



SLOVENSKI STANDARD

SIST EN 1335-1:2001

01-februar-2001

Pisarniško pohištvo - Pisarniški delovni stoli - 1. del: Mere - Ugotavljanje mer

Office furniture - Office work chair - Part 1: Dimensions - Determination of dimensions

Büromöbel - Büro-Arbeitsstuhl - Teil 1: Maße - Bestimmung der Maße

Mobilier de bureau - Sieges de travail de bureau - Partie 1: Dimensions - Détermination des dimensions

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Ta slovenski standard je istoveten z: **EN 1335-1:2000**

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ICS:

97.140 Pohištvo Furniture

SIST EN 1335-1:2001 **en**

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EUROPEAN STANDARD

EN 1335-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2000

ICS 97.140

English version

Office furniture - Office work chair - Part 1: Dimensions - Determination of dimensions

Mobilier de Bureau - Sièges de travail de bureau - Partie 1:
Dimensions - Détermination de dimensions

Büromöbel - Büro-Arbeitsstuhl - Teil 1: Maße - Bestimmung
der Maße

This European Standard was approved by CEN on 12 December 1999.

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 Central Secretariat 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 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

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Foreword

SIST EN 1335-1:2001

This European Standard has been prepared by Technical Committee CEN/TC 207, Furniture, the Secretariat of which is held by IBN. [fc8b16c3f76a/sist-en-1335-1-2001](https://standards.iteh.ai/catalog/standards/sist-en-1335-1-2001)

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 October 2000, and conflicting national standards shall be withdrawn at the latest by October 2000.

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.

This series consists of the following parts:

- prEN 1335-1:1999 Office furniture - Office work chair - Part 1: Dimensions, determination of dimensions
- prEN 1335-2:1999 Office furniture - Office work chair - Part 2: Safety requirements
- prEN 1335-3:1999 Office furniture - Office work chair - Part 3: Safety test methods

Introduction

This standard is part of a series of product standards for office chairs including the following types:

- Office work chair
- Visitors chair

General

The working conditions and the protection of office workers with respect to safety and health necessitates - when necessary - that these standards take ergonomic principles and minimum requirements into account. This applies in particular to the design of Visual Display Equipment (VDU) work stations where a EU Directive (90/270/EEC) has been implemented. These work stations should be designed to allow different users to carry out a variety of work tasks. The design of furniture and the work station should, therefore, take into account both the variety of work tasks and the needs of the users.

The design of work procedures, work stations and furniture should ensure that the user can move his or her body and limbs frequently in order to avoid muscle stress.

Basis of dimensions and reference seating posture

The dimensions in this standard are based on the conflicting requirements of anthropometric measurements, mechanical design, subjective preference and other factors. In general, they should be suitable for people between 1 510 mm and 1 920 mm in body height. People with body height outside this range may need furniture of different dimensions or a footrest. Due to the variation in population heights in different countries, there will be a variation in the percentage of the office population which the dimensions will accommodate in each country.

In order to be able to specify acceptable dimensional requirements, a theoretical reference seating posture has been adopted. This posture does, however, not automatically correspond to the ideal or optimum seating posture.

The reference seating posture is as follows:

- The sole of the foot placed on the floor.
- The foot forms an angle of approximately 90° with the lower leg.
- The lower leg is approximately vertical.
- The lower leg forms an angle of approximately 90° with the thigh.
- The thigh is almost horizontal.
- The thigh forms an angle of approximately 90° with the trunk.
- The trunk is erect.

1 Scope

This part of the prEN 1335:1999 applies to office work chairs. It specifies dimensions of three types of chairs as well as test methods for their determination.

2 Normative references

This European Standard incorporates by dated or undated reference, provision 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).

prEN 1335-3:1999 Office furniture - Office work chair - Part 3: Safety test methods

3 Terms and definitions

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

3.1 Office work chair: a piece of seating furniture for one person, with a back rest, with or without arm rests. The upper part of the chair, which includes the seat, can rotate in the horizontal plane and can be adjusted in height. There are three types A, B and C.

3.2 Axes of rotation: the vertical axis around which the upper part of the chair rotates (see figure 1).

3.3 Point "A": the point in which the chair's axes of rotation intersects with the seat surface loaded by a 64 kg dummy (see figures 1 and 2).

3.4 Median plane: the vertical plane passing through point "A" and dividing the chair into two generally symmetrical parts (see figure 1).

3.5 Transverse plane: the vertical plane passing through point "A" perpendicular to the median plane (see figure 1).

3.6 Back supporting point "S":

non tiltable back rest:

The foremost point on the back rest in the median plane between 170 mm and 220 mm above point "A" (see figure 3 a).

