
**Technical aids for persons with
disabilities — Classification and
terminology**

*Aides techniques pour personnes atteintes d'incapacités — Classification
et terminologie*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9999 was prepared by Technical Committee ISO/TC 173, *Technical systems and aids for disabled or handicapped persons*, Subcommittee SC 2, *Classification and terminology*.

This third edition cancels and replaces the second edition (ISO 9999:1998), which has been technically revised.

Annexes A and B are for information only.

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Introduction

In this third edition of ISO 9999, the former class 03 “Aids for training and therapy” has been replaced by two new classes: 04 “Aids for personal medical treatment, including those aids which are intended to improve, monitor or maintain the medical condition of a person” and class 05 “Aids for training in skills, including those aids which are intended to improve a person’s physical, mental and social abilities”.

This third edition of ISO 9999 also includes aids for public transport, public communications and aids to be used in public buildings.

A conversion table giving the changes from the previous edition is attached as informative annex A.

Proposals for changes or additions to this International Standard, both in respect of existing and proposed new classes/subclasses/divisions which take into account the given rules for classification, may be submitted to a national member body of ISO with an accompanying explanation for the proposal.

NOTE 1 A part of the technical aids for persons with disabilities can be classified as medical devices, which have to fulfil the requirements of the Council Directive 93/42 EEC of June 1993. The general requirements for technical aids for persons with disabilities are given in EN 12182:1999.

NOTE 2 National member bodies are encouraged to improve the accessibility of the classification by the addition of national language synonyms into the nationally implemented standard.

NOTE 3 Generally available devices are included, when they serve as technical aids for persons with disabilities.

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Technical aids for persons with disabilities — Classification and terminology

1 Scope

This International Standard establishes a classification of technical aids for persons with disabilities. It is restricted to technical aids intended mainly for the use of an individual.

Technical aids used by a person with a disability, and which require the assistance of a helper for their operation, are included in the classification.

The following items are specifically excluded from this International Standard:

- items used for the installation of technical aids;
- solutions obtained by combinations of technical aids which are individually classified in this International Standard;
- medicines;
- technical aids and instruments used exclusively by healthcare professionals;
- non-technical solutions, such as personal assistance, guide-dogs or lip-reading;
- implanted devices;
- financial support.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 1087 (all parts), *Terminology work — Vocabulary*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

**3.1
impairment**

any loss or abnormality of psychological, physiological, or anatomical structure or function¹⁾

**3.2
disability**

any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being¹⁾

**3.3
handicap**

disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfilment of a role that is normal (depending on age, sex and social and cultural factors) for that individual¹⁾

**3.4
disabled person**

person with one or more impairments, one or more disabilities, one or more handicaps or a combination of impairment, disability and/or handicap

**3.5
technical aid (for disabled persons)**

any product, instrument, equipment or technical system used by a disabled person, especially produced or generally available, preventing, compensating, monitoring, relieving or neutralizing the impairment, disability or handicap

NOTE Technical aids are frequently referred to as assistive devices or assistive technology.

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**3.6
classification**

system of concepts or a structured set of concepts established according to the relations between them, each concept being determined by a systematic code and its position in the system of concepts

**3.7
class**

collection of similar articles, divided according to definite and/or chosen rules

4 Principle

The classification is based on the function of the products being classified.

In particular, it should be noted that technical aids which are used exclusively for training in skills are included in class 05. Aids which have a function other than training, but which may also be used for training, are included in the class covering their principal function.

Software is classified at the division level of the class relating to its function.

1) The definitions mentioned in 3.1, 3.2 and 3.3 refer to the International Classification of Disabilities and Handicaps (ICIDH), WHO, Geneva 1980, reprint 1993 (see Bibliography). In the meantime, the World Health Assembly has accepted the revised version of the former ICIDH (WHO, 2001). The classification changed substantially (title, dimensions/components, key terms) and has a new title: International Classification of Functioning, Disability and Health, in short ICF. Attention should be paid to the fact that the term "handicap" is not included in the ICF any more and that the meaning of the term "disability" changed from narrow (related to the actual activity component) to a broader meaning as an umbrella term in the title of the ICF. Parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition.

