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Assistive products — Classification and terminology

Produits d'assistance — Classification et terminologie

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Contents

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).

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 Technical Committee ISO/TC 173, *Assistive products*, Subcommittee SC 2, *Classification and terminology,* 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 seventh edition cancels and replaces the sixth edition (ISO 9999:2016), which has been technically revised. The main changes are as follows:

— deletion of class 05 was;

— major changes in class 09, class 12 and class 22.

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

Assistive products (including software) are classified according to their function. The classification consists of three hierarchical levels and the codes each consist of three pairs of digits. Like other classifications, for each level, codes, titles, explanatory notes, inclusions, exclusions and cross-references are given. Besides the explanatory text and the classification itself, a table of conversion between the previous edition (ISO 9999:2016) and this document (ISO 9999:—) and an alphabetical index are provided in order to facilitate the use of and to improve the accessibility of the classification.

This document has 948 titles of which about 23 are new and 116 are changed, including minor editorial revisions.

All assistive products in this classification are primarily intended for use outside of health care settings; however, some of the products can be used in facilities such as rehabilitation centres to teach clients how to use these products. It should be noted that the titles of some subclasses and divisions in class 28 refer to the "workplace". This term does not refer to a specific setting or geographical location; instead, it refers to any setting in which employment-related activities or vocational training are performed.

The definition of "assistive product" used by this document has been revised to align it with the terminology of the International Classification of Functioning, Disability and Health (ICF, WHO, 2020).

In 2003, ISO 9999 was accepted as a related member of the WHO Family of International Classifications (WHO-FIC). The WHO-FIC comprises high-quality classifications for relevant sectors of the health system. With this inclusion, the use of this document was stimulated.

This document makes use of the terminology of the ICF, which is a classification of health and health-related domains. These domains are classified from body, individual and societal perspectives by means of two lists: a list of body functions and structure and a list of domains of activity and participation. Since an individual's functioning and disability occurs in a context, ICF also includes a list of environmental factors. Assistive products in this list are viewed as part of the environmental factors. The ICF is one of the core classifications of the WHO-FIC (see Annex A).

An alphabetical index of terms in Annex D is provided for information to facilitate access to the classification. Terms used in inclusion statements are incorporated in the index.

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

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Assistive products — Classification and terminology

1 Scope

This document specifies a classification and terminology of assistive products, especially produced or generally available, for persons to optimize functioning and reduce disability.

Assistive products used by a person to optimize functioning and reduce disability, but which require the assistance of another person for their operation, are included in the classification.

The following items are specifically excluded from this document:

— items used for the installation of assistive products;

— solutions obtained by combinations of assistive products that are individually classified in this document;

— medicines;

— assistive products and instruments used exclusively by healthcare professionals or by teachers;

— non-technical solutions, such as personal assistance, guide dogs or lip-reading;

— implanted devices;

— financial support.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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
execution of a task or action by an individual

[SOURCE: ICF 2020, WHO]

3.2
activity limitation
difficulties an individual can have in executing *activities* (3.1)

[SOURCE: ICF 2020, WHO]

3.3
assistive product
product that optimizes a person's functioning and reduces disability

Note 1 to entry: See Annex B.

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

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

3.4
body function
physiological functions of body systems (including psychological functions)

[SOURCE: ICF 2020, WHO]

3.5
body structure
anatomical parts of the body such as organs, limbs and their components

[SOURCE: ICF 2020, WHO]

3.6
disability
umbrella term for *impairments* (3.9), *activity limitations* (3.2) and *participation restrictions* (3.12) denoting the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors)

[SOURCE: ICF 2020, WHO]

3.7
environmental factor
physical, social and attitudinal environment in which people live and conduct their lives

[SOURCE: ICF 2020, WHO]

3.8
functioning
umbrella term for *body functions* (3.4), *body structures*, activities and *participation* (3.11) denoting the positive aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors)

[SOURCE: ICF 2020, WHO]

3.9
impairment
problems in body function or structure, such as a significant deviation or loss

[SOURCE: ICF 2020, WHO]

3.10
person with disability
person with one or more i*mpairments* (3.9), one or more *activity limitations* (3.2), one or more *participation restrictions* (3.12) or a combination thereof

3.11
participation
involvement in a life situation

[SOURCE: ICF 2020, WHO]

3.12
participation restriction
problems an individual can experience in involvement in life situations

[SOURCE: ICF 2020, WHO]

3.13
workplace
setting in which employment-related activities or vocational training are performed

3.14
robot
programmed actuated mechanism with a degree of autonomy to perform locomotion, manipulation or positioning

Note 1 to entry: A robot includes the control system and interface of the control system.

4 Elements and rules used in classification

4.1 Principle

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

Assistive products that have a principal function other than training, but which can also be used for training, are included in the class covering their primary function.

Software is classified according to its function.

