

# **Gymnastic equipment — Wall bars, lattice ladders and climbing frames — Safety requirements and test methods**

The European Standard EN 12346:1998 has the status of a  
British Standard

ICS 97.220.30

# National foreword

This British Standard is the English language version of EN 12346:1998.

The UK participation in its preparation was entrusted to Technical Committee SW/14, Gymnasium and sports equipment, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

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## Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 9 and a back cover.

## Amendments issued since publication

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English version

## Gymnastic equipment — Wall bars, lattice ladders and climbing frames — Safety requirements and test methods

Matériel de gymnastique — Espaliers, échelles et cadres à grimper — Prescriptions de sécurité et méthodes d'essai

Turngeräte — Sprossenwände, Gitterleitern und Kletterrahmen — Sicherheitstechnische Anforderungen und Prüfverfahren

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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**

## 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of an identical text or by endorsement, at the latest by December 1998, and conflicting national standards shall be withdrawn at the latest by December 1998.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 European Standard is one of a package, each of which deals with a particular type or a particular group of equipment.

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

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 European Standard specifies specific safety requirements for wall bars, lattice ladders and climbing frames, which are additional 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.

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

## 3 Profile of bars

All bars shall comply with the dimensions specified in Figure 1.

Any profile lying between the dimensions shown is acceptable.

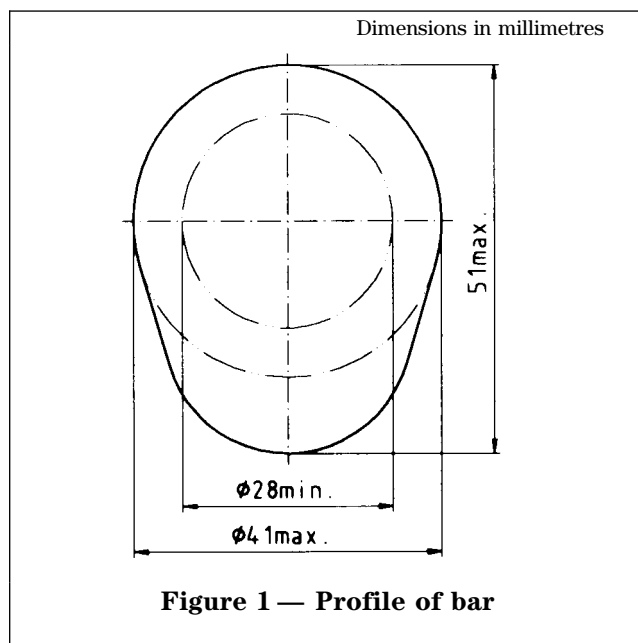


Figure 1 — Profile of bar

## 4 Safety requirements

### 4.1 General requirements

Wall bars, lattice ladders and climbing frames shall comply with the requirements of EN 913, except insofar as they are modified by this European Standard. Typical examples are shown in Figures A.1 to A.4.

## 4.2 Strength

### 4.2.1 Pre-installation with the equipment assembled for bars, joints and supports

4.2.1.1 When tested in accordance with 5.1.1, the bar, joint and supports shall show no signs of loose bonds, cracking, breaking or permanent deformation.

4.2.1.2 When tested in accordance with 5.1.2, the bar shall show no signs of rotation.

### 4.2.2 Post-installation strength

When tested in accordance with 5.2, the equipment shall not “pull away” from the wall.

## 4.3 Supports

For wall bars, the distance between supports shall be not less than 800 mm.

For lattice ladders and climbing frames, the distance between supports shall be not less than 500 mm.

## 4.4 Height

For wall bars, the highest bar shall be not more than 3 000 mm above the ground.

For lattice ladders and climbing frames, the highest bar shall be not more than 5 000 mm above the ground.