5 Elements and rules used in classification

5.1 Construction

The classification consists of three hierarchical levels, termed classes, subclasses and divisions respectively.

Each class, subclass, or division consists of a code, a term and, if necessary, an explanatory note and/or reference to other parts of the classification.

Explanatory notes are used to clarify the content of the class, subclass or division and to provide examples.

References are used for two purposes:

- to separate classes, subclasses or divisions from one another, e.g. general versus specific;
- for information, e.g. references between related products.

In general, references are made to the lowest possible level.

5.2 Codes

5.2.1 The code consists of three groups of two digits each.

The first and second digits indicate a class, the third and fourth digits a subclass, and the fifth and sixth digits a division.

For practical purposes, classes are indicated by two digits only (deleting two groups of zeros) and subclasses are indicated by two groups of two digits (deleting one group of zeros).

The code determines the position of the class, the subclass, or the division respectively in the classification.

5.2.2 The digits for the codes were originally chosen with intervals of three. In subsequent revisions, the intervening digits have been used to introduce new classes, subclasses and divisions without significantly modifying the classification.

5.2.3 Classes 00, 01, 02 and 90 to 99 and the associated subclasses and divisions are reserved for national applications.

In addition, further levels may be added to any part of the classification to serve national or local purposes.

A fixed position (89) is reserved at all levels for technical aids which are categorized as “other”.

5.2.4 A conversion table detailing the coding changes from the first revision of the classification to this revision is given for information in annex A.

5.2.5 In this revision, codes which were originally used to classify items which have been removed from the classification are not used to classify new items which have been added to the classification.

5.3 Terms

5.3.1 As far as possible, the terminology in general use has been adopted.

5.3.2 All terms are in the plural form.

5.3.3 Terms at class level generally describe a broad area of function, e.g. Aids for housekeeping. In classes, terms describing a specific product are only used when the term is broadly applied or when the function of the product is incorporated in the name, e.g. Orthoses and prostheses.

5.3.4 Terms at subclass or division level describe a special function within the broad area covered by the subclass (e.g. Aids for weighing and measuring) or a particular product covered by the division (e.g. Scissors).

5.3.5 In order to avoid repetition, the term at division level is considered to be interconnected with the term of the subclass.

5.3.6 Only in cases where a technical aid is used by a specific group of disabled persons or persons of specific age, may the term used refer to that group of disabled persons.

5.4 Some rules used in classification

5.4.1 A class is equal to the sum of its subclasses and a subclass is equal to the sum of its divisions. In the classification, no term such as “general” is used, since it is considered to be included in the heading of the class or the subclass (see also 5.2.3 concerning the use of the term “other”).

5.4.2 Products appear only at the division level.

5.4.3 In general, parts of aids, accessories to aids, individually adapted aids and individual adaptations in homes and other premises are included in the aid with which they are associated.

5.4.4 Parts, accessories and adaptations are separately classified when they are associated with a group of aids. In these cases, they are classified as close as possible to the group of technical aids with which they are associated.

5.4.5 The classification is organized in such a manner that all technical aids can be classified without being tested or measured.

5.4.6 A classification of hypothetical technical aids is avoided.

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6 Index

An alphabetical index of terms is provided for information in annex B to facilitate access to the classification.

Synonyms and examples are incorporated in the index and refer to the term in the classification.

7 Classification

For the purposes of the classification of this International Standard, the terminology specified in ISO 1087 applies. Where relevant product standards exist, their terminology is used in this International Standard (see Bibliography).