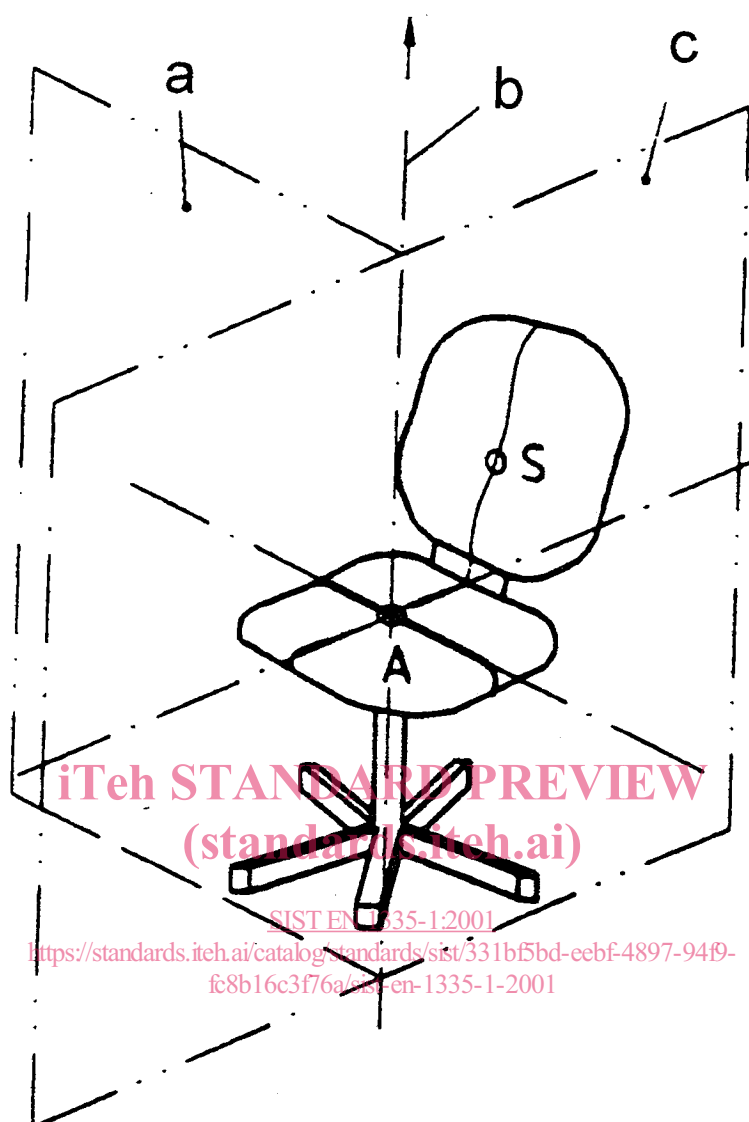
tiltable back rest:

The foremost point on the back rest in the median plane which intersects the vertical line 400 mm from the front edge of the seat when the back rest is tilted forward from the rearwards position (see figure 3 b).

