) or flexible rubber).

3.20

slide

structure with inclined surface(s) on which the user slides in a defined track

Note 1 to entry: Inclined planes designed primarily for other purposes, such as roofs and ramps, do not constitute slides.

3.21

suspension connector

device that forms the direct contact between a crossbeam and the swing device

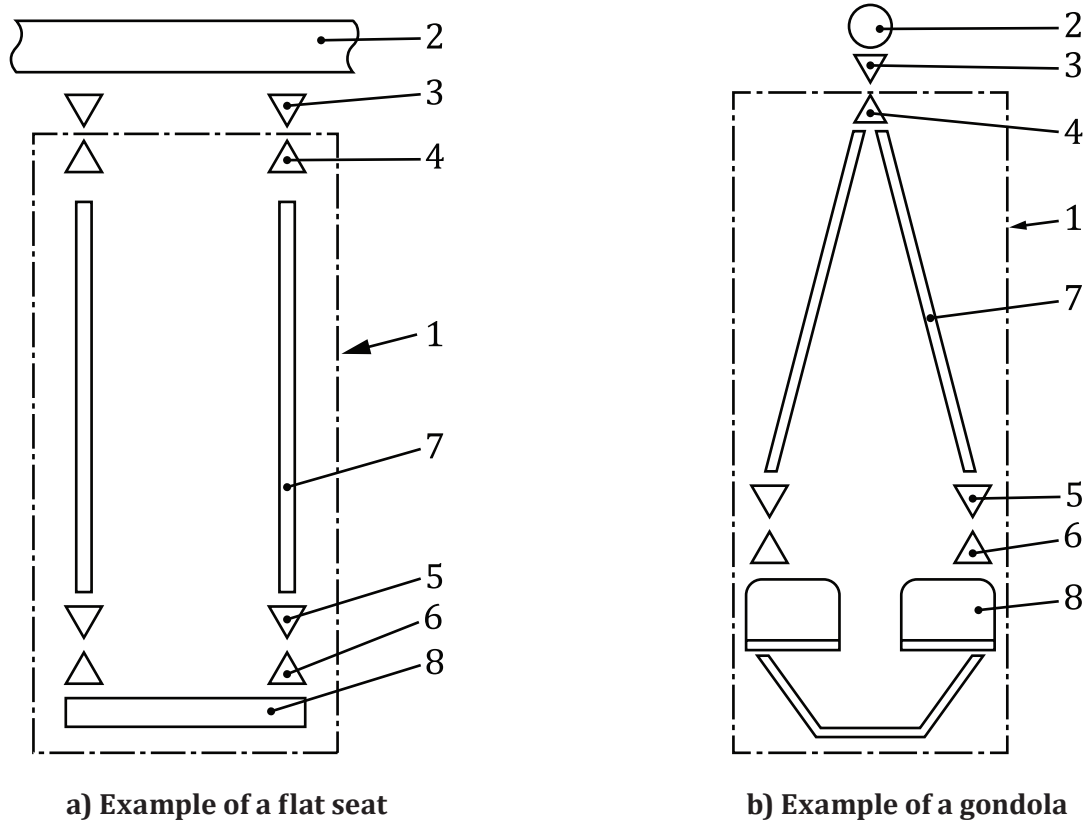
Note 1 to entry: See [Figure 3](#).

3.22

swing

structure, incorporating suspension connectors and a swing device with swing element, suspension coupling and a means of suspension and often attached to or incorporating a crossbeam

Note 1 to entry: See [Figure 3](#).



Key

- 1 swing device
- 2 crossbeam/support member
- 3 upper suspension connector
- 4 upper suspension coupling
- 5 lower suspension connector
- 6 lower suspension coupling
- 7 means of suspension
- 8 swing element (e.g. seat, rings, bar, gondola)

NOTE A swing device can include one or more footrests. Footrests are considered as parts of the swing elements.

Figure 3 — Diagrammatic representation of examples of swings

3.23

toddler swing

fully enclosed single occupancy swing intended for young children who can sit upright unaided

Note 1 to entry: A seat is considered fully enclosed when a containment system is employed to support the child on all sides and in between the legs (see [Figure 4](#)).

