



# SLOVENSKI STANDARD

## SIST EN 749:1996 + A1:1998

01-september-1998

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Playing field equipment - Handball goals - Functional and safety requirements, test methods (including amendment 1:1998)

**iTeh STANDARD PREVIEW**

Spielfeldgeräte - Handballtore - Funktionelle und sicherheitstechnische Anforderungen, Prüfverfahren (einschließlich Änderung 1:1998)

Equipement de jeux - Buts de handball - Exigences fonctionnelles et de sécurité, méthode d'essai (amendement 1:1998, inclus)

**Ta slovenski standard je istoveten z: EN 749:1995 + A1:1998**

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### **ICS:**

97.220.30	Oprema za dvoranske športe	Indoor sports equipment
97.220.40	Oprema za športe na prostem in vodne športe	Outdoor and water sports equipment

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 749:1995+A1

April 1998

ICS 97.220.30; 97.220.40

Descriptors: sports, handball, sports equipment, goals, sports nets, specifications, designation, dimensions, safety, tests, marking

English version

## Playing field equipment - Handball goals - Functional and safety requirements, test methods (including amendment 1:1998)

Equipement de jeux - Buts de handball - Exigences fonctionnelles et de sécurité, méthodes d'essai (amendement 1:1998, inclus)

Spielfeldgeräte - Handballtore - Funktionelle und sicherheitstechnische Anforderungen, Prüfverfahren (einschließlich Änderung 1:1998)

This amendment A1 modifies the European Standard EN 749:1995; it was approved by CEN on 23 March 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This Amendment EN 749:1995+A1:1998 to EN 749:1995 has been prepared by Technical Committee CEN/TC 136 "Sports, playground and other recreational equipment", the secretariat of which is held by DIN.

This Amendment to the European Standard EN 749:1995 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 1998, and conflicting national standards shall be withdrawn at the latest by October 1998.

This European Standard replaces EN 749:1995.

The amendment 1 to EN 749:1995 added the requirement and test method regarding strength in EN 748 and the additional requirement regarding steel cup hooks have been implemented in this standard as well.

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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## 1 Scope

This standard specifies the functional requirements for 2 types (see clause 3) and the safety requirements (see clause 4) for handball goals.

It is applicable to handball goals for training and competition.

NOTE: Goals according to this standard can also be used for indoor football and indoor hockey.

## 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.

prEN 1176-1

Playground equipment – Part 1: General safety requirements and test methods

EN 22768-1

General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1 : 1989)

ISO 2062

Textiles – Yarns from packages – Determination of single-end breaking force and elongation at break

ISO 2307

Ropes – Determination of certain physical and mechanical properties

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## 3 Requirements

### 3.1 Classification

Handball goals shall be classified by the design (types) as shown in table 1.

