SLOVENSKI STANDARD
SIST EN 1022:1997

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Pohištvo za domačo uporabo - Sedežno pohištvo - Ugotavljanje stabilnosti

Domestic furniture - Seating - Determination of stability

Wohnmöbel - Sitzmöbel - Bestimmung der Standsicherheit

Mobilier domestique - Sieges - Détermination de la stabilité

Ta slovenski standard je istoveten z: **EN 1022:1996**

ICS:

97.140 Pohištvo Furniture

SIST EN 1022:1997 **en**

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English version

Domestic furniture - Seating - Determination of stability

Mobilier domestique - Sièges - Détermination de la stabilité

Wohnmöbel - Sitzmöbel - Bestimmung der Standsicherheit

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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 Technical Committee CEN/TC 207 "Furniture", the secretariat of which is held by IBN.

It forms part of a series of standards on requirements and test methods for domestic furniture.

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of an identical text or by endorsement, at the latest by May 1997, and conflicting national standards shall be withdrawn at the latest by May 1997.

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

1 Scope

This European Standard specifies methods for the determination of the stability of all types of domestic seating which can be used by adults. For seating that can be converted into beds, this standard applies only to the seating configuration.

Chair stability can be determined by either the experimental or the calculative method. These methods are compatible in that they apply the same forces at the same positions. If the result of the calculative method is uncertain or marginal the result should be checked, if possible, by the experimental method.

The calculation method is invalid for chairs which visibly flex under horizontal loads and for the tests specified in 8.2, 8.3, 8.4 and 8.5.

2 Definitions

For the purposes of this standard, the following definitions apply:

2.1 stability: Ability to withstand forces that tend to cause the loaded article to overbalance.

2.2 load bearing structure: Any part of a chair which supports a portion of the loads exerted by the sitter as its primary function, e.g. the seat frame but not the upholstery.

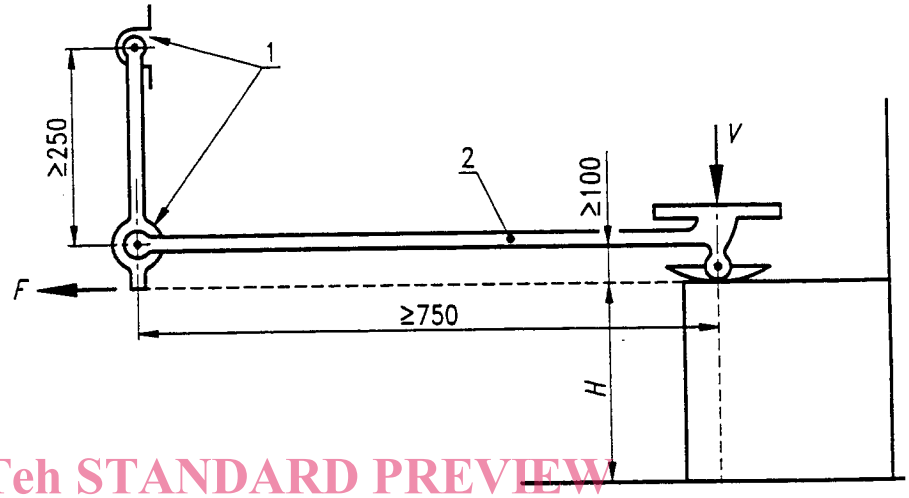
3 Test equipment

The tests can be applied by any suitable device because results are dependent on correctly applied loads and not upon the apparatus, except when the discs described in 3.3 are used.

3.1 Loading pad: Rigid circular object 200 mm in diameter with a face having a convex spherical curvature of 300 mm radius with a 12 mm edge radius. The loading pad shall be mounted on a device, which can apply a vertical force as specified. The device shall not hinder any movement of the article being tested. A suggested device is shown in Figure 1.

NOTE : The tests are described in terms of the application of forces. Masses can, however, be used.

