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Stationary training equipment —

Part 6:
Treadmills, additional specific safety requirements and test methods

Équipement d'entraînement fixe —

Partie 6: Simulateurs de course — Exigences spécifiques de sécurité et méthodes d'essai supplémentaires

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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 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 on 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 the following URL: www.iso.org/iso/foreword.html.

ISO 20957-6 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 136, *Sports, playground and other recreational facilities and equipment*, and was adopted with changes by ISO Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment*.

This second edition cancels and replaces the first edition (ISO 20957-6:2005), which has been technically revised.

It is intended to carry out the next revision of EN 957-6 and ISO 20957-6 in collaboration between CEN/TC 136 and ISO/TC 83 in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

The main changes compared to the previous edition are as follows:

— adoption of EN 957-6:2010+A1:2014 with following changes:

— Deletion of “a” in the key to Figure 2, since “a” is not included anymore in Figure 2;

— Inclusion of Footnote 1 to EN 957-1:2005 in the normative references;

The changes of EN 957-6:2010+A1:2014 compared to EN 9576:2011 are as follows

— specifications and definitions amended;

— requirements and test methods for the transmission elements and rotating parts amended;

- requirements and test methods for safety stop amended;
- requirements for the static loading, especially for class S amended;
- requirement for the endurance testing of class I added;
- requirements and test methods for treadmills with front handlebar and side handrails amended;
- requirements for the footrail amended;
- requirements for the permanent marking of the running surface added;
- requirements and test methods for the acceleration of power driven treadmills added;
- requirements and test methods for folding treadmills added;
- requirements for the heart rate control mode added;
- requirements for the marking of the maximum lateral position added;
- requirements for the test report added;
- additional instructions for use extended;

— editorial changes.

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

The European Standard amends and supplements EN 957-1. The requirements of this specific standard take precedence over those in EN 957-1.

This document is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

Stationary training equipment — Part 6: Treadmills, additional specific safety requirements and test methods

1 Scope

This European Standard specifies safety requirements and test methods for treadmills in addition to the general safety requirements and test methods of EN 957-1. It is intended that EN 957-6 is applied together with EN 957-1.

This part of EN 957 deals with significant hazards, hazardous situations and events relevant to stationary training equipment used as intended and under the conditions of misuse foreseeable by the manufacturer (see Clause 4).

EN 957-6 is applicable to power-driven as well as to non-power/manually driven training equipment type treadmills (hereafter referred to as treadmills) with the classes S, H and I and classes A, B and C regarding accuracy.

This document is not applicable to treadmills which are manufactured before the date of its publication as a European Standard.

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 957-1:2005, *Stationary training equipment — Part 1: General safety requirements and test methods*[1]

EN 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1:2010, modified)*

EN 60601-1, *Medical electrical equipment — Part 1: General requirements for basic safety and essential performance (IEC 60601-1:2005)*

EN ISO 11201, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO 11201)*

EN ISO 11202, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections (ISO 11202)*

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

EN ISO 12947-1:1998, *Textiles — Determination of the abrasion resistance of fabrics by the Martindale method — Part 1: Martindale abrasion testing apparatus (ISO 12947-1:1998)*

ISO 5904, *Gymnastic equipment — Landing mats and surfaces for floor exercises — Determination of resistance to slipping*

[1] Note: EN 957-1:2005 has been replaced by EN ISO 20957-1:2013. This modification will be included in the next revision of EN 957-1.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 957-1:2005 and the following apply.

3.1
treadmill
training equipment with a running surface on which walking or running activity takes place, where the feet are free to leave the running surface

3.2
length of the running surface
usable length of the running surface

Note 1 to entry: See *l* in Figure 2.

Note 2 to entry: Figure 1 is intended only to give examples and to illustrate the names of the components.

3.3
width of the running surface
usable width of the running surface excluding rear roller guards

Note to entry: See *b* in Figure 2.

3.4
front handlebar
frontally located bar provided for partially supporting the user's weight with the user's arm(s) and enhancing stability whilst exercising and to assist in emergency dismounts

EXAMPLE At low speed and high inclines.

3.5
side handrail
rail(s) located at the sides of the running surface provided for partially supporting the user's weight with the user's arm(s) and enhancing stability whilst exercising and to assist in emergency dismounts

3.6
foot rail
area beside the running surface intended for the user to stand on when mounting, dismounting or during a pause in the exercise

3.7
emergency dismount
act of the user quickly interrupting the exercise by getting off the running surface

Note to entry: Emergency dismount can be done e.g. by grabbing the front handlebar or both side handrails and jumping with *both* feet on the foot rails.

3.8
heart rate control mode
programme that allows the user to train maintaining a predetermined pulse level by adjusting the speed and/or incline automatically according to the actual pulse of the user

3.9
display
device that provides information to the user