## 5 Test methods

### 5.1 Pre-installation with the equipment assembled for bars, joints and supports

5.1.1 Apply a force of  $1\,700\text{ N} \pm 50\text{ N}$  in the middle of a bar, perpendicular to the face of the apparatus, for  $5\text{ min} \pm 10\text{ s}$ ; see Figure 2. Remove the force and examine the bar, joint and supports for signs of loose bonds, cracking or permanent deformation.

5.1.2 Apply a torque of  $50\text{ N}\cdot\text{m} \pm 2\text{ N}\cdot\text{m}$  to a bar for  $5\text{ min} \pm 10\text{ s}$ .

Remove the torque and examine the bar for signs of rotation.

### 5.2 Post-installation strength

After installation according to the manufacturer's instructions and with the equipment in its intended position of use, apply a force  $F_1$ , centrally to the top bar, perpendicular and away from the wall, of 900 N for  $5\text{ min} \pm 10\text{ s}$ ; see Figure 3.

Remove the force and determine whether the equipment has “pulled away” from the wall.

Repeat the test with a force  $F_2$  of 900 N for  $5\text{ min} \pm 10\text{ s}$  on the lowest bar.

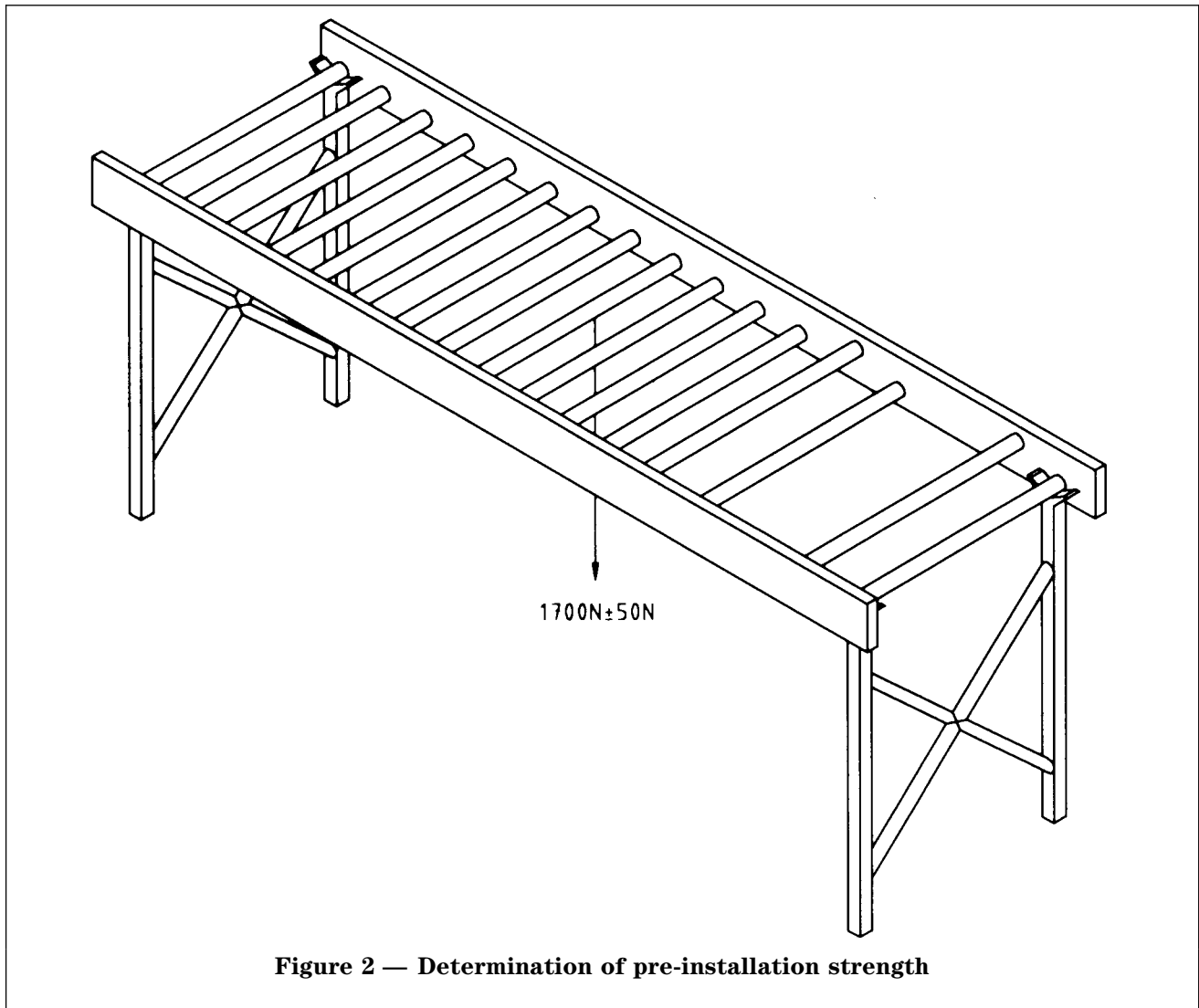
## 6 Instructions for use

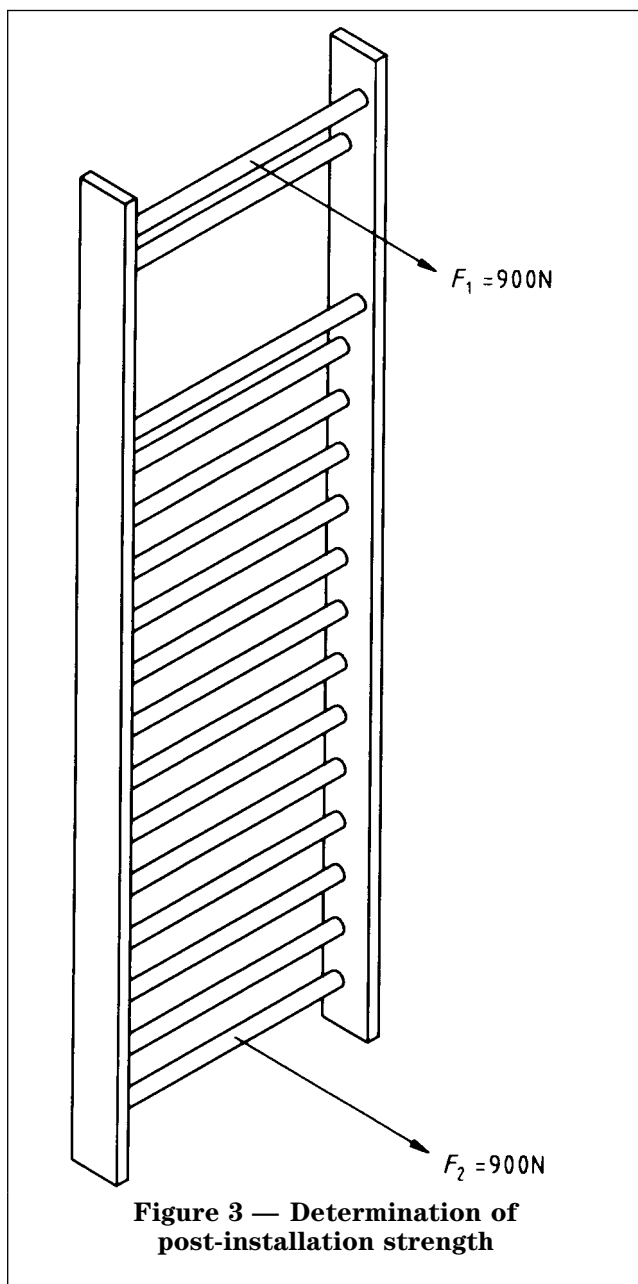
For retractable equipment, assembly instructions shall be provided.