Dimensions in millimetres



H	Loaded seat height
V	Vertical load
F	Horizontal force
1	Low friction bearings
2	Horizontal bar

Figure 1 : Suggested linkage arrangement constraining loading pad

3.2 Horizontal force application device, which can apply a force either at a given value or at a gradually increasing value, e.g. a spring balance.

3.3 Loading discs, each with a mass of 10 kg, diameter 350 mm and thickness 48 mm.

3.4 Support apparatus, to support the main stack of discs in reclining chair tests. It should be as light as possible and not heavier than 2,5 kg. Figure 2 shows a possible basic design.

Dimensions in millimetres

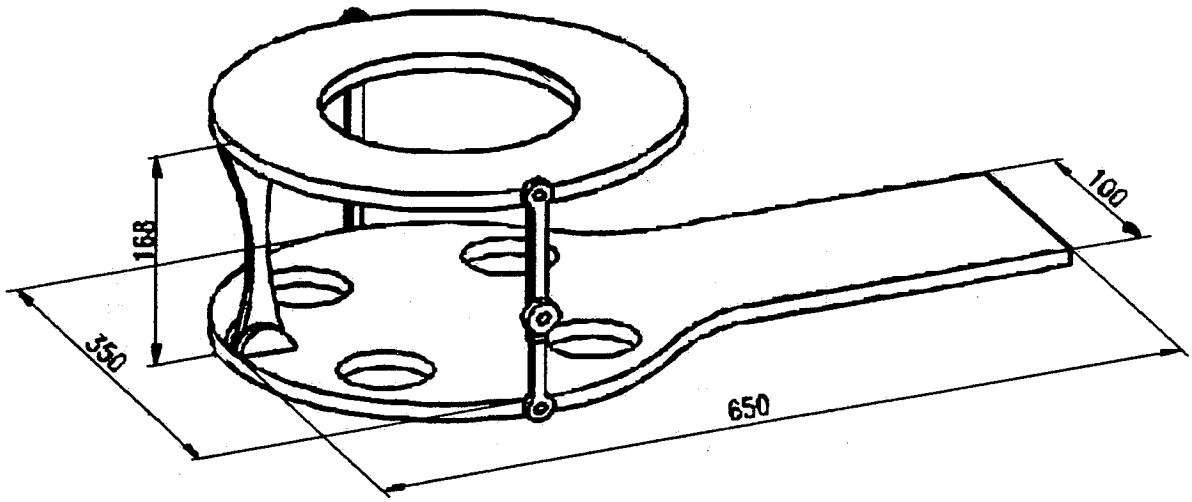
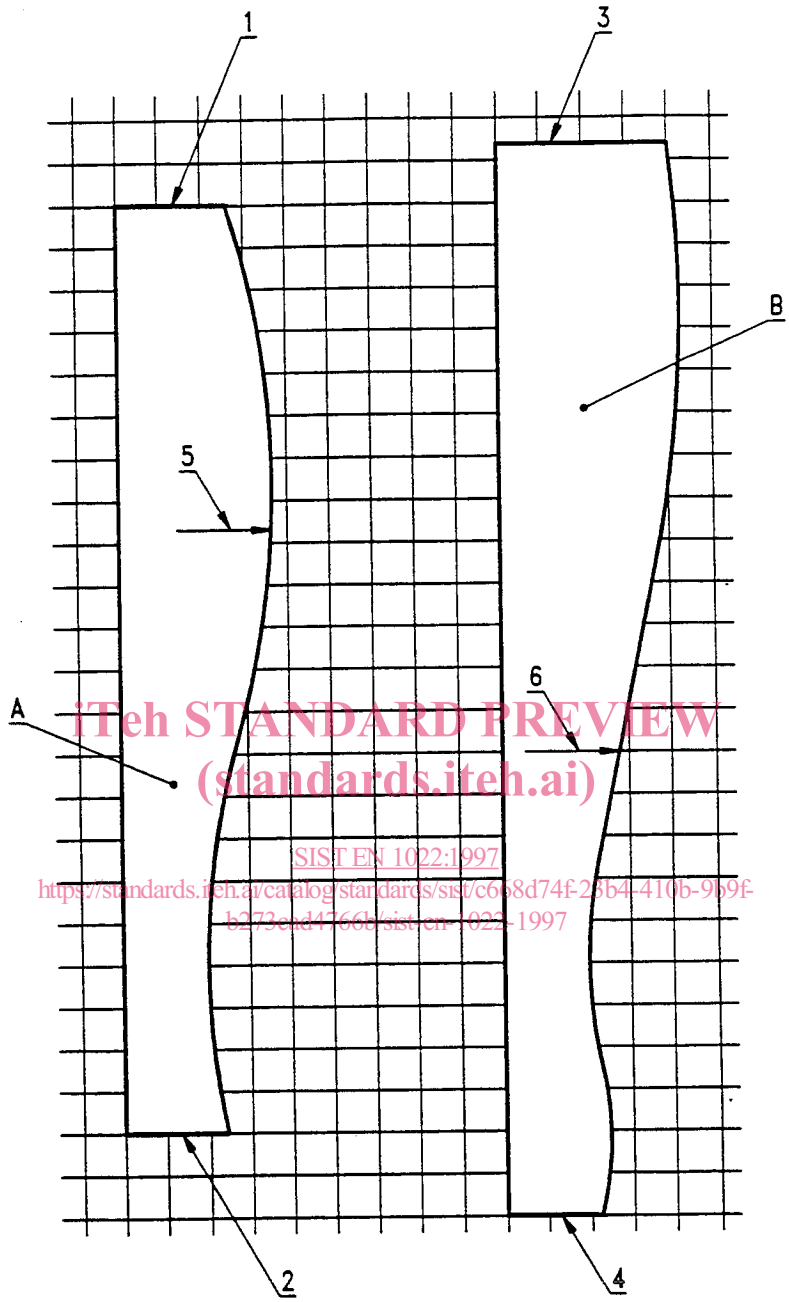


