



SLOVENSKI STANDARD
SIST EN 957-9:2003
01-oktober-2003

Stationary training equipment - Part 9: Elliptical trainers, additional specific safety requirements and test methods

Stationäre Trainingsgeräte - Teil 9: Ellipsen-Trainer, zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren

Appareils d'entraînement fixes - (Partie 9: Appareils d'entraînement elliptiques, exigences spécifiques de sécurité et méthodes d'essai supplémentaires)

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Ta slovenski standard je istoveten z: EN 957-9:2003

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ICS:

97.220.30

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English version

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Stationäre Trainingsgeräte - Teil 9: Ellipsen-Trainer,
zusätzliche besondere sicherheitstechnische
Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 25 March 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 957-9:2003) has been prepared by the Technical Committee CEN/TC 136 “Sports, playground and other recreational equipment”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2003, and conflicting national standards shall be withdrawn at the latest by December 2003.

This European Standard is one of the series EN 957 “Stationary training equipment” which consists of the following parts:

- Part 1: General safety requirements and test methods
- Part 2: Strength training equipment, additional specific safety requirements and test methods
- Part 4: Strength training benches, additional specific requirements and test methods
- Part 5: Pedal crank training equipment, additional specific safety requirements and test methods
- Part 6: Treadmills, additional specific safety requirements and test methods
- Part 7: Rowing machines, additional specific safety requirements and test methods
- Part 8: Steppers, stairclimbers and climbers, additional specific safety requirements and test methods
- Part 9: Elliptical trainers, additional specific safety requirements and test methods
- Part 10: Exercise bicycles with a fixed wheel or without freewheel, additional specific safety requirements and test methods

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This Part of EN 957 amends and supplements EN 957-1. The requirements of this specific European Standard take priority over those in the general standard.

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1 Scope

This Part of EN 957 specifies safety requirements for elliptical trainers also described as cross training machines in addition to the general safety requirements of EN 957-1 and should be read in conjunction with it.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 71-1, *Safety of toys — Part 1: Mechanical and physical properties*.

EN 957-1:1996, *Stationary training equipment — Part 1: General safety requirements and test methods*.

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

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 957-1:1996 and the following apply:

3.1

elliptical trainer

manually operated training equipment which can produce a continuous reciprocating elliptical foot action which can include upper body training devices. Elliptical training functions as a continuous and reciprocating closed loop cycle

3.2

footplatform

pedal

device designed to support the foot whilst correctly performing the exercise procedure determined by the manufacturer

3.3

footplatform guard

pedal guard

fence

rigid part of the footplatform structure which is designed to prevent the foot moving off the footplatform whilst correctly performing the exercise procedure determined by the manufacturer