04 Aids for personal medical treatment

Aids intended to improve, monitor or maintain the medical condition of a person included; aids used exclusively by healthcare professionals excluded

04 03 Aids for respiratory therapy

Devices to assist a person to breathe during therapy

Vibrators, see 04 27 12

Aids for environmental improvement, see 27 03

04 03 03 Inhaled-air preheaters

Devices which take in air from the surrounding area and warm it for inhalation

04 03 06 Inhalation equipment

Devices to assist a person to inhale and/or to administer drugs in the form of vapour, gas, liquid spray or fine dust; jet dispensers, automatic inhaler dispensers, pressure respirators, ultrasound nebulizers, filters and nebulizers with dosage aerosols included

- 04 03 12 Respirators
Devices to assist a person to breathe; equipment to provide artificial ventilation by means of intermittent external negative or internal positive pressure through the nose, the mouth or the trachea; some filter and/or purify the surrounding air; ventilators included
- 04 03 18 Oxygen units
Devices for providing concentrated oxygen gas; the gas is breathed in through the nose and/or mouth; some units concentrate the oxygen from the surrounding air.
- 04 03 21 Aspirators
Devices for sucking secretions and/or substances out of the lungs
- 04 03 24 Benches and cushions for respiratory therapy
Devices for positioning a person in order to help him/her to breathe and/or to drain secretions from the lungs
- 04 03 27 Respiration muscle trainers
Devices for training the respiratory muscles, either by applying resistance when a person is breathing or by direct compression onto the walls of the chest; masks producing a resistance to inspiration and/or expiration included
- 04 03 30 Respiration meters
Instruments for measuring the capacity of inspiration and expiration; spirometers included
- 04 06 Aids for circulation therapy**
Devices to assist circulation by passive or active compression
Blood pressure meters, see 04 24 09
Training and ergometer cycles, see 04 48 03
Special sitting furniture, see 18 09 21
Adjustable beds, see 18 12 07 and 18 12 10
- 04 06 03 Compression garments filled with compressed air
Garments filled with compressed gas or air which help to prevent atmospheric pressure from adversely affecting blood circulation; garments for arms, legs and other parts of the body included
- 04 06 06 Anti-oedema stockings for arms and legs and other parts of the body
Tube-like elastic bandages for reducing or preventing swelling caused by circulation problems
- 04 06 12 Compression units
Equipment with air-filled attachments for surrounding an affected part of the body; equipment consisting of compression garments and compressors which produce waves of compression to aid the circulation and/or to prevent swelling caused by circulation problems
- 04 09 Aids for light therapy**
Infrared (IR) lamps, see 04 30 03
- 04 09 03 Ultraviolet A (UVA) lamps
Devices providing emissions in the spectrum range of 315 nm to 400 nm
- 04 09 06 Selective Ultraviolet Phototherapy (SUP) and ultraviolet B (UVB) lamps
Devices providing emissions in the spectrum range of 280 nm to 315 nm
- 04 09 09 Protective eyeglasses for light therapy
Devices for protecting the eyes from ultraviolet rays
Aids for eye and face protection, see 09 06 06