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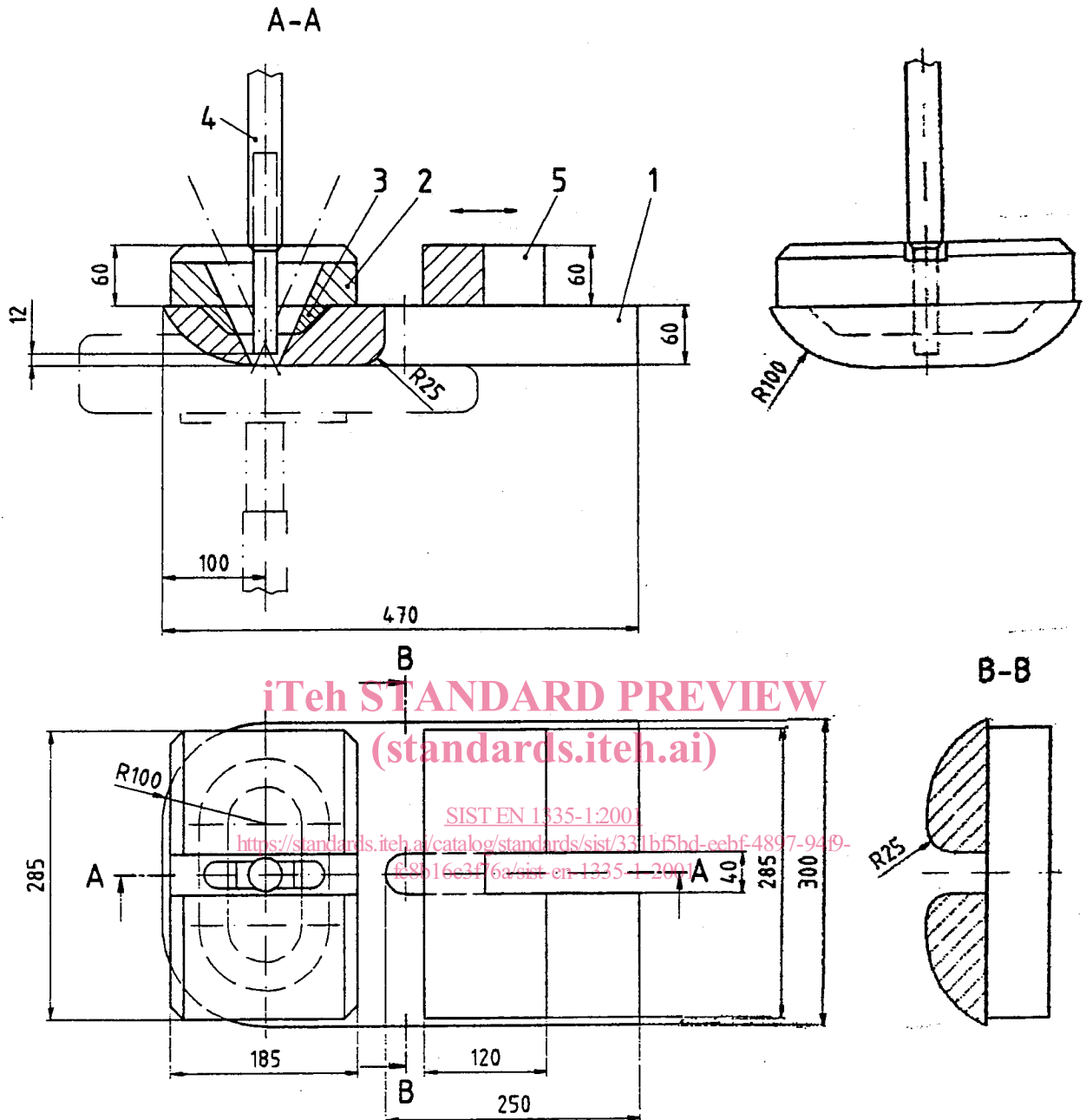
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- a Transverse Plane
- b Axis of Rotation
- c Median Plane

Figure 1 - Diagram of reference points, axes and planes



- Components:
- 1 Wooden component (or similar material)
 - 2, 3 Main mass (e.g. lead or force)
 - 4 Guide shaft
 - 5 Movable mass (e.g. steel)

- Mass of components:
- 1 = 4 kg
 - 5 = 15 kg
 - 2 + 3 + 4 = 45 kg (centre of gravity in the axes of the guide shaft)
 - 1 + 2 + 3 + 4 + 5 = 64 kg