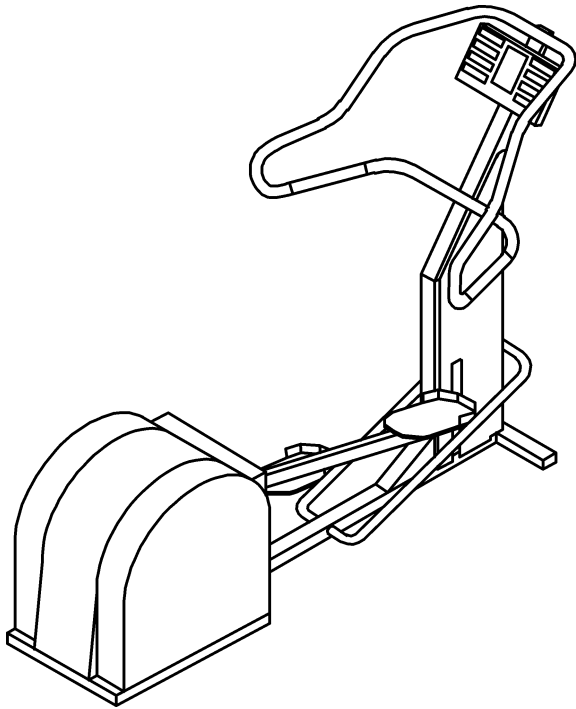
3.4

cycle

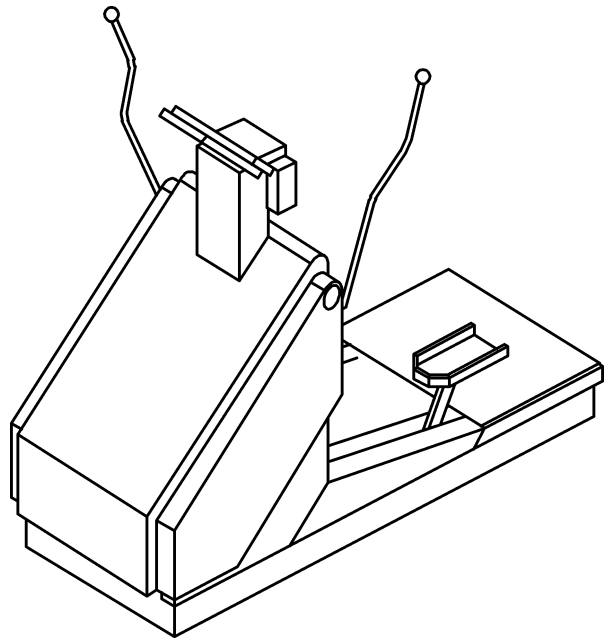
one cycle of an elliptical trainer equals from start to start through the full range of motion (360°)

4 Classification

The classification as defined in clause 4 of EN 957-1:1996 applies.

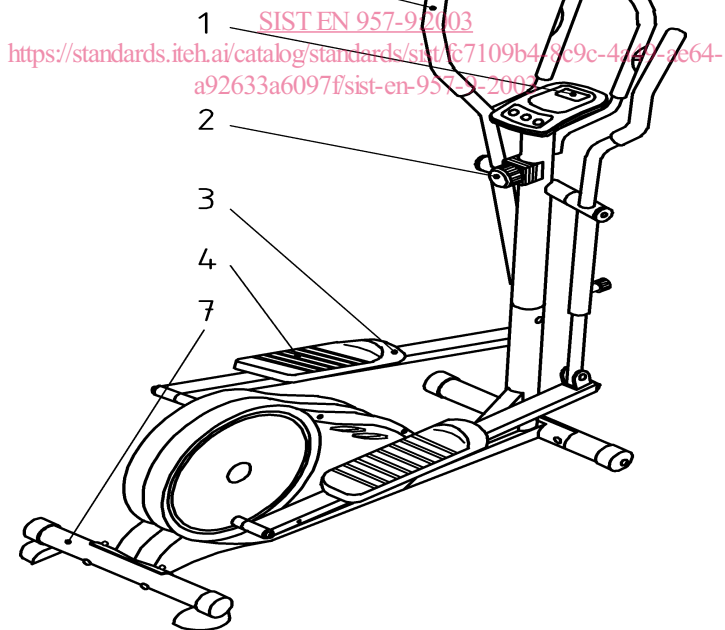


a) Elliptical trainer without movable handlebars



b) Elliptical trainer with movable handlebar

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c) Elliptical trainer with movable and fixed handlebar

Key

- 1 Display
- 2 Resistance
- 3 Footplatform guard
- 4 Footplatform (pedal)
- 5 Movable handlebar
- 6 Fixed handlebar
- 7 Frame

Figure 1 — Examples of elliptical trainers

5 Safety requirements

5.1 General

Depending on the design of the piece of equipment the following additional requirements to EN 957-1 shall apply as appropriate.

5.2 External construction

5.2.1 Squeeze and shear points within the accessible area

Elliptical trainers shall be free of squeeze and shear points.

Test in accordance with 6.2.

5.2.2 Temperature rise

When tested in accordance with 6.3, accessible parts of the elliptical trainer shall not have a temperature greater than 65 °C.

5.3 Intrinsic loading

5.3.1 Class H

Each piece of equipment of class H loaded with the user's body mass shall withstand 2,5 times the body mass (100 kg) without breakage.

Test in accordance with 6.4.

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5.3.2 Class S

The training equipment shall withstand four times the body mass (100 kg) without breakage.

Each piece of equipment of class S loaded with the user's body mass shall withstand two times the body mass (100 kg).

When tested according to 6.4, supports (e.g. load-bearing surfaces) shall not be deformed by more than $f = 1/100$, cantilever supports (cantilever surfaces) by more than $f = 1/150$ and other dimensions by more than 1 %.

A body mass of 100 kg is taken as the nominal load.

After the test

- supports (e.g. load-bearing surfaces) shall not be deformed by more than $f = 1/100$;
- cantilever supports (cantilever surfaces) by more than $f = 1/150$;
- other dimensions by more than 1/100.

5.4 Handlebars

The handlebars shall show no permanent deformation of more than 3 % when tested in accordance with 6.5.

To reduce the danger of penetration the section of the tip of the handlebar shall have a minimum diameter of 50 mm. Test in accordance with 6.1.1.