



**International
Standard**

ISO 17966

**Assistive products for toileting,
bathing and showering —
Requirements and test methods**

*Produits d'assistance pour les toilettes, le bain et la douche —
Exigences et méthodes d'essai*

**Second edition
2026-10**

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

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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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 173, *Assistive products*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 293, *Assistive products and accessibility*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 17966:2016), which has been technically revised.

The main changes are as follows:

- new terms and definitions were added, and a few definitions updated ([Clause 3](#));
- new apparatus was added and a few updated ([4.8](#));
- requirements for flammability were updated, and requirements for other soft parts, polymeric parts and wiring were added ([5.2](#));
- requirements for infection and microbiological contamination were updated, and requirements, test methods, performance criteria and marking requirements for machine washable assistive products were added ([5.4](#));
- requirements for electromagnetic compatibility were removed from this document, reference to requirements in IEC 60601-1:2005 was added instead ([Clause 7](#));
- reference to electrical standards was adjusted, and requirements for electrical systems, safe positioning, single fault safety, hold to run activation, emergency stopping functions and continuity of power supply were therefore removed from this document ([8.1](#));
- charge level indication for battery powered assistive products was modified for better understanding ([8.2](#));
- requirement for ingress of particulate matter was specified ([8.4.2](#));
- requirement and test of pendant controls was added ([8.5](#));

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- update of test method for velocity of powered lifting and lowering movement ([11.4.2](#));
- means to prevent falling out (e.g. side rails) were added ([Clause 12](#));
- [Table 6](#) for calculating forces was updated, formula to find F1 was modified for several products and drawing examples were given for explanation ([16.2](#));
- designed lifetime t_{DL} was changed to expected lifetime t_{EL} in the formula for calculating number of test cycles, expected lifetime was changed from a minimum of 3 years to 5 years, [Table 7](#) and [Table 8](#) were updated ([16.3](#));
- modification of test methods and new test methods added for static strength ([16.4](#)) and durability ([16.5](#));
- modification of test methods for stability ([Clause 17](#));
- [Clause 19](#) for assistive products for children has been modified;
- ergonomic requirement for surface of buttons from previous version were removed ([Clause 21](#));
- ergonomic requirement for hand-operated controls were adjusted to a height of 870 mm to 1 100 mm above the surface of the floor ([Clause 21](#));
- test method for movement over a threshold and door frame were modified so it is no longer possible to use a test dummy, and a reference to suitable loading pads was added ([22.4.3](#), [22.4.4](#));
- requirement for handles for pushing and pulling or both was changed to be positioned between 800 mm to be operated at a height of 1 200 mm above the surface of the floor ([22.5.2](#));
- starting force in the requirements for moving forces was changed to maximum 170 N ([22.6.1](#));
- modification of test methods for fixed assistive products ([Clause 23](#));
- modification of test methods for portable assistive products ([Clause 24](#));
- [Annex E](#) on lithium batteries was added.

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 specifies requirements and test methods that are relevant to assistive products for toileting, bathing and showering.

[Clauses 4](#) to [21](#) and [Clauses 25](#) to [27](#) contain general requirements for all types of products included in the scope.

[Clauses 22](#) to [24](#) contain specific requirements for mobile, fixed and portable assistive products. These clauses contain additional requirements to the requirement in [Clauses 25](#) to [27](#).

An assistive product is deemed to conform with this document when it fulfils the general requirements as well as the additional requirements in the clauses relevant to the type of product (mobile, fixed or portable).

In addition to the requirements in this document, [Annex B](#) gives general recommendations.

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Assistive products for toileting, bathing and showering — Requirements and test methods

1 Scope

This document specifies requirements and associated test methods for assistive products for toileting, bathing and showering (from herein referred to as 'assistive product' within this document).

NOTE 1 Some of the assistive products can be classified as medical devices.

This document specifies safety, functional and ergonomic requirements for both persons with disability and assistants that apply during normal use and foreseeable misuse and failure.

This document specifies requirements and test methods for assistive products within the following divisions of ISO 9999:2022.