## 7 Marking

Marking shall comply with EN 913, and in addition shall include the following:

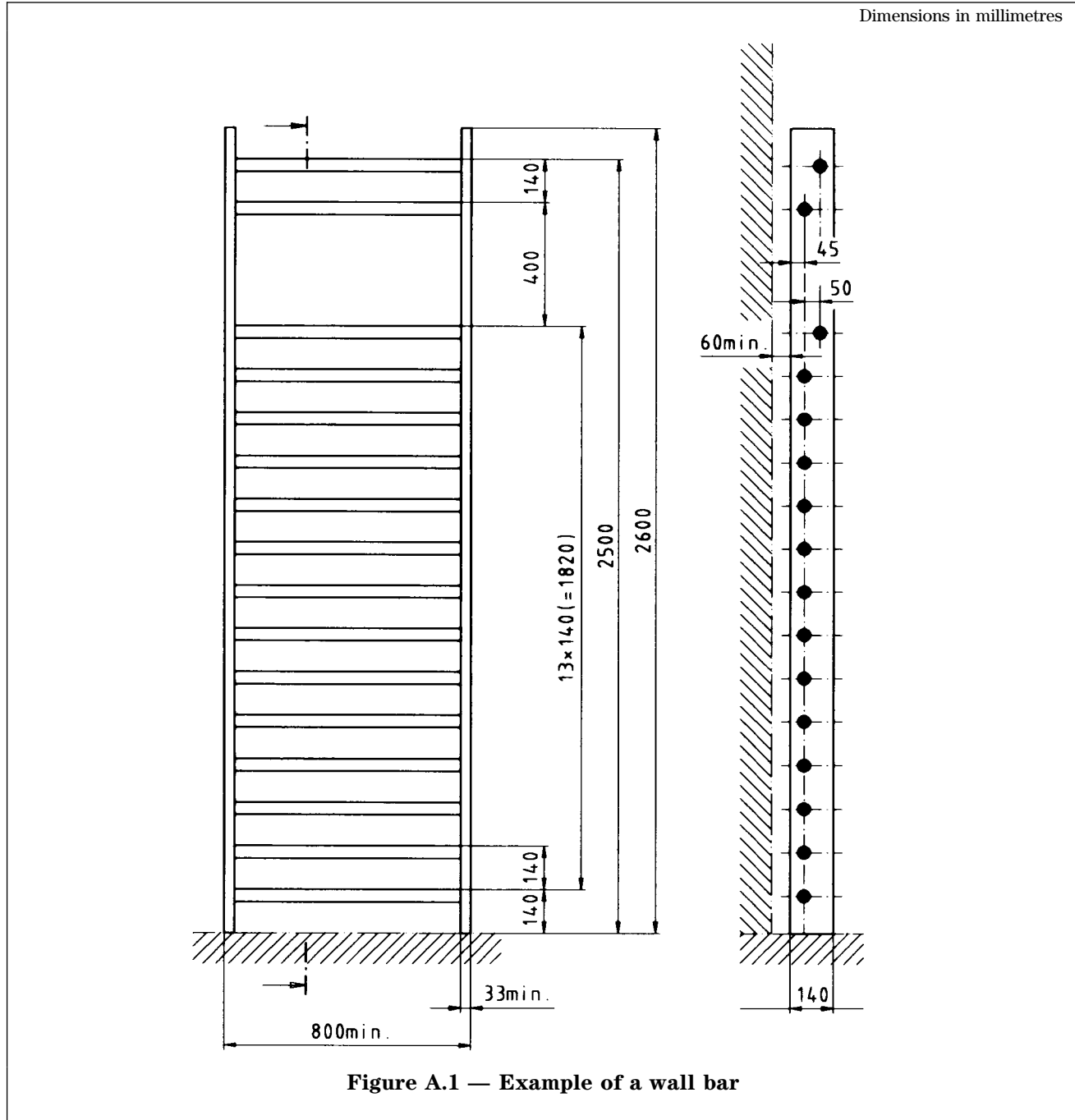
- name of product; and
- a statement advising the maximum number of users (maximum safe load).