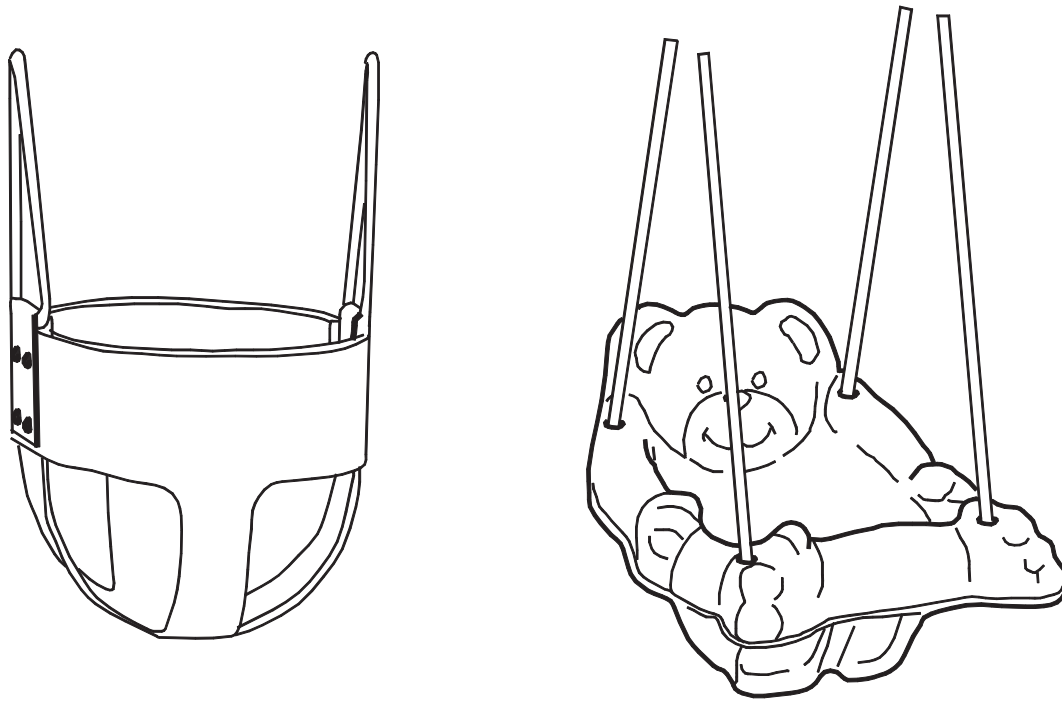


Figure 4 — Examples of toddler swing seats

4 Requirements

4.1 General (see [Clause A.4](#))

4.1.1 Materials

Metals subject to structural degradation such as by rust or corrosion shall be painted, galvanized or otherwise treated.

Woods shall be naturally resistant to rot and insect infestation or treated to avoid such deterioration. Creosote, pentachlorophenol, tributyl tin oxide, and surface coatings that contain pesticides shall not be used for activity toys.

Plastics and other materials that experience ultraviolet (UV) degradation shall be stabilized against ultraviolet light.

4.1.2 Hardware

Bolts shall be sized so that after final assembly, their ends shall either:

- a) meet the requirements of [4.1.6](#) when the nuts are tightened to a torque of between 2,3 Nm and 2,8 Nm: or
- b) be recessed such that the end of the bolt lies at or below a surrounding surface located within 25 mm of the centre line of the bolt.

Threaded ends of exposed bolts or rods that protrude from adjacent surfaces in areas of normally expected play, or that have exposed hazardous sharp edges or burrs shall be covered by smooth finish caps.

When installed in accordance with the manufacturer's instructions, caps shall not be removed when subjected to a torque of $(0,45 \pm 0,02)$ Nm when tested in accordance with ISO 8124-1:2022, 5.24.5 and a tensile force of (70 ± 2) N when tested in accordance with ISO 8124-1:2022, 5.24.6.4.

Lock washers, self-locking nuts or other locking means shall be provided for all bolts.

4.1.3 Static strength

Activity toys, other than swings and paddling pools, shall not collapse when tested in accordance with [6.3.2](#). After testing, the toy shall continue to conform to the relevant requirements of this document and ISO 8124-1.

NOTE Requirements for swings are given in [4.7.2](#). Requirements for paddling pools are given in [4.11.2](#).

4.1.4 Maximum height

See [Clause A.5](#).

There shall be no part of the activity toy designed to encourage the child to climb, sit on or stand on it, with a height of 2 500 mm or more when measured from the ground.

This does not include barriers, roofs, etc., that are not intended to be climbed, sat on or stood on.

Barriers, roofs, etc., that are not intended to be climbed on shall be designed in such a way that climbing is not encouraged.

4.1.5 Corners and edges

See [Clause A.6](#).

Exposed corners and edges shall be rounded.

Exposed corners and edges on moving parts shall have a minimum radius of 3 mm. This does not apply to swing elements with a mass of 1 000 g or less, however the corners and edges of these swing elements shall be rounded.