**Table 1: Types**

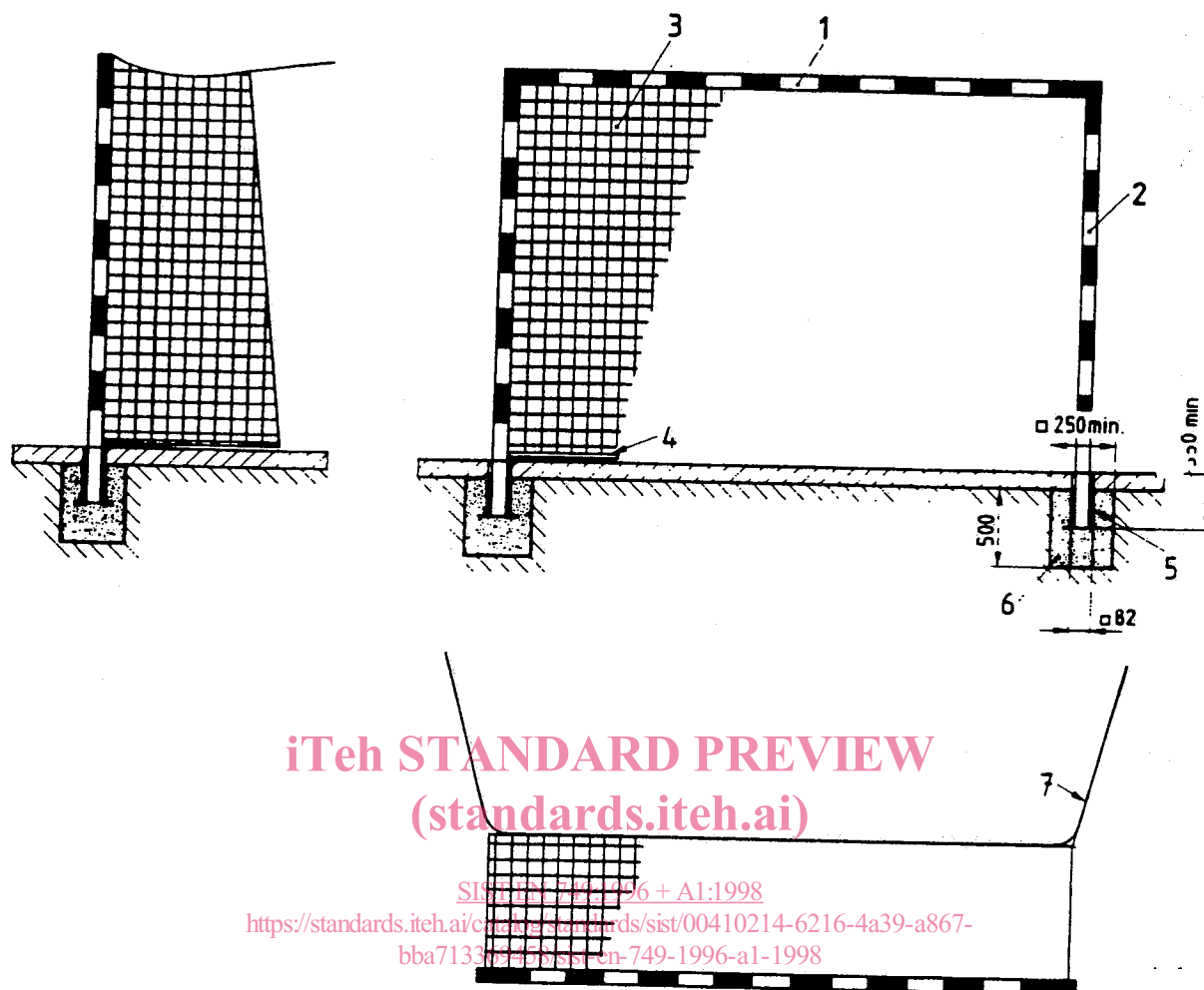
Type	Description
1	Handball goal with ground sockets
2	Freestanding handball goal

### 3.2 Dimensions

Handball goals shall comply with the dimensions shown in figures 1 and 2.

General tolerances: ISO 2768 – v.

Dimensions in millimetres



- |                 |                  |
|-----------------|------------------|
| 1 Crossbar      | 5 Ground socket  |
| 2 Upright       | 6 Concrete block |
| 3 Net           | 7 Net head line  |
| 4 Net weighting |                  |

Other dimensions as given in figure 2.

**Figure 1: Handball goal type 1**

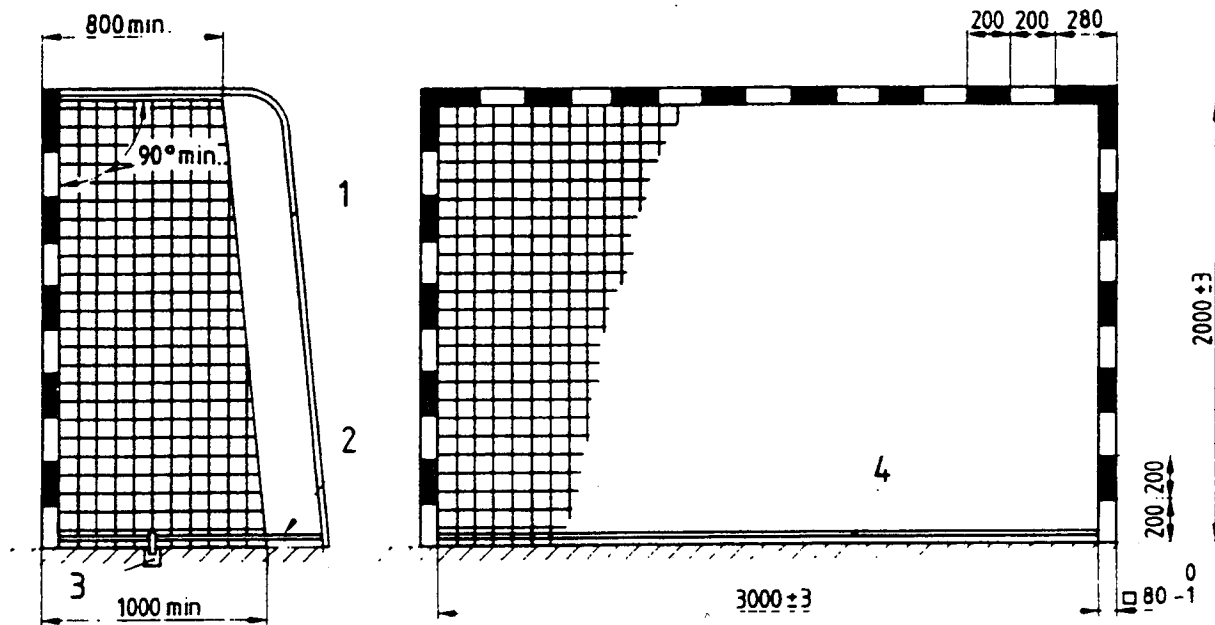
Example for foundation see annex A.