Multifunctional products are also classified based on the primary function. References may be added related to secondary functions of the item.

4.2 Construction

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

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

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

References are used for two purposes:

— to separate classes, subclasses or divisions from one another;

— for information, e.g. references between related products.

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

4.3 Codes

4.3.1 The code consists of three pairs of digits.

The first pair of digits indicates a class, the second pair of digits a subclass and the third pair of digits a division.

For practical reasons, in this document, the classes are indicated by one pair of digits only (deleting two pairs of zeros) and subclasses are indicated by two pairs of digits (deleting one pair of zeros).

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

4.3.2   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.

Codes that were originally used to classify items that have been removed from the classification are not used to classify new items that have been added to the classification. As a consequence, the order of the codes is no longer in all places in intervals of three and the divisions may not in all places follow a logic order.

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

The subclasses XX 01, XX 02, and XX 90 to XX 99 and the associated divisions are reserved for national applications.

The divisions XX XX 01, XX XX 02 and XX XX 90 to XX XX 99 are reserved for national applications.

Subclasses XX 88 and the divisions XX XX 88 are reserved for assistive products that are titled "Other (title of parent class or parent subclass)" for international applications.

In addition, further levels, e.g. 4th level, may be added to any part of the classification to serve national or local purposes

4.3.4   A conversion table detailing the coding changes from the previous edition (ISO 9999:2016) of the classification to this document is given in Annex C.

4.4   Titles of classes, subclasses and divisions

4.4.1   The common language and framework of the ICF is used when appropriate, otherwise terminology in general use has been adopted; titles of classes are harmonized with the ICF.

4.4.2   All titles in the classification are in the plural form.

4.4.3   Titles at class level generally describe a broad area of function of the product, e.g. assistive products for domestic activities and participation in domestic life, assistive products for activities and participation relating to personal mobility and transportation and assistive products for work activities and participation in employment.

4.4.4   Titles at subclass level describe a special function, e.g. "assistive products for reading", within the broad area covered by the class, e.g. "assistive products for communication and information management".

4.4.5   Going down to the division level, the description gets more specific.

4.4.6   Only in cases where an assistive product is intended for use by persons with a specific disability, age or gender should the title refer to that group.

4.5   Rules used in classification

4.5.1   A class is equal to the sum of its subclasses and a subclass is equal to the sum of its divisions.

4.5.2 In general, parts of assistive products, accessories to assistive products, individually adapted assistive products and individual adaptations in homes and other premises are classified in the same subclass or division of the assistive product with which they are associated.

4.5.3 Parts, accessories and adaptations are separately classified when they are associated with a group of assistive products. In these cases, they are classified as close as possible to the group of assistive products with which they are associated, e.g. 12 07 accessories for assistive products for walking.

4.5.4 The classification is organized in such a manner that all assistive products can be classified without being tested or measured.

4.5.5 Classification of hypothetical assistive products is avoided.

4.5.6 Classes are created in such a manner that they do not overlap in the described broad function of other classes. The subclasses are created in such a manner that they do not overlap in the specific function of other subclasses. The divisions are created in such a manner that they do not overlap with products in other divisions.

5   Classification

5.1   One-level classification — Classes

04 Assistive products for measuring, stimulating or training physiological and psychological functions

06 Orthoses and prostheses

09 Assistive products for self-care activities and participation in self-care

12 Assistive products for activities and participation relating to personal mobility and transportation

15 Assistive products for domestic activities and participation in domestic life

18 Furnishings, fixtures and other assistive products for supporting activities in indoor and outdoor human-made environments

22 Assistive products for communication and information management

24 Assistive products for controlling, carrying, moving and handling objects and devices

27 Assistive products for controlling, adapting or measuring elements of physical environments

28 Assistive products for work activities and participation in employment

30 Assistive products for recreation and leisure

5.2   Two-level classification — Classes and subclasses

04 Assistive products for measuring, stimulating or training physiological and psychological functions

04 03 Assistive products for respiration

04 06 Assistive products for supporting and stimulating blood circulation

04 08	Assistive products for stimulating body control and conceptualization
04 09	Assistive products for light therapy
04 15	Assistive products for dialysis therapy
04 19	Assistive products for administering medicines
04 22	Sterilizing equipment
04 24	Physical, physiological and biochemical test equipment and materials
04 25	Cognitive test and evaluation materials
04 26	Assistive products to enhance cognitive function
04 27	Stimulators for treatment on cellular and tissue level
04 28	Assistive products for stimulating senses
04 29	Assistive products for pain relief
04 30	Assistive products for heat treatment or cold treatment
04 33	Assistive products intended to manage tissue integrity
04 45	Assistive products for spinal traction
04 48	Equipment for movement, strength, balance and cardio training
04 49	Wound care products
06	Orthoses and prostheses
06 03	Spinal and cranial orthoses
06 04	Abdominal orthoses
06 06	Upper limb orthoses
06 12	Lower limb orthoses
06 15	Functional neuromuscular stimulators and hybrid orthoses
06 18	Upper limb prostheses
06 24	Lower limb prostheses
06 30	Prostheses other than limb prostheses
09	Assistive products for self-care activities and participation in self-care
09 03	Clothes and shoes
09 06	Body-worn assistive products for body protection
09 07	Assistive products for body stabilization
09 09	Assistive products for dressing and undressing
09 12	Assistive products for toileting