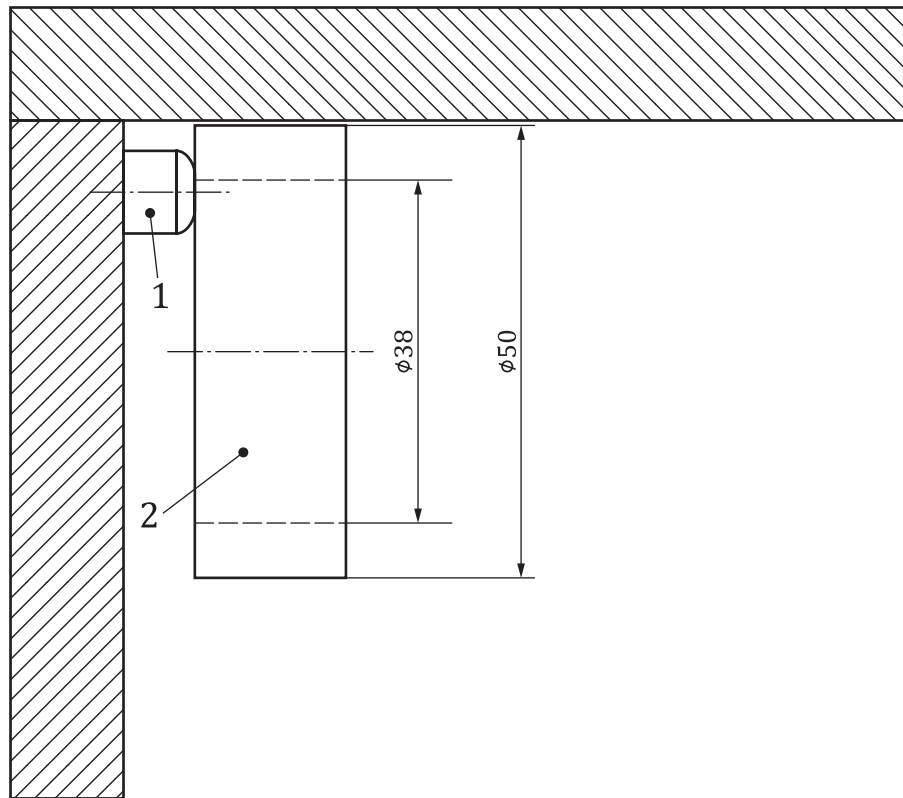
4.1.6 Protruding parts

4.1.6.1 General

Protruding parts (such as bolt ends and nuts) shall be recessed or be protected in such a way that they do not constitute an entrapment hazard or other hazard to users.

If protrusions cannot be placed within the 50 mm outside diameter test gauge specified in [6.8.1](#), they are considered to be inaccessible and are exempted from these requirements (see [Figure 5](#)).

Rope protrusions are specifically exempted from the requirements of [4.1.6](#).



Key

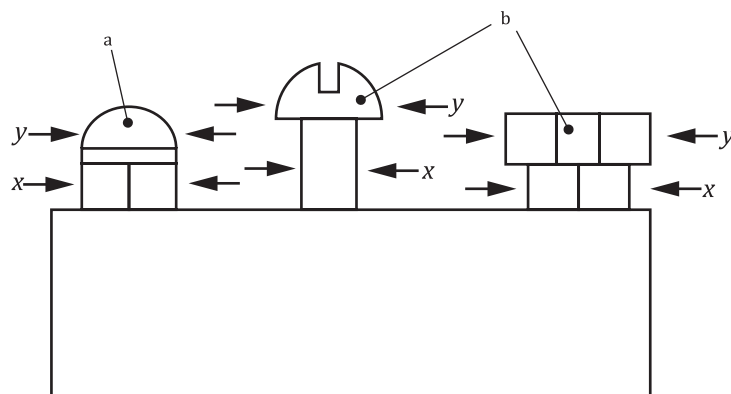
- 1 inaccessible protrusion (excluded)
- 2 test gauge (50 mm diameter)

Figure 5 — Example of excluded protrusion

4.1.6.2 All protrusions

No protrusion shall extend beyond the full depth of the test gauges when tested in accordance with [6.8.1](#).

No protrusion shall terminate in a dimension greater than that of the base dimension (see [Figure 6](#)). In the case of hardware, the base dimension shall be defined as the major dimension of the attachment nut or bolt head.