- 04 12 Abdominal hernia aids**
Devices to support and hold the hernia in place
Lumbo-sacral orthoses, see 06 03 06
- 04 12 09 Hernia straps, girdles and trusses
- 04 15 Aids for dialysis therapy**
Devices which purify the blood of a person
Injection materials, see 04 19
Sterilizing equipment, see 04 22
Bacteria culture media and equipment, see 04 24 06
Blood pressure meters, see 04 24 09
Blood analysis materials, see 04 24 12
Body thermometers, see 09 48 03
Personal scales, see 09 48 06
Tables, see 18 03
Light fixtures, see 18 06
Sitting furniture, see 18 09
Water-purifiers and water-softeners, see 27 03 18
- 04 15 03 Haemodialysis units (HD)
Machines used regularly to purify the blood of a person who has poorly functioning or absent kidneys; dialysers, monitors, blood pumps, heparin pumps and air-detectors included
- 04 15 06 Units for continuous ambulant peritoneal dialysis (CAPD)
Body-worn devices to continuously purify the blood of a person with poorly functioning or absent kidneys; infusion unit bags, frames, heaters and fistula cannulas included
- 04 15 12 Instrument sets for dialysis
Devices to connect a person to a dialyser; trays and forceps included
Sterilizing equipment, see 04 22
- 04 19 Aids for administering medicines**
Aids to control the rate and/or quantity of medicines administered; devices that assist or help liquid medicines to be introduced directly into the body through the skin included
Aids for opening bottles, cans, containers, see 24 06 03
- 04 19 03 Dosing devices
Devices for helping a person to take the correct dose of medicine; these devices could also give an indication as to when to take the medicine.
- 04 19 06 Injection guns
Devices with a trigger for introducing liquid medicines directly into the body through the skin
- 04 19 09 Injection syringes, single-use
Devices with a plunger for introducing liquid medicines directly into the body through a needle inserted in the skin; each syringe is intended to be used once only.
- 04 19 12 Injection syringes, multi-use
Devices with a plunger for introducing liquid medicines directly into the body through a needle inserted in the skin; each syringe can be sterilized and reused.
- 04 19 15 Injection needles, single-use
Needles intended to be used once only
- 04 19 18 Injection needles, multi-use or permanent-use
Sterilizable needles that can be reused and/or needles that can stay in the body for a long period of time

- 04 19 21 Dosing aids used in conjunction with injection syringes
Aids for filling a syringe and/or to guarantee a correct dose, even if the user is partially sighted, blind or has impaired hand functioning; injection cartridges, aids for insulin storage and automatic pipettes included
- 04 19 24 Infusion pumps
Devices attached to the body for the automatic administering of medicine; insulin-pumps included
- 04 22 Sterilizing equipment**
Devices to reduce the risk of infection from instruments; equipment used in conjunction with aids for personal medical treatment, e.g. injection materials and dialysis equipment
- 04 24 Physical, physiological and biochemical test equipment and materials**
- 04 24 03 Urinalysis equipment
- 04 24 06 Bacteria culture media and equipment
- 04 24 09 Blood pressure meters (sphygmomanometers)
- 04 24 12 Blood analysis materials
- 04 24 15 Electrocardiogram (ECG) equipment
Equipment for monitoring and recording the activities of the heart
- 04 24 18 Physical test and evaluation materials
Equipment for testing and evaluating functions, such as joint stability, joint mobility, muscle strength and physical endurance, as well as movement activities such as sitting, standing, rolling over and walking
- 04 25 Cognitive test equipment and materials**
Equipment for testing all those functions and activities related to logical thinking, intellectual potential and reasoning
- 04 25 03 Language test and evaluation materials
Equipment for testing and evaluating how to use and understand language as a means of communication
- 04 25 06 Psychological test and evaluation materials
Equipment for testing and evaluating behaviour, attitudes and emotional response
- 04 25 09 Educational test and evaluation materials
Equipment for testing and evaluating learning capabilities, abilities and potential; vocational tests included
- 04 27 Stimulators**
Aids for increasing, decreasing or stabilizing bodily functions included
Functional electrical stimulators and hybrid orthoticsystems, see 06 15
Aids for sexual activities, see 09 54
Hearing-aids used in connection with implant, see 21 45 18
- 04 27 03 Heart stimulators
Equipment for stimulating or regulating the heartbeat; implants (e.g. pacemakers) not included in this classification
- 04 27 06 Stimulators for pain relief
Equipment which changes the nerve sensitivity and therefore reduces the sensation of physical pain.