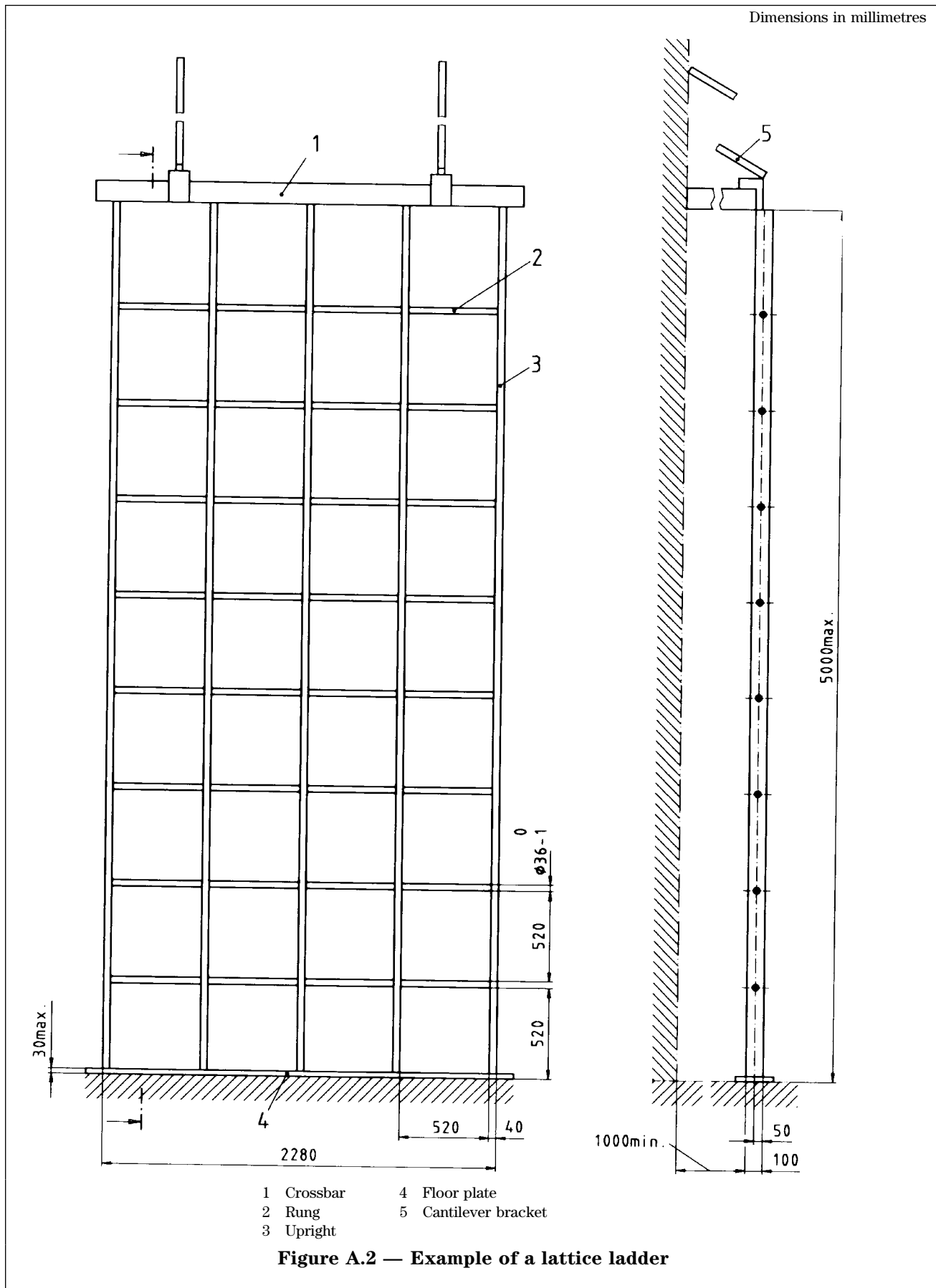


