



NSAI
Standards

Irish Standard
I.S. EN ISO 20957-9:2016

Stationary training equipment - Part 9:
Elliptical trainers, additional specific safety
requirements and test methods (ISO 20957-
9:2016)

I.S. EN ISO 20957-9:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN ISO 20957-9:2016

Published:

2016-11-23

This document was published under the authority of the NSAI and comes into effect on:

2016-12-12

ICS number:

97.220.30

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN ISO 20957-9:2016 is the adopted Irish version of the European Document EN ISO 20957-9:2016, Stationary training equipment - Part 9: Elliptical trainers, additional specific safety requirements and test methods (ISO 20957-9:2016)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

EN ISO 20957-9

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2016

ICS 97.220.30

Supersedes EN 957-9:2003

English Version

**Stationary training equipment - Part 9: Elliptical trainers,
additional specific safety requirements and test methods
(ISO 20957-9:2016)**

Équipement d'entraînement fixe - Partie 9: Appareils
d'entraînement elliptiques, exigences spécifiques de
sécurité et méthodes d'essai supplémentaires (ISO
20957-9:2016)

Stationäre Trainingsgeräte - Teil 9: Ellipsen-Trainer,
zusätzliche besondere sicherheitstechnische
Anforderungen und Prüfverfahren (ISO 20957-9:2016)

This European Standard was approved by CEN on 14 August 2016.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN ISO 20957-9:2016 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 20957-9:2016) has been prepared by Technical Committee ISO/TC 83 “Sports and other recreational facilities and equipment” in collaboration with Technical Committee CEN/TC 136 “Sports, playground and other recreational facilities and 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 May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 957-9:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 20957-9:2016 has been approved by CEN as EN ISO 20957-9:2016 without any modification.

This page is intentionally left blank

**INTERNATIONAL
STANDARD**

**ISO
20957-9**

Second edition
2016-10-15

Stationary training equipment —

Part 9:

**Elliptical trainers, additional specific
safety requirements and test methods**

Équipement d'entraînement fixe —

*Partie 9: Appareils d'entraînement elliptiques, exigences spécifiques
de sécurité et méthodes d'essai supplémentaires*



Reference number
ISO 20957-9:2016(E)

© ISO 2016

ISO 20957-9:2016(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification	2
5 Safety requirements	4
5.1 General.....	4
5.2 Squeeze and shear points of external construction within the accessible area.....	4
5.3 Temperature rise of external construction.....	4
5.4 Handlebars.....	4
5.4.1 Movable handlebars.....	4
5.4.2 Non-movable handlebars.....	4
5.4.3 Seat handlebars.....	4
5.5 Footplatforms.....	5
5.5.1 Non-slip surface.....	5
5.5.2 Guard.....	5
5.6 Stability.....	5
5.7 Endurance.....	5
5.8 Seat system.....	5
5.9 Additional requirements for class A.....	5
5.10 Additional requirements for class B.....	6
5.11 Additional requirements for class C.....	6
5.12 Additional instructions for use.....	6
5.13 Additional warnings.....	6
6 Test methods	6
6.1 General.....	6
6.1.1 Dimensional check.....	6
6.1.2 Visual examination.....	6
6.1.3 Performance test.....	6
6.2 Testing of squeeze and shear points.....	7
6.3 Testing of temperature rise.....	7
6.4 Testing of intrinsic loading.....	8
6.5 Testing of handlebars.....	8
6.5.1 Movable handlebars.....	8
6.5.2 Non-movable handlebars.....	9
6.5.3 Seat handlebars.....	9
6.6 Testing of stability.....	9
6.7 Endurance testing.....	9
6.7.1 Speed-independent elliptical trainers.....	9
6.7.2 Speed-dependent elliptical trainers.....	9
6.8 Testing of seat system.....	9
6.9 Testing of additional requirements for class A.....	10
6.9.1 General.....	10
6.9.2 Speed-independent elliptical trainers.....	10
6.9.3 Speed-dependent elliptical trainers.....	11
6.10 Testing of power repeatability for class B.....	11
6.11 Testing of friction.....	12
7 Test report	13
Bibliography	14

ISO 20957-9:2016(E)

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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 83, *Sports and other recreational facilities and equipment*.

ISO 20957-9 was prepared by Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment* and by Technical Committee CEN/TC 136, *Sports, playground and other recreational facilities and equipment* in collaboration.

This second edition cancels and replaces the first edition (ISO 20957-9:2005), which has been technically revised. The main changes are as follows:

- a) publication as an EN ISO;
- b) formulation aligned with ISO 20957-1;
- c) [Clause 5](#) specified and restructured;
- d) [Clause 6](#) specified and restructured;
- e) Normative references updated.

ISO 20957 consists of the following parts, under the general title, *Stationary training equipment*:

- *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 safety 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*

ISO 20957-9:2016(E)

Introduction

This part of ISO 20957 contains additional requirements to ISO 20957-1. The requirements of this specific International Standard take precedence over those in the general standard.

Stationary training equipment —

Part 9:

Elliptical trainers, additional specific safety requirements and test methods

1 Scope

This part of ISO 20957 specifies additional safety requirements for elliptical trainers in addition to the general safety requirements of ISO 20957-1.

This part of ISO 20957 specifies safety requirements for cardiovascular equipment with a closed pattern motion and/or a reciprocating motion, where the user's feet are designed to be in contact with the footplatform, but not including steppers, performed from either a standing or seated position.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4649:2010, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 20957-1:2013, *Stationary training equipment — Part 1: General safety requirements and test methods*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 20957-1 and the following apply.

3.1

elliptical trainer

stationary training equipment which can produce a continuous closed pattern motion and/or a reciprocating motion similar to an elliptical type of foot action used from a seated or standing position and can include upper body training devices

3.2

footplatform

surface designed to support the foot whilst performing the exercise determined by the manufacturer or for user mounting and dismounting

3.3

footplatform guard

part of the structure designed to help prevent the foot from moving off the footplatform to the inside or front

3.4

movable handlebar

handlebar that is linked to the pedals and moves during the exercise

EXAMPLE Levers used for upper body training.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-