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Stationary training equipment —

Part 1:
General safety requirements and test methods

~~*Appareils*~~*Équipement d'entraînement ~~fixes — fixe —~~*

Partie 1: Exigences générales de sécurité et méthodes d'essai

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Contents

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iv

Foreword

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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~~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).

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This document was prepared by Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 136, *Sports, playground and other recreational facilities and equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 20957-1:2013), which has been technically revised.

The main changes are as follows:

— Clause 2 ~~— Clause 2~~ was updated ~~to remove unused references~~;

— Clause 3 ~~— Clause 3~~ was updated by removing, renaming, and adding entries;

— Clause 5 ~~— Clause 5~~ was updated so that 5.3.4 ~~Subclause 5.3.4~~ combines requirements for squeeze and shear points and 5.13 ~~Subclause 5.13~~ combines loading requirements;

— Clause 6 ~~— Clause 6~~ was updated so that 6.15 ~~Subclause 6.15~~ creates a single test method for loading testing;

— Annex A ~~— Annex A~~ was added to provide informative examples for carrying out load testing~~;~~.

~~— — Annex ZA added to align with the safety requirements of Commission Decision No 476/2011/EU.~~

A list of all parts in the ISO 20957 series can be found on the ISO website.

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

Introduction

This document specifies safety requirements that are applicable to all stationary training equipment. For specific types of equipment these requirements are supplemented or modified by the requirements of the other parts of the ISO 20957 series.

This document should be used in conjunction with the other parts of the ISO 20957 series.

Stationary training equipment —

Part 1:
General safety requirements and test methods

1 Scope

This document specifies general safety requirements and test methods for indoor stationary training equipment. Other parts of the ISO 20957 series can modify the requirements contained in this document. This document also covers environmental aspects.

It also specifies a classification system (see Clause 4Clause 4).).

This part of ISO 20957document is applicable to all stationary training equipment. This includes equipment for use in training areas of organizations such as sport associations, educational establishments, hotels, sport halls, clubs, rehabilitation centres and studios (classes S and I) where access and control is specifically regulated by the owner (person who has the legal responsibility), equipment for domestic use (class H) and other types of equipment including motor driven equipment as defined in 3.13.1.

The requirements of a specific partother parts of the ISO 20957 series take priority over the corresponding requirements of this general standard.

This document does not apply to stationary training equipment intended for outdoor use. It also does not apply to stationary training equipment intended for use by children under 14 years old, unless such stationary training equipment is intended for educational purposes in schools and other pedagogical contexts for children under the supervision of a qualified adult instructor.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN IEC 60335-1:2023, *Household and similar electrical appliances — Safety — Part 1: General requirements*

ENIEC 60601--1:2006, *Medical electrical equipment — Part 1: General requirements for basic safety and essential performance*

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
stationary training equipment
equipment that is not moved as a unit during use and either stands freely on the floor or is attached to a floor, wall, ceiling or other fixed structure

Note 1 to entry: Stationary training equipment can be used for example for the following:

a) ~~a)~~ body building or body shaping;

b) ~~b)~~ health/fitness training;

c) ~~c)~~ physical education;

d) ~~d)~~ training specific to competition and related sports activities;

e) ~~e)~~ preventive treatment and rehabilitation.

3.2
training area
area occupied by the user and the equipment while exercising over the full *range of movement* (3.5~~(3.5)~~)

3.3
free area
area in addition to the *training area* (3.2~~(3.2)~~) which is required for the user or third party to access the equipment and/or conduct an emergency dismount outside the full *range of movement* (3.5~~(3.5)~~)

3.4
accessible hand and foot area
area accessible to the hand or foot of either a user or a third party when the equipment is in normal use, during exercise set-up, grasping, adjusting the equipment or the position of the body for exercise

3.5
range of movement
space in which the user or part of the equipment is moving according to the instructions given in the user's manual

3.6
body mass
maximum specified user mass as described in the user's manual or 100 kg, whichever is greater

3.7
maximum training load
maximum load specified by the manufacturer in the user's manual and in the marking

3.8
heart rate control mode
programme that allows the user to maintain training with a predetermined heart rate level by adjusting the loading parameters automatically to the user's heart rate response

Note 1 to entry: Loading parameters can be resistance or speed or incline or a combination of these.

3.9
heart rate measurement system
system which displays the heart rate of the user

3.10
display
device that provides information to the user

3.11
squeeze point
place where parts of the equipment can move against each other, or against a fixed area, which can result in parts of user's or third person's body being crushed

3.12
shear point
place where part of the equipment can move past a fixed or moving part, or past a fixed area, which can result in parts of user's or third person's body being cut

3.13
cycle
movement associated to one complete operation of a single component from start to start of a repetitive process

EXAMPLE A typical component is a pedal, handlebar or seat.

3.14
most onerous position
position that maximizes the likelihood of a negative outcome

EXAMPLE The most onerous position in the case of stability is the orientation of the equipment in which it is least stable, i.e. the centre of gravity of the equipment is as high as possible and/or outside or as close as possible to the edge of equipment's base while the equipment is placed on a tilted table.

3.15
flywheel
rotating mass designed to create inertia

3.16
guard
barrier between the user and the hazard

3.17
protective cover
cover provided to protect the user from inadvertent access to hazardous parts of the training equipment

Note 1 to entry: Hazardous parts include moving parts, gear systems, hot surfaces, etc.

4 Classification

4.1 General

Equipment shall be classified in accordance with accuracy and usage classes as described in 4.24.2 and 4.34.3..

If the intended use of the equipment is for more than one usage class, it shall fulfil the requirements of each class.