



International
Standard

ISO 20957-1

**Stationary training equipment —
Part 1:
General safety requirements and
test methods**

Équipement d'entraînement fixe —

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

**Third edition
2024-11**

Reference number
ISO 20957-1:2024(en)

Full document details: [ISO 20957-1-2024](#)

© ISO 2024  **Documents**
Document Sharing Hub



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, 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
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification	3
4.1 General	3
4.2 Accuracy classes	3
4.3 Usage classes	3
5 Safety requirements	4
5.1 General	4
5.2 Stability	4
5.3 External construction	4
5.3.1 General	4
5.3.2 Edges and corners	4
5.3.3 Tube ends	4
5.3.4 Squeeze and shear points	5
5.3.5 Weights and other resistance means	5
5.4 Entrapment of the user	5
5.5 Adjustment components and locking mechanisms	5
5.6 Ropes, belts, chains and attachment components	6
5.6.1 General	6
5.6.2 Ropes and belts	6
5.6.3 Rope and belt guides	6
5.7 Pull-in points	6
5.7.1 General	6
5.7.2 Pulleys	6
5.7.3 Chains, gears and sprockets	6
5.8 Hand grips	7
5.8.1 Integral handgrips	7
5.8.2 Applied handgrips	7
5.8.3 Rotating handgrips	7
5.9 Endurance	7
5.10 Isometric test function	7
5.11 Heart rate measurement system	7
5.11.1 Indication	7
5.11.2 Heart rate control mode	7
5.12 Electrical safety	8
5.13 Loading	8
5.14 Care and maintenance	8
5.15 Assembly instructions	9
5.16 General instructions for use	9
5.17 Marking	10
5.17.1 Permanent marking	10
5.17.2 Additional marking	10
6 Test methods	10
6.1 Test conditions	10
6.2 Stability test	11
6.2.1 Test in training position	11
6.2.2 Test in folded or storage position	11
6.3 External construction	11
6.3.1 Test of edges and corners	11
6.3.2 Tube ends	11

ISO 20957-1:2024(en)

6.3.3	Testing of squeeze points and shear points.....	11
6.3.4	Weights and other resistant means.....	11
6.3.5	Testing of pull-in points	11
6.4	Testing of entrapment.....	12
6.5	Adjustment components and locking mechanisms.....	12
6.6	Tests for ropes, belts, chains and attachment components.....	12
6.7	Testing of rope and belt guides.....	12
6.8	Testing of integral handgrips.....	12
6.9	Testing of applied handgrips.....	13
6.10	Testing of rotating handgrips.....	13
6.11	Testing of endurance load.....	13
6.12	Testing of isometric equipment.....	13
6.13	Testing of indicator of the heart rate measurement system.....	13
6.14	Testing of the heart rate control mode	13
6.15	Load testing.....	13
6.16	Testing of care and maintenance, assembly instructions, general instructions for use and marking.....	14
6.17	Test report.....	14
Annex A (informative) Examples for carrying out load testing.....		15
Bibliography		18

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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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 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](#) was updated;
- [Clause 3](#) was updated by removing, renaming, and adding entries;
- [Clause 5](#) was updated so that [5.3.4](#) combines requirements for squeeze and shear points and [5.13](#) combines loading requirements;
- [Clause 6](#) was updated so that [6.15](#) creates a single test method for loading testing;
- [Annex A](#) was added to provide informative examples for carrying out load testing.

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 4](#)).

This document 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 [3.1](#).

The requirements of other 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 the age of 14 years, 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.

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

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

IEC 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) body building or body shaping;
- b) health/fitness training;
- c) physical education;
- d) training specific to competition and related sports activities;
- 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](#))

3.3

free area

area in addition to the *training area* ([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](#))

3.4

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