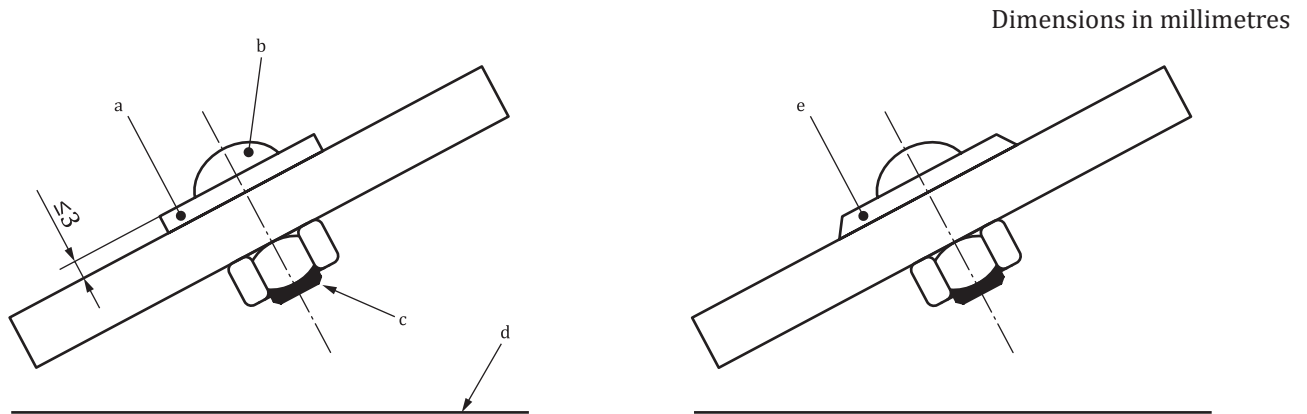
- a Pass ($y \leq x$).
- b Fail ($y > x$).

Figure 6 — Examples of protrusion configurations

4.1.6.3 Upright protrusions

Protrusions that fit within any of the gauges specified in [6.8.1](#) and that project upwards from a horizontal plane shall have no projection perpendicular or at an acute angle to the plane of the initial surface extending more than 3 mm in height (see [Figure 7](#)).

For example, the hemispherical ends of bolts are exempt from this requirement because they do not project perpendicular to the plane of the initial surface.



- a Protrusions that project perpendicular or at an acute angle to the plane of the initial surface with the axis inclined upward from the horizontal plane shall conform to the 3 mm maximum requirement.
- b Hemispherical end exempted from the 3 mm maximum requirement.
- c Protrusions with axis horizontal or below horizontal shall not extend beyond the face of the test gauges specified in [6.8.1](#).
- d Horizontal plane.
- e Protrusions that project at an obtuse angle to the plane of the initial surface are exempt from the 3 mm maximum requirement.

