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**Nepremična oprema za vadbo - 4. del: Klopi za vadbo moči, dodatne posebne varnostne zahteve in preskusne metode**

Stationary training equipment - Part 4: Strength training benches, additional specific safety requirements and test methods

Stationäre Trainingsgeräte - Teil 4: Kraft-Trainingsbänke, zusätzliche besondere sicherheitstechnische Anforderungen und Prüfverfahren

Appareils d'entraînement fixes - Partie 4: Bancs pour halteres, exigences spécifiques de sécurité et méthodes d'essai supplémentaires

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**Ta slovenski standard je istoveten z: EN 957-4:2006+A1:2010**

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**ICS:**

97.220.30      Oprema za dvoranske športe    Indoor sports equipment

**SIST EN 957-4:2006+A1:2010**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 957-4:2006+A1**

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**Stationary training equipment - Part 4: Strength training  
benches, additional specific safety requirements and test  
methods**

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zusätzliche besondere sicherheitstechnische  
Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 22 May 2006 and includes Amendment 1 approved by CEN on 13 March 2010.

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 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 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 957-4:2006+A1:2010) 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 October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

This document supersedes A1 EN 957-4:2006 A1.

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 includes Amendment 1, approved by CEN on 2010-03-13.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

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*
- *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*

The design of strength training benches need not comply with the figures in this part of EN 957.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

**EN 957-4:2006+A1:2010 (E)****Introduction**

This part of EN 957 concerns the safety of strength training benches.

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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## 1 Scope

This part of EN 957 specifies safety requirements for stationary strength training benches and free-standing barbell racks used to perform exercises during use 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 benches (type 4) (hereinafter referred to as benches) with the classes S, H and I.

## 2 Normative references

The following referenced documents are indispensable for the application 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*

EN 957-2:2003, *Stationary training equipment — Part 2: Strength training equipment, additional specific safety requirements and test methods*

## 3 Terms and definitions

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

## 4 Classification

Clause 4 of EN 957-1:2005 applies. [SIST EN 957-4:2006+A1:2010  
https://standards.iteh.ai/catalog/standards/sist/ea07ce5c-32d1-4cd8-b60e-612f3d757a7c/sist-en-957-4-2006a1-2010](https://standards.iteh.ai/catalog/standards/sist/ea07ce5c-32d1-4cd8-b60e-612f3d757a7c/sist-en-957-4-2006a1-2010)

## 5 Safety requirements

### 5.1 General

Depending on the design of the piece of training equipment the following requirements shall apply as appropriate.

### 5.2 Benches with fixed barbell supports

#### 5.2.1 Rotational stability of the barbell

Overturning of the barbell by an unequal load shall be prevented either by the distance between the supports or safety device.

Test in accordance with 6.2.

#### 5.2.2 Rotational stability of benches with fixed barbell supports

Benches with fixed barbell supports shall be stable when loaded with unequal load at right angles to the longitudinal axis.

Test in accordance with 6.3.

**EN 957-4:2006+A1:2010 (E)****5.2.3 Longitudinal stability**

Benches with fixed barbell supports shall be stable in the longitudinal direction.

Test in accordance with 6.4.

**5.3 Free-standing barbell supports in conjunction with benches**

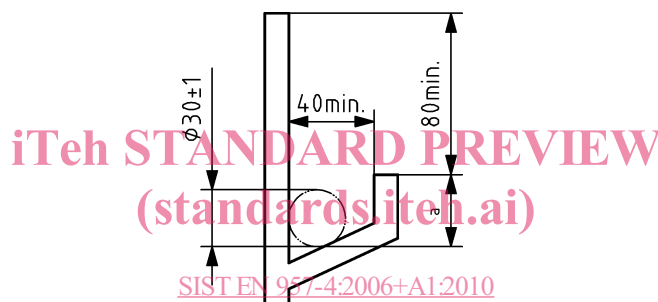
Free-standing barbell supports in conjunction with benches shall have a device for connecting to the ground.

Test in accordance with 6.1.2.

**5.4 Dimensions of the barbell support**

The front part of the support (yoke), when measured with a 30 mm diameter bar, shall have a vertical height of 20 mm to 40 mm (a) above the lowest point of the resting bar and the rear part shall be at least 80 mm higher than the top of the front of the support (yoke) (see Figure 1).

Dimensions in millimetres

**Key**

a) Vertical height of the barbell support, 20 mm to 40 mm

**Figure 1 — Dimensions of the barbell support**

Test in accordance with 6.1.1.

**5.5 Barbell support strength**

**[A<sub>1</sub>]** The rear part of the barbell support shall absorb the loads without impairment of the performance and without breakage, when submitted to a non symmetric barbell impact. **[A<sub>1</sub>]**

Test in accordance with 6.5.

**5.6 Loading**

Loading for benches types H, S and I shall comply with 5.2 of EN 957-2:2003.

**5.7 Barbell support**

Any part of the equipment intended to support free weights, shall be easily accessible to the user while accepting or replacing the barbell.

Test in accordance with 6.1.4.



## 6 Test methods

### 6.1 General

#### 6.1.1 Dimensional check

#### 6.1.2 Visual examination

#### 6.1.3 Tactile examination

#### 6.1.4 Performance test

### 6.2 Testing of rotational stability of the barbell

Place a solid steel bar ( $(1\,600 \pm 50)$  mm long and a diameter of 30 mm max.) centrally on the barbell supports. Then place one weight disk (10 kg for class H, 20 kg for class S) on one side of the steel bar with mid-plane of the disk positioned 200 mm from the end of the steel bar, see Figure 2. If the bench is designed for use with an Olympic size steel bar use instead of the  $(1\,600 \pm 50)$  mm steel bar an Olympic steel bar of  $(2\,200 \pm 50)$  mm and follow the procedure above.

Dimensions in millimetres

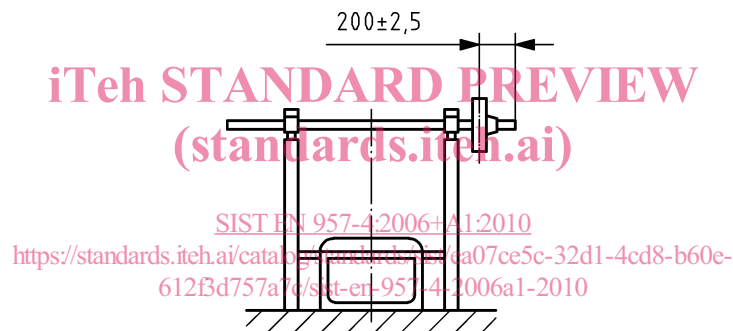


Figure 2 — Stability test under unequal load

### 6.3 Testing of rotational stability of benches with fixed barbell supports

Test as specified in 6.2, but with the barbell fixed.

### 6.4 Testing of longitudinal stability

Position the bench on a  $10^\circ$  slope (see Figure 3) and place a barbell loaded in accordance with the manufacturer's maximum load, but with a minimum of 50 kg, on the barbell support in the highest position.

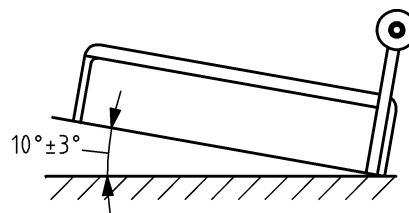


Figure 3 — Stability test in longitudinal direction