- 09 12 03 Commode chairs;
chairs, with or without castors, with a collection receptacle used for toileting away from the bathroom.
- 09 12 06 Toilets;¹⁾
included are, e.g. raised or height adjustable toilets, toilets with built-in douche and air dryers.
- 09 12 09 Toilet seats;¹⁾
devices attached to the toilet bowl or toilet chair for a person to sit on, which can provide stability and comfort.
- 09 12 10 Toilet splash guards;¹⁾
devices to keep bodily substances from splashing outside the toilet bowl.
- 09 12 12 Raised toilet seats, free-standing;
raised toilet seats (separate) standing on floor, where the seat can easily be removed from the toilet bowl;
included are, e.g. over toilet frames.
- 09 12 15 Raised toilet seats, detachable;
raised toilet seats (loose attachments) placed directly on the toilet bowl/toilet seat where the seat insert can easily be removed from the toilet bowl/toilet seat.
- 09 12 18 Raised toilet seats fixed to toilet;
devices permanently fixed on to a toilet bowl to increase the height of the seat and to facilitate sitting down upon, and standing up from, the toilet;
included are, e.g. plinths.

1) There are no specific requirements and test methods for these products. Only the relevant general requirements apply when these products are considered to be assistive products.

- 09 12 21 Toilet seats with built-in raising mechanism to help standing up and sitting down;
toilet seats that have a built-in lifting mechanism to assist a person to sit down on and get up from the toilet.
- 09 12 24 Toilet arm supports and toilet back supports mounted on toilet;
devices mounted on the toilet that provide support getting on or off the toilet.
- 09 12 25 Toilet arm supports and toilet back supports, free standing.
- 09 12 36 Douches and air dryers for attachment to a toilet;²⁾
devices attached to a toilet to provide a water spray with or without air blowing afterwards to wash, and possibly dry, a person's bottom while sitting on the toilet;
included are, e.g. toilet seats with that function.
- 09 33 04 Bath boards;
seats without back support placed on the rim across the bathtub.
- 09 33 05 Bath seats;
seats hung from the rim of or placed in the bathtub;
included are e.g. bath seats with or without backrest.
- 09 33 07 Shower chairs with and without wheels;
devices for supporting sitting during showering;
included are, e.g. shower stools.
- 09 33 08 Back supports for bath or shower;
excluded are, e.g. back support cushions.
- 09 33 12 Bathing stretchers, shower tables and diaper-changing tables;
stationary or portable tables, with or without castors, on which a person lies during bathing, showering or changing.
NOTE 2 Mainstream diaper-changing tables for babies/toddlers are excluded. They are covered by EN 12221-1.
- 09 33 15 Wash basins;²⁾
stationary or portable basins for water used when washing parts of the body.
- 09 33 18 Bidets;²⁾
stationary or portable basins primarily intended for washing genitals and bottom.
- 09 33 36 Assistive products for drying oneself;²⁾
devices and materials for enabling a person to dry their own body.
- 18 15 06 Height adjustable plinths and brackets;

2) There are no specific requirements and test methods for these products. Only the relevant general requirements apply when these products are considered to be assistive products.

height-adjustable surfaces or brackets on which furniture (e.g. wash basins) can be mounted.

18 18 03 Handrails and support rails;

bars, usually cylindrical, attached to a wall, floor or other stable structure that provide the means for a person to support or stabilize themselves using hands or arms while walking, e.g. up and down stairs or ramps or moving along corridors.

18 18 06 Fixed grab bars and handgrips;

devices, usually straight or angled bars, that are permanently attached to a wall, a wall and a floor, or a wall, ceiling and floor to provide support to a person while standing or changing position.

18 18 10 Removable grab rails and handgrips;

devices, usually straight or angled bars, that can be temporarily attached to walls, floors, ceilings or furniture using, e.g. clamps or suction pads and removed without tools providing support to a person while changing position.

18 18 11 Hinged rails and arm supports;

devices that provide support to a person when changing their position; they can be fixed to a wall or floor and can be folded up or sideways or lowered down to allow access or when they are not needed.

This document does not apply for:

- safe mounting in building structures;
- fixed building installations e.g. water, electricity, drainage and sewerage, requirements in relation to excretion-disposal and wrapping systems;
- bathtub hoists that are covered by ISO 10535:2021, namely
 - 12 36 06 Mobile hoists for transferring a person in sitting position with solid seats;
 - 12 36 09 Mobile hoists for transferring a person in lying position;
 - 12 36 12 Stationary hoists fixed to walls, floor or ceiling;
 - 12 36 15 Stationary hoists fixed to, or mounted in or on, another product;
- 09 33 21 Bathtubs;
- stability and friction issues in relation to slippery surfaces due to soap;
- products that have been customised or custom-made for an individual user.