Figure 7 — Upright protrusion test

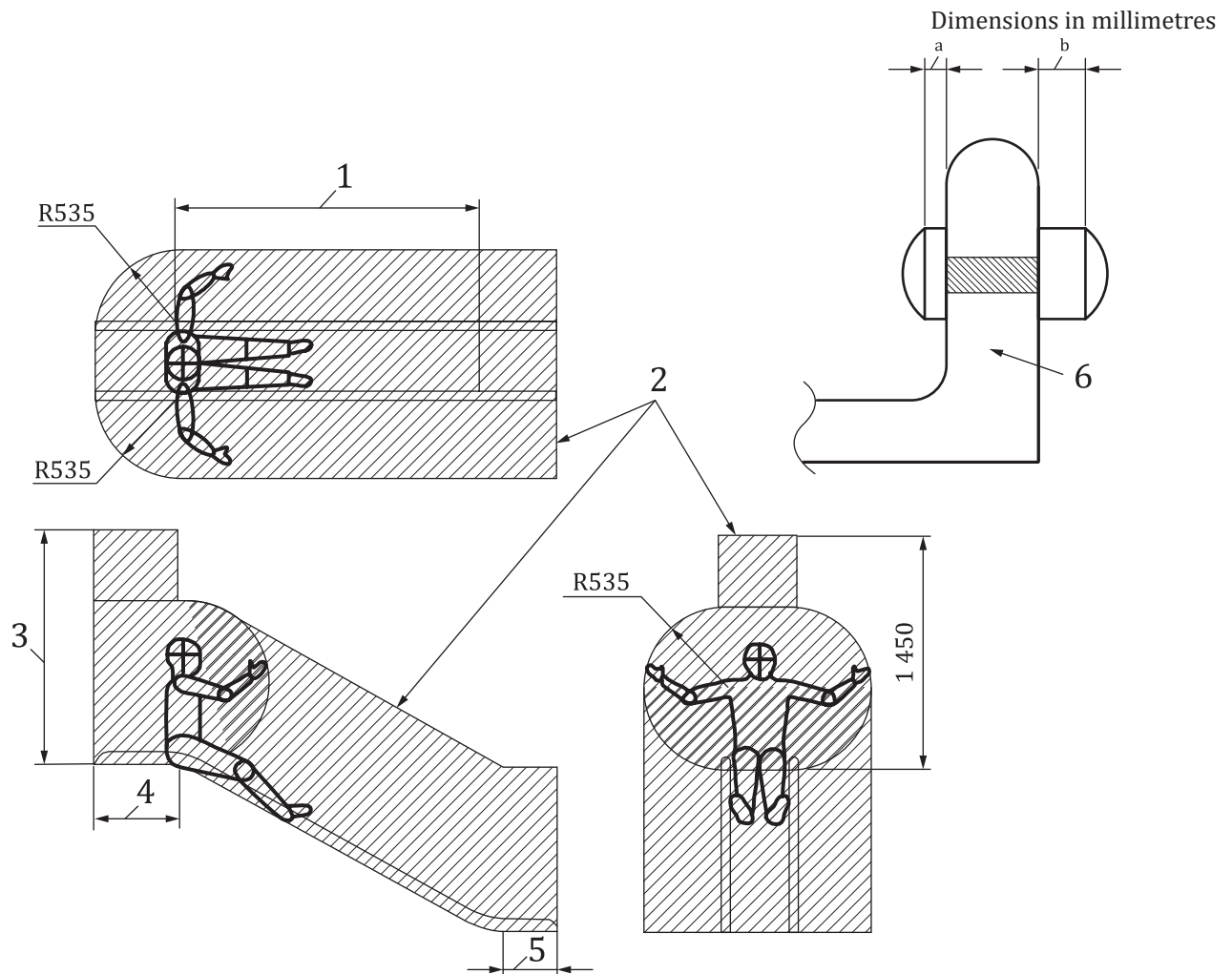
4.1.6.4 Motion rides

Protrusions on the front and rear surfaces of suspended members of swinging elements and those on the interior surface of slides shall not protrude beyond the full depth of the test gauge when tested in accordance with [6.8.2](#).

4.1.6.5 Slides

Slides, including protective barriers and their means of attachment, and transition areas pose a greater risk of entrapment than other areas of activity toys. Therefore, the following requirements apply to slides and sliding devices.

Any accessible protrusion that allows the 77 mm test gauge specified in [6.8.1.2](#) to pass over it shall have no projection perpendicular or at an acute angle to the plane of the initial surface extending more than 3 mm. The areas subject to this requirement are outlined in [Figure 8](#). The outside surface of tunnel slides that are completely enclosed are exempt from this requirement.



Key

- | | | | |
|---|--|---|------------------|
| 1 | sliding surface | 4 | starting section |
| 2 | shaded areas representing non-entrapment/protrusion zone | 5 | run-out section |
| 3 | standing height | 6 | slide side rail |
| a | Pass (3 mm or less). | | |
| b | Fail (more than 3 mm). | | |

Figure 8 — Non-entrapment/protrusion zone and protrusion examples

Slides shall be constructed in such a way as to provide a smooth continuous sliding surface with no gaps or spaces that can potentially create an entrapment hazard such as, but not limited to, the space created between sidewalls when two single slides are combined to create a double wide slide, or the point where a hood is attached to the sidewalls of a slide. Roller slides are exempt from the requirements of this subclause. See [4.6.5](#) for specific requirements for roller slides.

4.1.7 Diameter of ropes and other means of suspension

When measured according to [6.12](#), ropes and other means of suspension shall have the diameters according to [Table 1](#).

Table 1 — Diameter of ropes and other means of suspension

Description	Diameter/width of rope or other means of suspension mm
Ropes fixed at both ends	16 – 45
Ropes used in climbing nets and ladders	10 – 45
Free-hanging ropes fixed at upper end	25 – 45
Means of suspension for swing elements	≥10

4.1.8 Open tubing

All open tubing ends that are not resting on the ground or otherwise covered shall be provided with caps or plugs that have a smooth finish and are tight-fitting. The protective cap or plug shall not become detached when tested in accordance with the torque test and the tension test for protective components specified in ISO 8124-1.

4.1.9 Crush and shear points

There shall be no crush or shear points caused by junctures of two components moving relative to each other that can cause a contusion, laceration, abrasion, amputation or fracture.

Any potential crush or shear point that allows a 5 mm diameter neoprene rod to enter at one or more positions, shall allow a 12 mm diameter neoprene rod to be pulled out with a force not greater than 9 N.

The neoprene rods shall have a hardness reading between 50 and 60 as determined by a Type A durometer in accordance with ISO 868.

4.1.10 Hand support: hand-gripping/grasping components

4.1.10.1 General

The requirements in [4.1.10](#) do not apply to climbing and swinging ropes, chains and cables covered by [4.1.7](#).

4.1.10.2 Hand-gripping components

Hand-gripping components intended to be gripped by the hands to support body weight, such as rungs of horizontal ladders, climbing bars, handles, etc., shall be at least 16 mm but not exceed 40 mm in diameter or in the maximum cross-sectional dimension.

When structural requirements cannot reasonably be met by the 40 mm diameter components, it is necessary to exercise care in selecting alternate components and designs, or both, to ensure that hand-gripping potential is not seriously impaired.

