



SLOVENSKI STANDARD
SIST EN 916:2003
01-julij-2003

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SIST EN 916:1996

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Gymnastic equipment - Vaulting boxes - Requirements and test methods including safety

Turngeräte - Sprungkästen - Anforderungen und Prüfverfahren einschließlich Sicherheit

Matériel de gymnastique - Plints - Exigences et méthodes d'essai y compris la sécurité

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Ta slovenski standard je istoveten z: ~~SIST EN 916~~ EN 916:2003

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English version

Gymnastic equipment - Vaulting boxes - Requirements and test methods including safety

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Turngeräte - Sprungkästen - Anforderungen und Prüfverfahren einschließlich Sicherheit

This European Standard was approved by CEN on 28 November 2002.

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.

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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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 916:2003) 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 September 2003, and conflicting national standards shall be withdrawn at the latest by September 2003.

This European Standard is one of several standards, each of which deals with a particular type or a particular group of gymnastic equipment.

This document supersedes EN 916:1996. The modifications of this second edition refer to the editorial rewording of the scope and to the reduction of the force for testing the stability from 40 % of the self weight to 20 % and from a minimum of 90 N to 70 N.

This was necessary as the formula of EN 913 proved not to be applicable for vaulting boxes.

This European Standard should be read in conjunction with EN 913.

In this European Standard the annex A is informative.

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.

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1 Scope

This European Standard specifies functional requirements (see clause 3) and specific safety requirements for five types of vaulting boxes (see Table 1) in addition to the general safety requirements in EN 913.

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 913:1996, *Gymnastic equipment — General safety requirements and test methods*.

3 Requirements

3.1 Classification

Vaulting boxes shall be classified by the design (types) as shown in Table 1.

Table 1 — Types

Type	Description	Example
1	rectangular vaulting box with individual box-sections and padded top box	Figure A.1
2	rectangular mini vaulting box with padded top	Figure A.2
3	pyramidal vaulting box with individual box sections and padded top box	Figure A.3
4	padded vaulting tables with supported frame	Figure A.4
5	vaulting box or table with any other design which fulfils the safety requirements of this standard and dimensions of padded top surface	Table 2

3.2 Dimensions

Top surfaces of vaulting boxes shall comply with the dimensions specified in Table 2.

Table 2 — Dimensions of top surfaces

Dimensions in millimetres

Range	Length <i>l</i>	Width <i>b</i>
maximum	1 605	705
minimum	395	395

3.3 Performance of padded box top

When tested according to EN 913:1996, annex C using a drop height of 300 mm, the peak acceleration shall not exceed 500 m/s^2 (50 g).

4 Safety requirements

4.1 General

Vaulting boxes shall comply with the requirements of EN 913, except insofar as they are modified by this European Standard.

4.2 Stability

When tested according to 5.1, the vaulting box shall not rotate about the base, nor shall any of the sections separate in normal use when subjected to a horizontal force representing 20 % of the self weight of the vaulting box.

4.3 Strength

When tested according to 5.2, the vaulting box or any vertical sided individual section shall show no sign of loose bonds, breaking or cracking.

4.4 Durability of construction

When tested according to 5.3, sections shall not show any loose joints, breakage, cracking or change in diagonal dimensions greater than 3 mm.

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5 Test methods

5.1 Determination of stability

5.1.1 Principle

A horizontal force is applied to the top of the equipment and any movement of the top is noted.

5.1.2 Test temperature

Condition the equipment for a minimum of 3 h at a temperature of $(23 \pm 2) \text{ }^\circ\text{C}$.

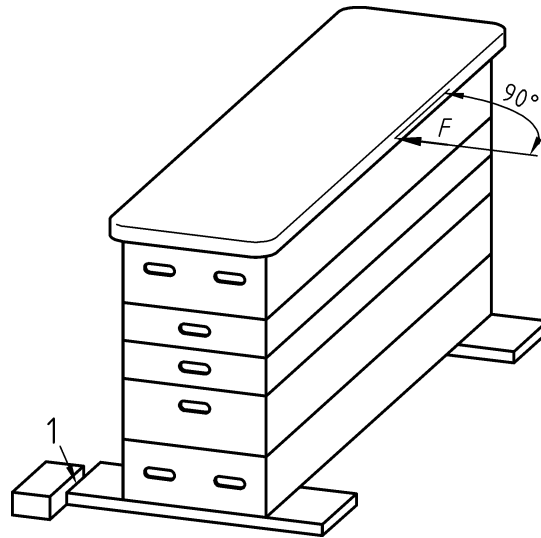
5.1.3 Procedure

Carry out the test at maximum height.

Prevent the vaulting box from sliding, see Figure 1.

Apply a horizontal force calculated from 20 % of the self weight of the equipment with a minimum of 70 N to the highest point in the centre of the top (see Figure 1).

Note the first movement of the top of the vaulting box.



Key
1 point of rotation
F Force

Figure 1 — Determination of stability

5.1.4 Expression of results iTeh STANDARD PREVIEW
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Express the level of stability by noting if rotation has occurred.

5.2 Determination of strength

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5.2.1 Principle

Load the equipment with a calculated vertical force and examine for fracture or other damage.

5.2.2 Apparatus

A rigid plate of dimensions (200 mm × 200 mm × 10 mm) ± 1 mm with a radius of the lower edges of minimum 3 mm.

5.2.3 Test temperature

Condition the equipment for a minimum of 3 h at a test temperature of (23 ± 2) °C.

5.2.4 Procedure

5.2.4.1 Whole vaulting box

Apply a vertical force of 2 850 N at the centre of the top of the equipment for 1 min ⁺¹⁰₀ s.

Note any loose bonds, breaking or cracking of the equipment.

5.2.4.2 Sections

Apply a vertical force of 1 700 N at the centre of each long side of the equipment for 1 min ⁺¹⁰₀ s.

Note any loose bonds, breaking or cracking of the equipment.

5.2.5 Expression of results

Express the strength by whether loose bonds, breaking or cracking has occurred.

5.3 Determination of durability of construction

5.3.1 Principle

A section is dropped on a concrete floor from a specified height and examined for damage and the pre-test and post-test variation of diagonal dimensions is measured and the difference is determined.

5.3.2 Procedure

Before testing, measure the diagonal dimensions of a section. Drop the section onto a concrete floor, from a minimum height of 120 mm perpendicular to the section's diagonal axis. Carry out the test five times for each corner, taking diagonally opposite corners in turn.

5.3.3 Expression of results

Note any breakage or loose and easily moveable connections. Record the pre-test and post-test variation of diagonal dimensions in millimetres.

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6 Warning

The manufacturer shall provide a warning notice that the equipment should be used under controlled supervision.

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7 Marking

- a) marking shall comply with EN 913;
- b) type according to Table 1.