A handball goal type 1 consists of:

- the goal frame (2 uprights and 1 crossbar) including net fixings and ground sockets;
- 1 net with net head line and net weighting.

Handball goals type 1 may also be made with net supporting brackets and bottom back bar like type 2; other goals can be supplied as a folding up type with a supporting frame or wall fixing.

Dimensions in millimetres



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90° min.

1 Net supporting brackets  
2 Bottom side bar

3 Example of anti-tilting device  
4 Bottom back bar

Figure 2: Handball goal type 2

A handball goal type 2 consists of:

- the goal frame (2 uprights and 1 crossbar) including net fixings;
- 2 net supporting brackets;
- 2 bottom side bars;
- anti-tilting devices (at least one at each side);
- 1 bottom back bar;
- 1 net.

### 3.3 Material

The goal frame may be made of timber, steel, light metal or plastics.

Net supporting brackets and bottom side and back bars shall be made of light metal and/or steel protected against corrosion (e.g. hot galvanized, powder coated or painted).

The net fixings to the goal shall be made of non-corrosive metal or of plastic material.

For the net, net yarns may be used made of synthetic or natural fibres.

For the net head line synthetic ropes shall be used.

NOTE: Synthetic net yarn and net head lines should contain a minimum of 2,5 % UV-stabilizer.

### 3.4 Design

#### 3.4.1 Goal frame

The construction shall be sufficiently secure to withstand the stresses occurring during a game and during transport. The latter requirement is fulfilled when the corner section of the goal frame is not deformed or damaged after testing according to 5.2.

The uprights and the crossbar should be marked in accordance with the current regulations of the sports associations.

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#### 3.4.2 Nets

##### 3.4.2.1 Dimensions

The net dimensions shall comply with table 2. <https://standards.iteh.ai/catalog/standards/sist/00410214-6216-4a39-a867-bba713369458/sist-en-749-1996-a1-1998>

The net meshes shall be square with filaments running horizontally and vertically.

Table 2: Net dimensions

Dimensions in millimetres

length	height	depth		width of mesh	diameter of yarn
		top	ground		
min.	min.	min.	min.	max.	min. <sup>1)</sup>
3 000	2 000	800	1 000	100 45 <sup>2)</sup>	2
<sup>1)</sup> The diameter is minimum to minimize the risk of cutting. <sup>2)</sup> for indoor hockey					

##### 3.4.2.2 Physical properties

Nets shall comply with tables 3 and 4, as appropriate.



**Table 3: Breaking forces of net yarn**

Class	N min.	Test method
A	1 500	ISO 2062
B	900	
C	660	

**Table 4: Rope breaking forces of net head line**

Class	N min.	Test method
Z	7 000	ISO 2307
Y	3 000	

### 3.4.2.3 Net fixing

A net head line of a length suitable for the installation shall be drawn in at the top of the net and fixed so that no displacement will be possible (see figure 1). The breaking force of the net head line shall be at least 7 000 N, see table 4.

The net shall be suspended loosely so that a ball thrown into the goal cannot rebound from the constructional parts. The fixing devices shall therefore be outside the net.

The net shall be retained on the wall by means of the net head line or by means of the net supporting brackets.

The net shall be so fixed that the ball will not pass between the goal frame and the net.

If an additional net curtain is used, it shall have the same mesh and width as the main net and shall be fixed (700<sub>-100</sub><sup>0</sup>) mm from the front.

### 3.4.3 Ground sockets

When using ground sockets out of doors, they shall have a drainage hole.

## 4 Safety requirements

### 4.1 General requirements

Corners and edges, which may cause injuries, shall be rounded with a radius of at least 3 mm.

### 4.2 Goal frame

The edges of the goal frame shall be rounded to a radius of (4±1) mm.

### 4.3 Strength

When tested in accordance with 5.2, the crossbar shall not fracture or collapse or show permanent deformation greater than 10 mm.