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 845:2006, *Cellular plastics and rubbers — Determination of apparent density*

ISO 2439:2008, *Flexible cellular polymeric materials — Determination of hardness (indentation technique)*

ISO 3746:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane*

ISO 10993-1:2025, *Biological evaluation of medical devices — Part 1: Requirements and general principles for the evaluation of biological safety within a risk management process*

ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 14155:2025, *Clinical investigation of medical devices for human subjects — Good clinical practice*

ISO 14971:2019, *Medical devices — Application of risk management to medical devices*

ISO 15223-1:2021, *Medical devices — Symbols to be used with information to be supplied by the manufacturer — Part 1: General requirements*

ISO 20417:2021, *Medical devices — Information to be supplied by the manufacturer*

ISO 22442-1:2020, *Medical devices utilizing animal tissues and their derivatives — Part 1: Application of risk management*

IEC 60068-2-31:2008, *Environmental testing — Part 2-31: Tests — Test Ec: Rough handling shocks, primarily for equipment-type specimens*

IEC 60332-1-2:2025, *Tests on electric and optical fibre cables under fire conditions — Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame*

IEC 60529:1989+AMD2:2013+COR1:2019, *Degrees of protection provided by enclosures (IP code)*

IEC 60601-1:2005+AMD1:2012+AMD2:2020, *Medical electrical equipment — Part 1: General requirements for basic safety and essential performance*

IEC 60601-1-11:2015+AMD1:2020, *Medical electrical equipment — Part 1-11: General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment*

IEC 60601-2-35:2020, *Medical electrical equipment — Part 2-35: Particular requirements for the basic safety and essential performance of heating devices using blankets, pads, and mattresses and intended for heating in medical use*

IEC 60695-11-10:2013+COR1:2014, *Fire hazard testing — Part 11-10: Test flames — 50 W horizontal and vertical flame test methods*

EN 614-1:2006+A1:2009, *Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles*

EN 12527:1998, *Castors and wheels - Test methods and apparatus*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60601-1:2005+AMD1:2012+AMD2:2020 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 applied part

part of device that in *normal use* (3.17) necessarily comes into physical contact with the user (3.27) to perform its function

3.2

assistant

person who is helping or supporting a person with disability in using the *assistive product* (3.3)

Note 1 to entry: Examples of the ways assistants help persons with disability are pushing commode chairs, operating height adjustable devices, and assisting with entering and leaving seats, stretchers and commode chairs.

Note 2 to entry: An assistant can be a health care professional or a non-professional, for example, a relative.

3.3

assistive product

product that optimizes a person's functioning and reduces disability

Note 1 to entry: See [Clause B.2](#).

Note 2 to entry: Assistive products include devices, instruments, equipment, and software.

Note 3 to entry: Assistive products can be specially produced or generally available items.

[SOURCE: ISO 9999:2022, 3.3]

3.3.1

fixed assistive product

product designed to be fastened to a support or otherwise secured in a specific location either by shape or fasteners

Note 1 to entry: Friction bath boards and friction toilet seats are excluded from this definition.

3.3.2

mobile assistive product

movable mobile assistive product

equipment that, once installed and placed into service, is intended to be moved from one location to another while supported by its own wheels or equivalent means

3.3.3

portable assistive product

movable portable assistive product

equipment that, once installed and placed into service, is intended to be used with a user in place only when stationary and can be moved from one location to another without the user in place

Note 1 to entry: Bath boards and toilet seats secured by friction are included.

3.3.4

robotic assistive product

assistive product (3.3) that has programmed actuated mechanisms with a degree of autonomy to perform locomotion, manipulation or positioning

3.4

backward

180° to the forward direction of travel

3.5

cleaning

removal of foreign materials from a surface

3.6

detachable part

part designed to be unfastened or disconnected without damage to the part or the product

[SOURCE: ISO 20342-1:2022, 3.10, modified — “whole” was changed to “product”.]