SLOVENSKI STANDARD
SIST EN 749:1996

01-december-1996

Playing field equipment - Goals for handball - Requirements and test methods

Playing field equipment - Handball goals - Requirements and test methods including safety

Spielfeldgeräte - Handballtore - Anforderungen und Prüfverfahren einschließlich Sicherheit

Equipement de jeux - Buts pour handball - Exigences d'essai y compris la sécurité

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ICS:

97.220.30 Oprema za dvoranske športe Indoor sports equipment

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English version

Playing field equipment - Handball goals - Requirements and test methods including safety

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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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

Contents

Foreword

This European Standard has been prepared by the Technical Committee 136 "Sports, playground and other recreational equipment" of which the secretariat 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of an identical text or by endorsement, at the latest by June 1996, and conflicting national standards shall be withdrawn at the latest by June 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Irland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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

3 Requirements

3.1 Classification

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

Table 1: Types

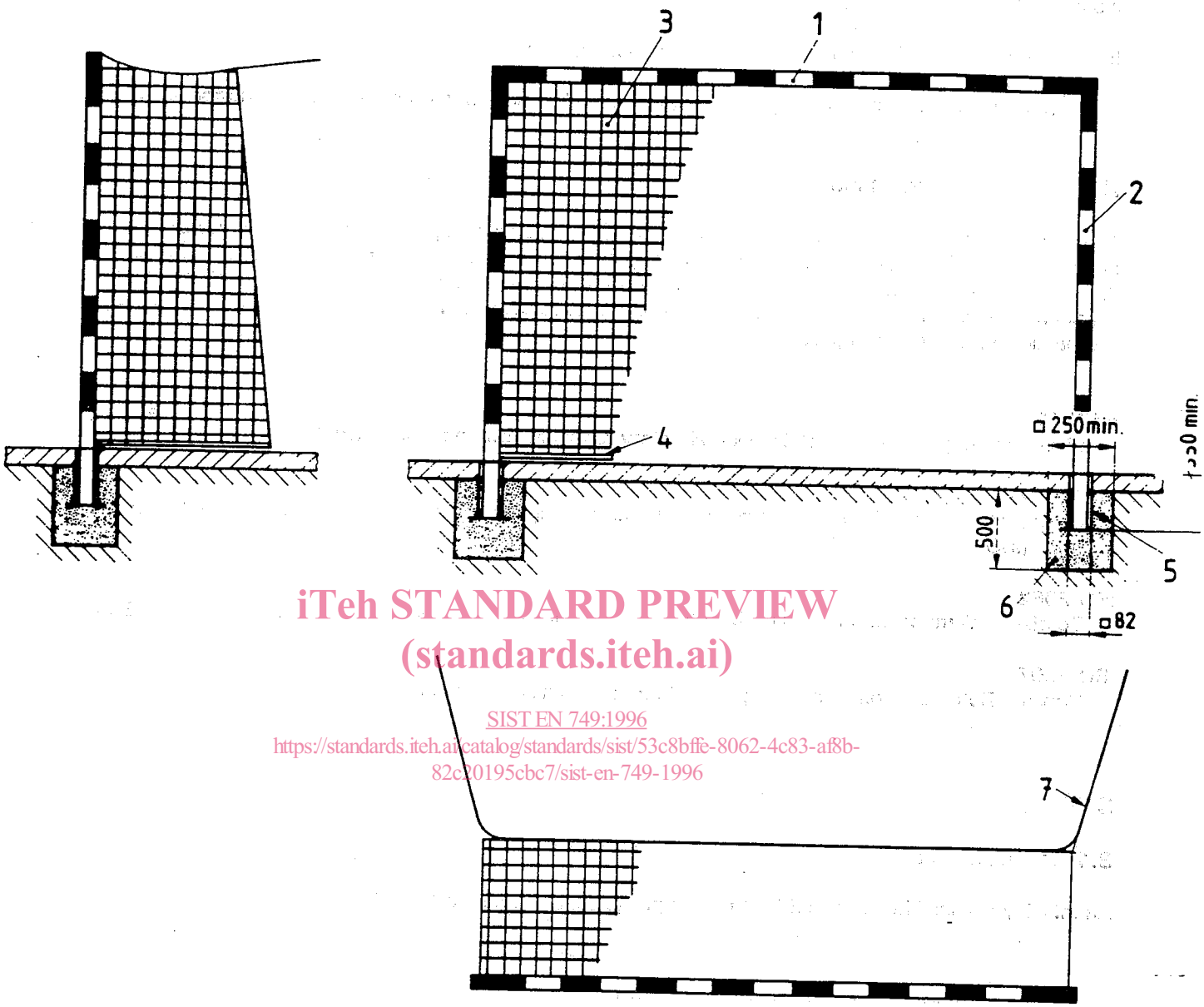
Type	Description
1	Handball goal with ground sockets
2	Freestanding handball goal

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
2 Upright
3 Net
4 Net weighting
5 Ground socket
6 Concrete block
7 Net head line

Other dimensions as given in figure 2.