Figure 2 :Support apparatus

3.5 The loading point template (see figures 3 and 4) consists of two sections, a seat portion with seat loading point A and a back portion with back loading point B.

The sections are linked to each other by a pivot, and the contour of the surface of the seat section is designed so that it sinks a representative distance into the seat when a weight of 20 kg is applied to loading point A.

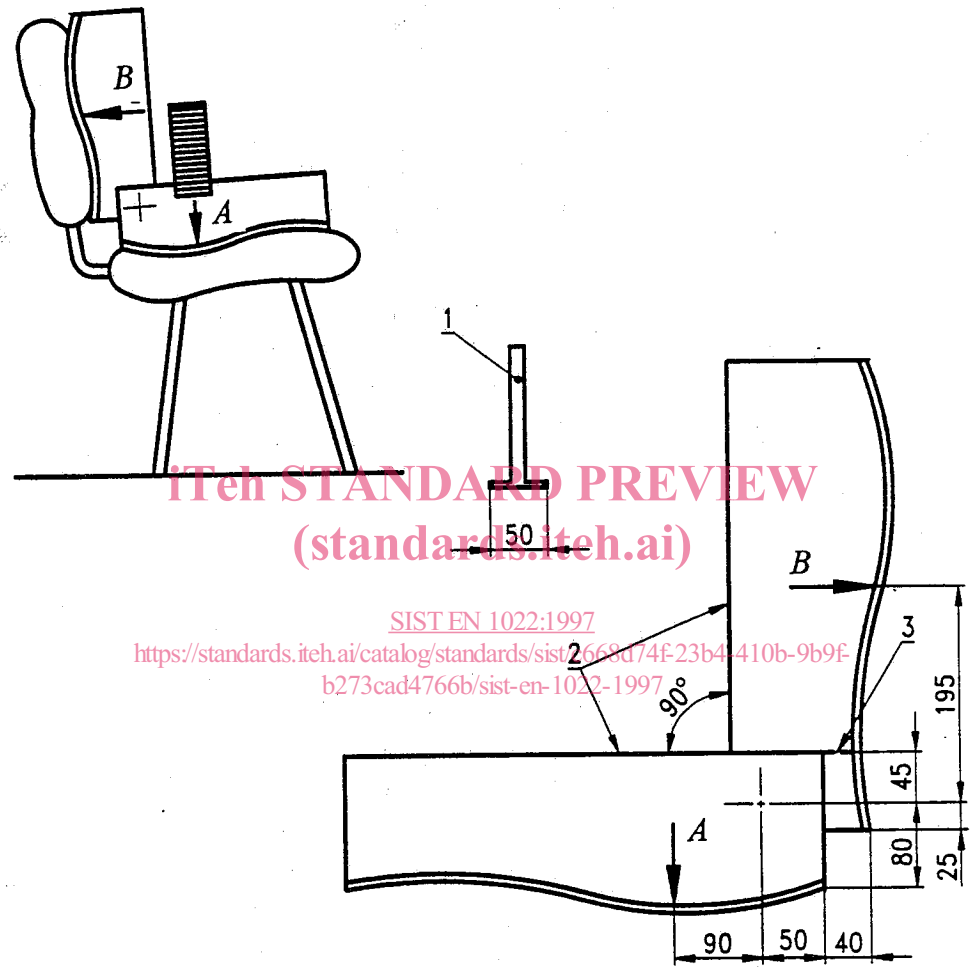


A Seat portion
B Back portion
1 Rear
2 Front
3 Top
4 Bottom
5 Seat load
6 Back load

NOTE: Scale: 1 side of square = 20 mm

Figure 3 : Loading surface curves for seat and back loading point template

Dimensions in millimetres



A Seat load (chairs)
B Back load (chairs)

1 Typical section
2 Straight edge for determination of seat or back inclination
3 Mark to fix 90°

Figure 4 : Loading point template

3.6 **Stops**, to prevent the article from sliding but not overturning, not higher than 12 mm except in cases where the design of the item necessitates the use of higher stops, in which case the lowest that will prevent the item from sliding shall be used.

3.7 **Testing surface**, horizontal, flat, rigid.

4 Conditioning

No prior conditioning of the articles is required.

5 General test requirements

5.1 General

The furniture shall be tested as delivered. Knock-down furniture shall be assembled according to the instructions supplied with it. If the furniture can be assembled or combined in different ways, the most adverse configuration shall be used for each test. Knock-down fittings shall be tightened before testing.

Position the article on the floor surface (3.7) with the legs or base restrained by stops (3.6).

The tests shall be carried out in the configuration most likely to cause overbalancing.

Stools shall fulfil the forwards overbalancing requirements in all directions. The other stability tests are not applicable.