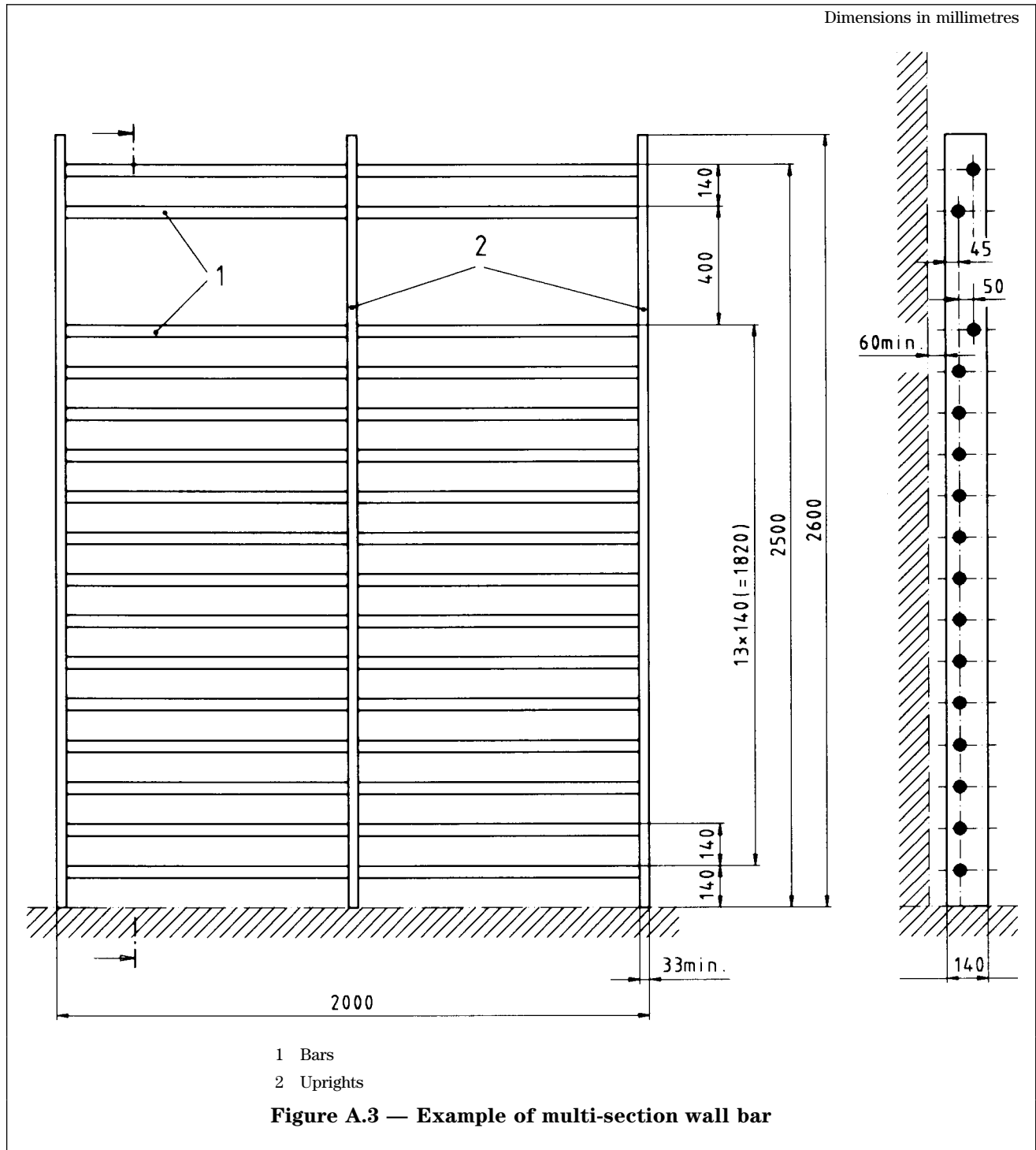
Annex A (informative)