09 15	Assistive products for tracheostomy care
09 18	Assistive products for ostomy care
09 21	Products for skin care, skin protection, and skin cleaning
09 24	Urine diverters
09 27	Assistive products for collecting urine and faeces
09 30	Absorbing products to contain urine and faeces
09 31	Assistive products to prevent involuntary urine or faeces leakage
09 32	Assistive products for management of menstruation
09 33	Assistive products for washing, bathing and showering
09 36	Assistive products for nail care
09 39	Assistive products for hair care
09 42	Assistive products for dental care
09 45	Assistive products for facial care
09 54	Assistive products for sexual activity
12	Assistive products for activities and participation relating to personal mobility and transportation
12 02	Assistive products for walking, not manipulated by the arms
12 03	Assistive products for walking, manipulated by one arm
12 06	Assistive products for walking, manipulated by both arms
12 07	Accessories for assistive products for walking
12 08	Guide canes and symbol canes for orientation
12 10	Cars, vans and pick-up trucks
12 11	Mass transit vehicles
12 12	Vehicle accessories and vehicle adaptations
12 16	Mopeds and motorcycles
12 17	Diverse motorized vehicles
12 18	Cycles
12 22	Manual wheelchairs
12 23	Powered wheelchairs
12 24	Wheelchair accessories
12 25	Accessories wheelchair seating
12 27	Diverse human powered vehicles

12 31   Assistive products for changing body position

12 36   Assistive products for lifting persons

15   Assistive products for domestic activities and participation in domestic life

15 03   Assistive products for preparing food and drink

15 06   Assistive products for dishwashing

15 09   Assistive products for eating and drinking

15 12   Assistive products for housecleaning

15 15   Assistive products for making and maintaining textiles for domestic use

15 18   Assistive products for gardening and lawn care for domestic use

18   Furnishings, fixtures and other assistive products for supporting activities in indoor and outdoor human-made environments

18 03   Tables

18 06   Light fixtures

18 09   Sitting furniture

18 10   Accessories for sitting furniture

18 12   Beds and bed equipment

18 15   Assistive products for height adjustment of furniture

18 18   Supporting handrails and grab bars

18 21   Gate, door, window and curtain openers/closers

18 24   Construction elements in homes and other premises

18 30   Assistive products for vertical accessibility

18 33   Safety equipment for homes and other premises

18 36   Furniture for storage

22   Assistive products for communication and information management

22 03   Assistive products for seeing

22 06   Assistive products for hearing

22 09   Assistive products for voice and speech functions

22 13   Assistive products for reading, writing and drawing

22 15   Assistive products for calculation and training basic arithmetic

22 18   Assistive products that record, play and display audio and visual information

22 21   Assistive products for face-to-face communication

22 24   Assistive products for distant communication

22 28   Assistive products for indication of time, planning, memory, and structuring

22 29   Assistive products for signalling, alarming, monitoring, and identifying

22 31   Assistive products for learning languages

22 33   Computers and terminals

22 39   Output devices

22 45   Assistive products for orientation

24   Assistive products for controlling, carrying, moving and handling objects and devices

24 06   Assistive products for handling containers

24 09   Mechanical assistive products for operation and controlling devices

24 13   Electronic assistive products for operation and controlling devices

24 18   Assistive products to assist or replace arm function, hand function, finger function or combination of these functions

24 21   Assistive products for extended reach

24 24   Assistive products for positioning

24 27   Assistive products for fixation

24 36   Assistive products for carrying and transporting

27   Assistive products for controlling, adapting or measuring elements of physical environments

27 03   Assistive products for environmental improvement

27 06   Measuring instruments

28   Assistive products for work activities and participation in employment

28 03   Workplace furniture and furnishing elements

28 06   Assistive products for transporting objects in workplaces

28 09   Assistive products for hoisting and repositioning objects in workplaces

28 12   Assistive products for fixing, reaching and grasping objects in workplaces

28 15   Machines and tools for use in workplaces

28 18   Devices for testing and monitoring in workplaces

28 21   Assistive products for office administration, information storage and management at work

28 24   Assistive products for health protection and safety in workplaces

28 27   Assistive products for vocational assessment and vocational training

30   Assistive products for recreation and leisure

30 03   Assistive products for play

30 09   Assistive products for sports