- 04 27 09 Muscle stimulators not used as orthoses
Equipment for stimulating a muscle or a particular area of a muscle causing it to contract or relax; stimulators to treat incontinence included
- 04 27 12 Vibrators
Devices producing vibrations for the purpose of e.g. draining mucus from the lungs or to achieve skin sensory awareness
Vibrators and massage devices, see 09 54 09
- 04 27 15 Tinnitus masks
Devices to mask the auditory perception of noise produced from within the ear
Attachments for hearing-aids and hearing-aids with built-in tinnitus masking, see 21 45
- 04 27 18 Aids for stimulating the senses
Devices that stimulate the senses
- 04 30 Aids for heat or cold treatment**
Devices to produce heat or cold for therapeutic purposes
- 04 30 03 Aids for heat treatment
Devices to heat the body or an area of the body for therapeutic purposes; IR lamps and preheated cushions included
- 04 30 06 Aids for cold treatment
Devices to cool the body or an area of the body for therapeutic purposes
- 04 30 09 Aids for heat and cold treatment
The same device could be used to heat or cool the body or an area of the body for therapeutic purposes.
- 04 33 Aids for pressure-sore prevention (antidecubitus aids)**
Devices relieving the pressure on parts of the body or the whole body to avoid the occurrence of pressure sores
Body-worn protective aids, see 09 06
Seat cushions and underlays, see 18 09 42
Back cushions and back pads, see 18 09 45
Beds, see 18 12
Mattresses and mattress-coverings, see 18 12 18
Sheepskins, see 18 12 18
- 04 33 09 Special equipment for pressure-sore prevention
Equipment for evaluating or warning of excess pressure on parts of the body; alarms for pressure-sore prevention included
- 04 36 Aids for perceptual training**
Aids for training in the correct acquisition and mental processing of external stimuli (coming from sight, hearing and other senses)
Stimulators, see 04 27
Aids for heat or cold treatment, see 04 30
Equipment for movement, strength and balance training, see 04 48
Aids for communication therapy and training, see 05 03
Aids for training cognitive skills, see 05 12
- 04 36 03 Aids for training in perceptual discrimination and matching
Equipment for helping a person to distinguish between, match and categorize external stimuli
Vibrating chairs (for training deaf persons) are also included; these are chairs used to convert different sounds into vibrations which can be felt by the person occupying the chair and which are used to educate deaf people to realize that different sounds produce different vibrations and that these can be differentiated through touch.

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- 04 36 06 Aids for training in perceptual coordination
Equipment for training to improve ability to correctly process and coordinate external stimuli, especially those relating to concepts of space and time, spatial concepts and eye-hand coordination
Aids for training personal mobility, see 05 33 09
- 04 39 Aids for visual training**
Devices to train the visual system, e.g. eye(s), to function better
- 04 39 03 Aids for occlusion treatment
Devices for covering one eye in order to stimulate the other
- 04 45 Aids for spinal traction**
Devices to produce stretching of the spine
- 04 48 Equipment for movement, strength and balance training**
- 04 48 03 Training and ergometer cycles
Stationary cycles for physical exercise
Arm ergometer cycles included
- 04 48 07 Parallel bars and supports for walking
Stationary equipment for providing support to a person learning to walk
- 04 48 08 Standing frames and supports for standing
Stationary equipment for providing support to a person learning to stand
Tilting tables, see 04 48 21
- 04 48 12 Finger and hand exercise devices
Equipment for training movement or strengthening the fingers and/or the hands
- 04 48 15 Arm, trunk and leg exercise devices
Equipment for training movement and balance, or for strengthening the limbs and the trunk; wall bars, trampolines, gymnasium mats and balance boards included
- 04 48 18 Weighted cuffs
Cuffs filled with weighted substances worn on the limbs during exercise to strengthen them
- 04 48 21 Tilting tables
Platforms for positioning and supporting a person whilst progressively moving them from a lying position to an upright position so that the body can adapt to functioning in that position
- 04 48 24 Biofeedback devices for movement, strength and balance training
Devices for providing an audible, a visible or a tactile signal in response to a specific physical or physiological action
- 04 48 27 Aids for positioning the body during therapy
Equipment for supporting a person in the correct position to facilitate therapy and treatment
Tilting tables, see 04 48 21
- 04 48 30 Jaw exercise devices
Aids for traction of the jaw
- 05 Aids for training in skills**
Aids intended to improve a person's physical, mental and social abilities included
Aids that have a function other than training, but which may also be used for training, should be included in the class covering its principal function.