4.1.10.3 Hand-grasping components

Hand-grasping components intended to be grasped by the hand to steady the user, such as a handrail, shall have a maximum diameter or width of 45 mm and a minimum graspable depth of 38 mm to allow the fingers to pass over the object to be grasped.

4.2 Barriers

(See [Clause A.7](#).)

Any platform intended for sitting or standing more than 760 mm above the ground shall be equipped with a barrier on all sides that face outward from the toy.

Openings between the surface of the platform and the lower edge of the barrier, and openings in the barrier, shall not allow the passage of probe C ([Figure 30](#)) and probe E ([Figure 32](#)), except for entrance and exit openings necessary for each play element. Probe C and probe E shall be applied according to [6.6.1](#).

Openings in barriers that give access to slides, climbing frames and ladders are allowed.

Barriers shall have minimum heights in accordance with [Table 2](#).

Table 2 — Height of barriers

Height of platform above the ground mm	Minimum height of barrier mm
> 760 – 1 000	630
> 1 000 – 1 830	685
> 1 830	840

For barriers with an uneven top design, a straightedge of (200 ± 5) mm shall be used for measuring minimum height. Place the straightedge horizontally on top of the barrier. Measure the vertical distance between the platform and the bottom of the straightedge. The distance shall in no place be less than the minimum heights specified in this document.

Barriers for platforms more than 1 000 mm above the ground shall be designed to minimize the likelihood of climbing.

NOTE Special requirements apply to slides (see [4.6.3](#) and [4.6.4](#)).

When tested in accordance with [6.4](#), no part of the barrier shall collapse in such a way that the toy does not continue to conform with the relevant requirements of this document and ISO 8124-1.

4.3 Rung ladders, stepladders and stairways

4.3.1 General

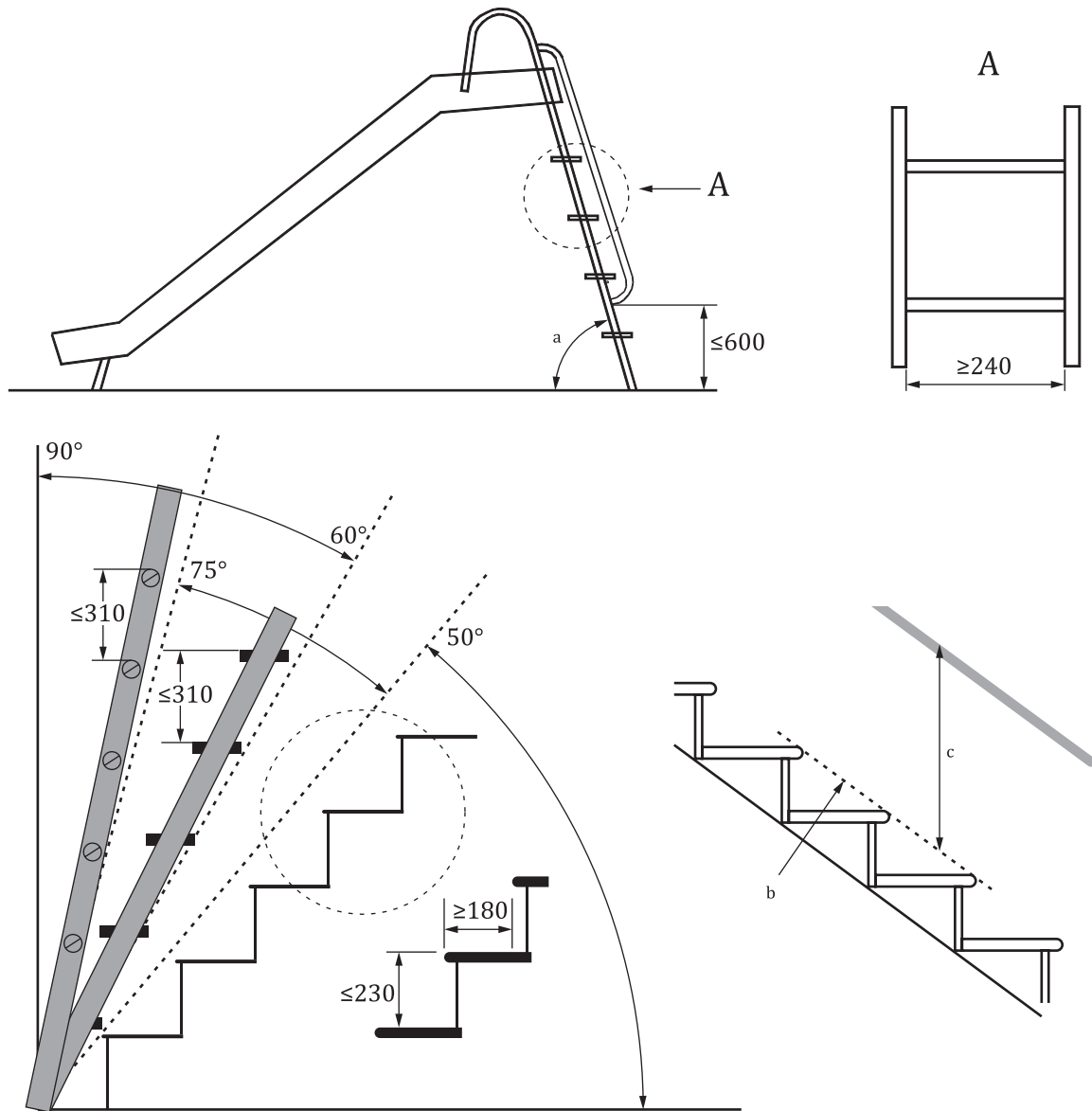
These requirements do not apply to toys with a platform height of 600 mm or less.