Figure 1: Handball goal type 1

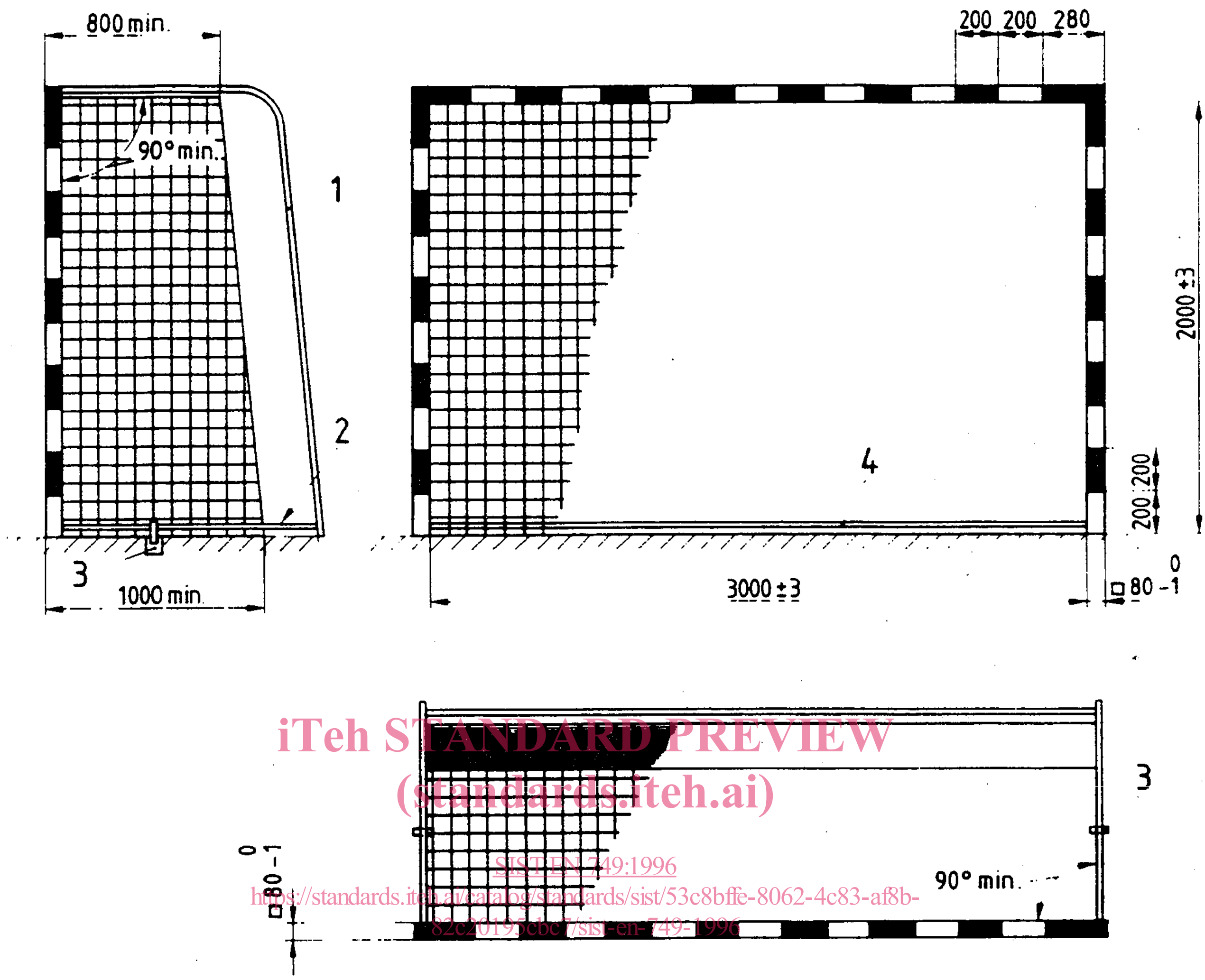
Example for foundation see annex A.

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



1 Net supporting brackets
2 Bottom side bar
3 Example of anti-tilting device
4 Bottom back bar

Bild 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 occuring 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.

3.4.2 Nets

3.4.2.1 Dimensions

The net dimensions shall comply with table 2.

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

Table 2: Net dimensions

Dimensions in millimetres

length	heigth	depth		width of mesh	diameter of yarn
		top	ground		
min.	min.	min.	min.	max.	min.[1]
3 000	2 000	800	1 000	100 45[2]	2

[1] The diameter is minimum to minimize the risk of cutting.

[2] 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 ($700\ ^{0}_{-100}$) 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 Stability

When tested in accordance with 5.2, the goal shall not fall over nor slide.