The test results are only valid for the tested article. When the test results are intended to be applied to production models, the test specimen should be representative of the production model.

In the case of designs not catered for in the test procedures, the tests shall be carried out as far as possible as described and deviations from the test procedure recorded in the test report.

5.2 Tolerances

Unless otherwise stated:

All forces shall have an accuracy of ± 5% of the nominal force.
All masses an accuracy of ±0,5% of the nominal mass.
All dimensions an accuracy of ±1 mm of the nominal dimension.
All angles an accuracy of ±2 ° of the nominal angle.
The tolerance for position of loading pads shall be ±5 mm.
The relationship 10 N = 1 kg may be used for this purpose.

6 Determination of seat and back loading positions

The seat and back loading points shall be determined using the loading point template (3.5) as specified below. In some cases it may not be possible to determine the loading points by means of the loading point template. In such cases, the loading points of 175 mm forward of the seat/back junction and 300 mm upward from the seat/back junction shall be used.

Position the loading point template (3.5) on the seat and back centreline as far towards the rear as possible with its load applied at the seat loading point.

Adjust its position by pushing the back portion into the back, so levering the seat portion forwards until the shape of the loading point template correlates with that of the seat. In cases where the loading point template can be settled in more than one position, the position having the smallest angle between the seat and back portions of the loading point template shall be used. The angle shall in no cases be less than 90°. Mark the loading points from the loading point template. When a seat has more than one sitting place, repeat the procedures on the other sitting places.