
Stationary training equipment —

Part 8:

**Steppers, stairclimbers and climbers —
Additional specific safety requirements
and test methods**

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Équipement d'entraînement fixe —

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Partie 8. Monte-escaliers, escalators et simulateurs d'escalade —

Exigences spécifiques de sécurité et méthodes d'essai supplémentaires

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Published in Switzerland

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 20957-8 was prepared by CEN (as EN 957-8) and was adopted, under a special “fast-track procedure”, by Technical Committee ISO/TC 83, *Sports and recreational equipment*, in parallel with its approval by the ISO member bodies.

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*

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Foreword

This European Standard has been prepared by 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 1998, and conflicting national standards shall be withdrawn at the latest by December 1998.

This standard EN 957 "Stationary training equipment" 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 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*

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

This part of EN 957 concerns the safety of steppers, stairclimbers and climbers.

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

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EN 957-8:1998 (E)

1 Scope

This part of EN 957 specifies safety requirements for stepper, stairclimber and climber machines (hereafter called training equipment) in addition to the general safety requirements of EN 957-1 and should be read in conjunction with it.

This part of EN 957 is applicable to stationary training equipment type stepper, stairclimber and climber training equipment (type 8), within classes S and H and class A for accuracy.

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.

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.*

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3 Definitions

For the purposes of this standard the definitions of EN 957-1 and the following apply.

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3.1 <https://standards.iteh.ai/catalog/standards/sist/3f0525ee-af77-4fa9-b470-aff078d5b659/iso-20957-8-2005>

stepper

stationary training equipment where the feet move in a reciprocating motion without the foot having to leave the foot pedal (see figure 1)

3.2**stairclimber**

Stationary training equipment similar to a moving mechanical staircase or escalator (see figure 2)

NOTE Work is carried out by simulating climbing a conventional staircase.

3.3**Climber**

stationary training equipment that is equipped with feet and hand positions that can be moved in a reciprocating motion (see figure 3)

3.4**dependent action**

movement of each foot pedal linked directly or indirectly

3.5**independent action**

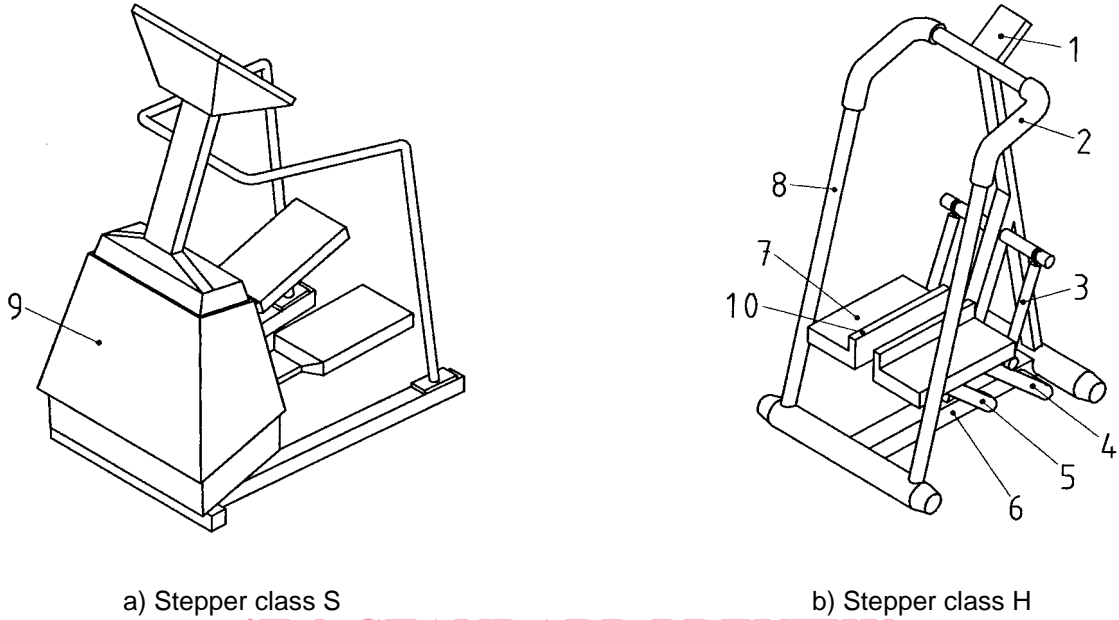
movement of each foot pedal not linked

3.6**step**

downward movement of either foot pedal or stair

**3.7
foot guard**

a raised edge, see figures 1 and 5

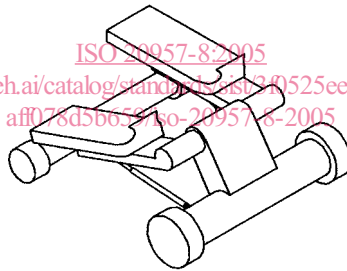


a) Stepper class S

b) Stepper class H

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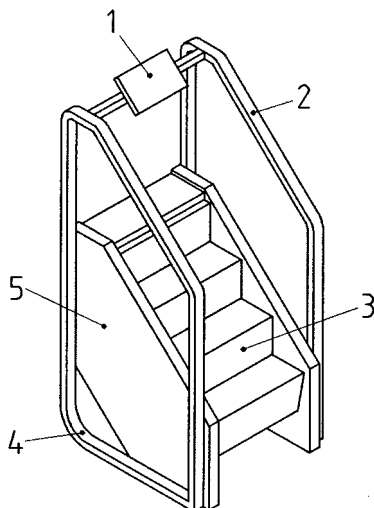
c) Ministepper

Key

- 1 Display
- 2 Hand grip
- 3 Hydraulic piston/resistance
- 4 Lever arm
- 5 Pedal stabilizing arm
- 6 Base frame
- 7 Foot pedal
- 8 Handrail/handlebar
- 9 Housing
- 10 Foot guard

Figure 1 — Examples of steppers

EN 957-8:1998 (E)



Key

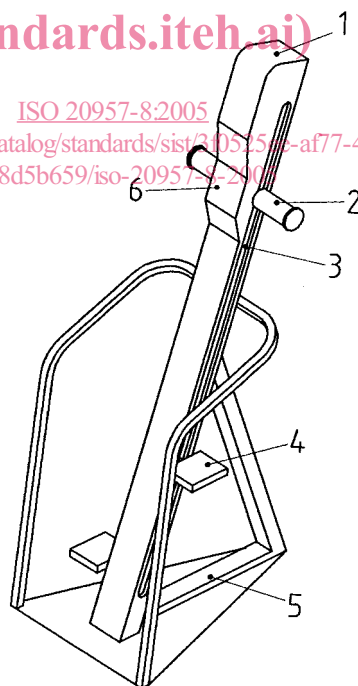
- 1 Display
- 2 Handrail
- 3 Stair
- 4 Base frame
- 5 Housing

Figure 2 — Example of a stairclimber

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Key

- 1 Display
- 2 Movable handgrip
- 3 Track rail
- 4 Foot pedal
- 5 Base frame
- 6 Resistance adjustment

Figure 3 — Example of a climber