Rung ladders, stepladders and stairways shall conform to the following requirements.

- The rung or tread shall have a substantial horizontal stepping surface with a lateral width of 240 mm or more (see [Figure 9](#)).
- The distance between the upper surface of the rungs or treads on rung ladders or stepladders shall not be more than 310 mm and on stairways not more 230 mm when measured vertically in accordance with [Figure 9](#).
- The surface of the tread shall not be slippery.

NOTE This can be achieved by corrugation of the tread or by use of non-slip materials.

- The diameter or cross-sectional dimension of the rungs on rung ladders shall meet the requirements of [4.1.10.2](#). Care should be taken when using designs other than circular cross-sections to ensure that gripping potential is not seriously impaired.
- The depth of treads on stepladders with closed risers or stairways shall be 180 mm or more.
- The inclination of stairways shall not be more than 50°. The inclination of stepladders shall not be less than 50° and not more than 75°. The inclination of rung ladders shall not be less than 60° and not more than 90°.



- a Angle of inclination:
— for stepladders $\geq 50^\circ$ and $\leq 75^\circ$;
— for rung ladders $\geq 60^\circ$ and $\leq 90^\circ$.
- b Pitch line.
- c Handrail height, between 560 mm and 965 mm.

Figure 9 — Dimensions of ladders and stairways

4.3.2 Handrails and hand support

Stairways and stepladders with a height of 1 200 mm or more above the ground shall be provided with handrails to the top of the platform from a starting height of not more than 600 mm from the ground (see [Figure 9](#)).

The handrail height (the vertical distance between pitch line and the handrail upper surface) shall be between 560 mm and 965 mm (see [Figure 9](#)).

Open riser step ladders with a slope between 65° and 75° may be considered a climber and do not require handrails as long as a means of hand support is provided while climbing.

Climbers and rung ladders shall have hand-gripping components above the platform to facilitate the transition from the ladder to the platform.

4.4 Entrapment (see [Clause A.8](#))

4.4.1 Head and neck entrapment

Activity toys shall be constructed so that any openings do not create head and neck entrapment hazards either by head first or feet first passage.

NOTE Hazardous situations in which this type of entrapment can be encountered include the following:

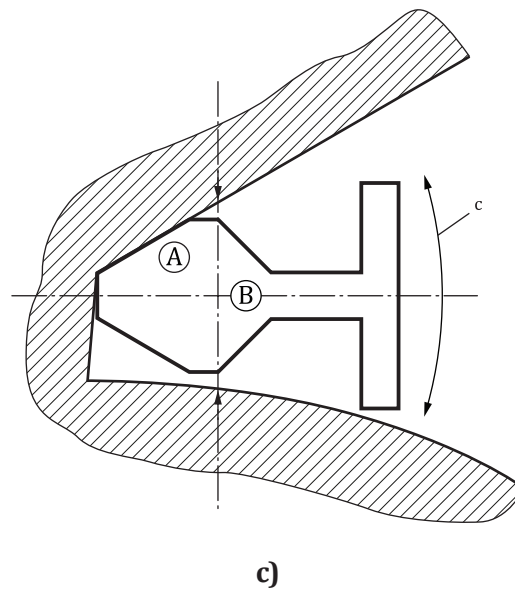
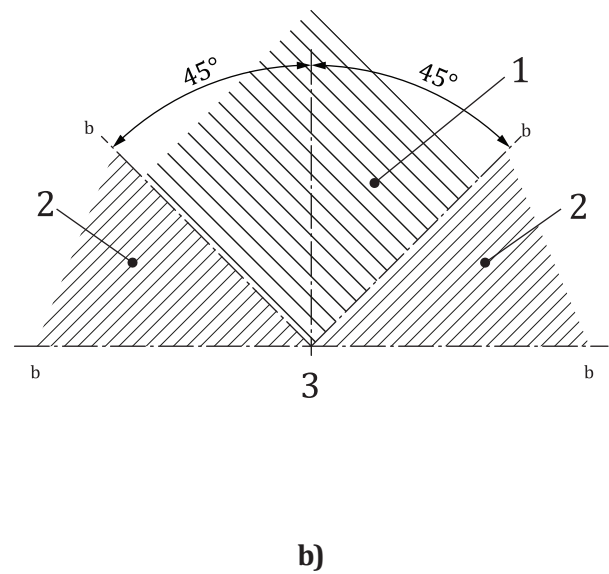
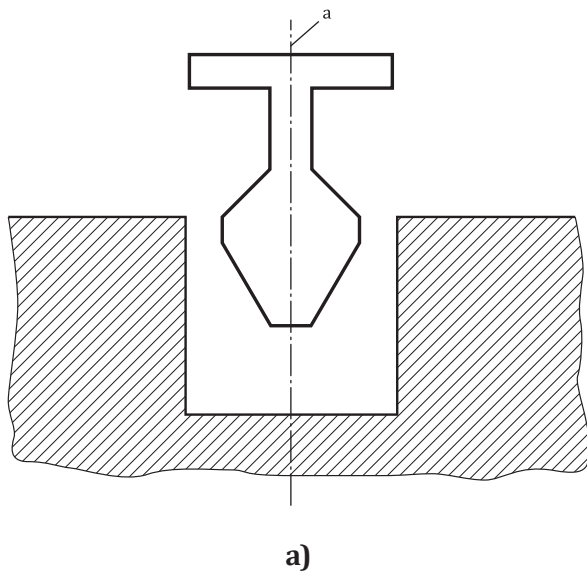
- completely bound openings through which a user can slide head first or feet first;
 - partially bound or V-shaped openings;
 - other openings, e.g. shearing and moving openings.
- a) Accessible completely-bound openings with a lower edge 600 mm or more above the ground, or above any other surface which is of such a size that it will support a child, shall be tested in accordance with [6.6.1](#).
- Probes C ([Figure 30](#)) or E ([Figure 32](#)) shall not pass through any opening unless it also allows the passage of the large head probe D ([Figure 31](#)).
- b) Accessible completely-bound openings, that allow the free passage of probe C ([Figure 30](#)) when tested according to [6.6.1](#) shall have no parts that converge in the downward direction at an angle of less than 60° if the lower edge is 600 mm or more above the ground (V-shaped opening).
- c) Partially bound and V-shaped openings with an entrance at 600 mm or more above the ground, or above any other surface which is of such a size that it will support a child, shall be constructed so that either:
- 1) the opening is not accessible as defined in [Figure 34](#), when tested in accordance with [6.6.2.3 a\)](#); or
 - 2) if the opening is accessible at a position of 600 mm or more above ground when tested in accordance with [6.6.2.3 a\)](#), it shall be tested in accordance with [6.6.2.3 b\)](#) and conform to the requirements in [Table 3](#), based on the angular orientation range of the opening determined in accordance with [Figure 10](#).

Table 3 — Requirements for accessible partially-bound and V-shaped openings 600 mm or more above the ground

Angular orientation range of the opening (Figure 10)	Requirement
Range 1 Probe F centre line $\pm 45^\circ$ from vertical)	The probe F apex shall contact the base of the opening and the depth of the opening shall be less than the length of probe F to the underside of the shoulder section.
Range 2 Probe F centre line from horizontal to $+45^\circ$	When the probe F apex contacts the base of the opening, the depth of the opening shall be less than the "A" portion of probe F; or If the depth of the opening is greater than the "A" portion of probe F all parts of the opening above the "A" portion shall also allow insertion of the shoulder section of probe F or probe D (Figure 31).
Range 3	No probe test requirements

- d) Non-rigid members (e.g. ropes) shall not overlap if by doing so they create openings that do not conform to the requirements for completely-bound openings.

- e) Openings between flexible parts of suspended bridges and any rigid side members shall not be less than 230 mm in diameter under the most onerous condition of loading. Both loaded and unloaded situations shall be considered.
- f) Swing devices with suspension ropes hanging from a crossbeam shall not create a head and neck entrapment in the area of the starting and sliding sections of slides. For adjustable means of suspension, the most onerous length shall be used.



Key

- 1 range 1
- 2 range 2
- 3 range 3
- A A-portion (see [Figure 33](#))
- B B-portion (see [Figure 33](#))
- a Insertion angle for assessing the range.
- b Probe centre line.
- c Check all insertion angles.

Figure 10 — Checking all insertion angles to determine angular orientation range