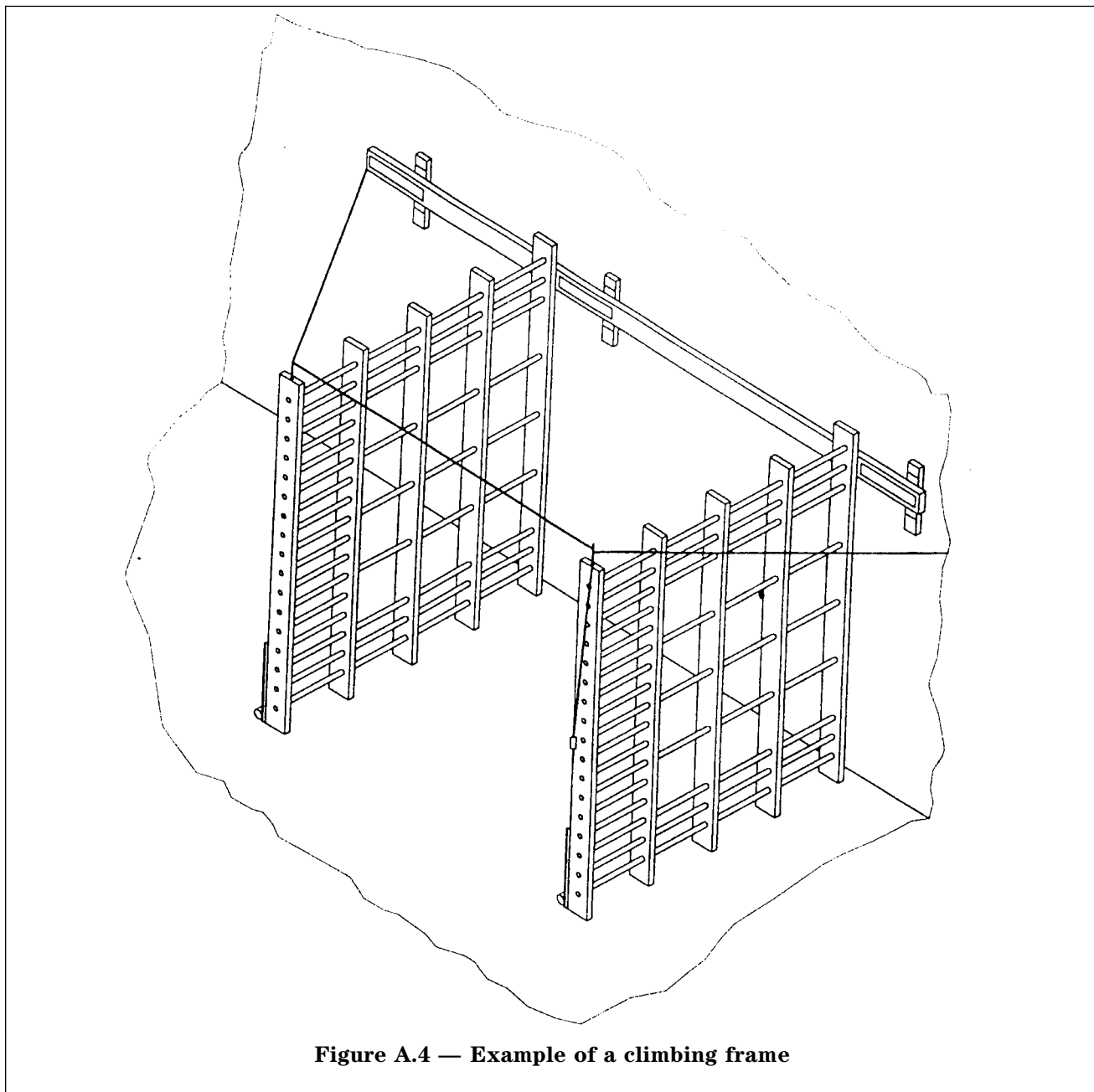
Typical examples of wall bars, lattice ladders and climbing frames











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