Figure 2 - Dummy

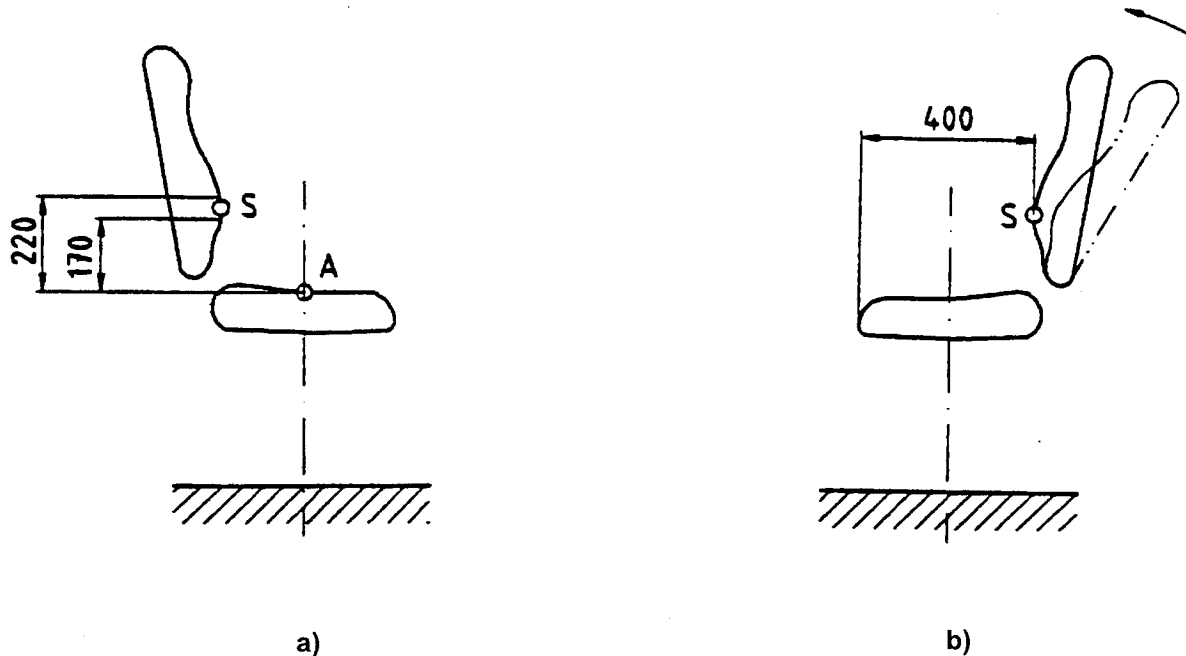


Figure 3 - Back supporting point "S"

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4 Dimensions

The chair shall provide support to the thighs and the lumbar region with sufficient depth and height to provide all users with a sitting position suited to their activity and their height.

The dimension of the chair shall comply with one of the types of annex A. An exception is made in the case of the stability dimension t , provided that the chair passes the rearwards stability tests according to 5.4.2 and 5.4.3 of prEN 1335-3:1999.

5 Determination of reference points

The chair shall be positioned on a flat, rigid and horizontal test surface.

5.1 Point "A"

The dummy (see figure 2) shall be placed on the seat surface symmetrically to the median plane in such a way that the centre of gravity of the main mass coincides with the axis of rotation. The seat shall be set as close as possible to the horizontal and the back rest shall be set as close as possible to the vertical. The movable mass shall be positioned so that the lower edge of the groove coincides with the vertical line tangential to the front edge of the seat. Before measuring, the seat shall be loaded and unloaded five times for a short period.

5.2 Back supporting point "S"

In the case of chairs with a back rest rotatable around a horizontal axes the upper and lower edges of the back rest shall be positioned vertically one above the other midway in the median plane before measurements are made. If this is not possible the closest possible position to it shall be chosen.

6 Determination of dimensions

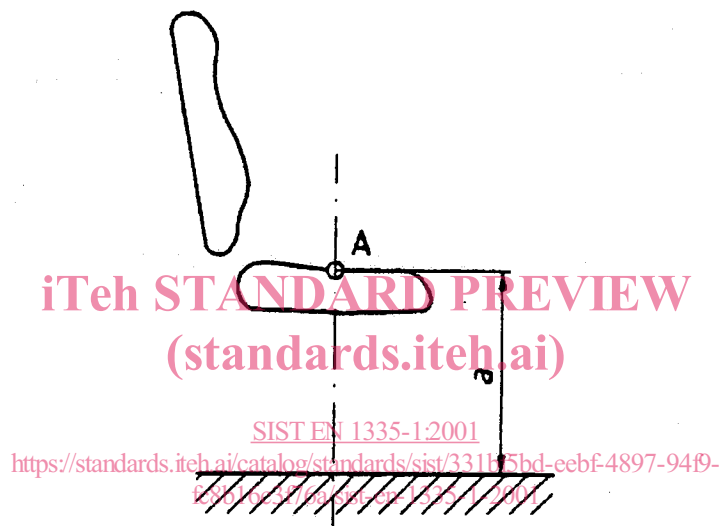
The chair shall be positioned on a flat, rigid and horizontal test surface. The seat shall be set as close as possible to the horizontal and the back rest shall be set as close as possible to the vertical. Linear dimensions shall have an accuracy of ± 2 mm and all angles an accuracy of $\pm 1^\circ$.

Unless otherwise specified, all dimensions shall be measured without loading at the measurement point. Where point "A" is used as reference point the seat shall be loaded by the dummy in accordance with 5.1.

All adjustable dimensions and angles shall be measured both in the smallest and largest position.

6.1 Seat height a

The seat height a is the vertical distance between the floor and the point "A" (see figure 4).



NOTE: The height is determined by measurement, either at the front edge of the seat in combination with the slope of the dummy or directly at point "A".

Figure 4 - Determination of the seat height a

6.2 Seat depth b

The seat depth b is the horizontal distance from the front edge of the seat to the vertical projection of the back supporting point "S", measured in the median plane (see figure 5).

Before determining the seat depth of chairs with height adjustable back rests, the back supporting point "S" shall be set at a height of 220 mm above point "A" (see figure 9). If the seat depth and back rest are adjusted simultaneously, i.e. when the seat depth is increased, the back rest height is automatically increased, the minimum seat depth shall be measured with back rest in its lowest position, and the maximum seat depth with the back rest in its highest position.

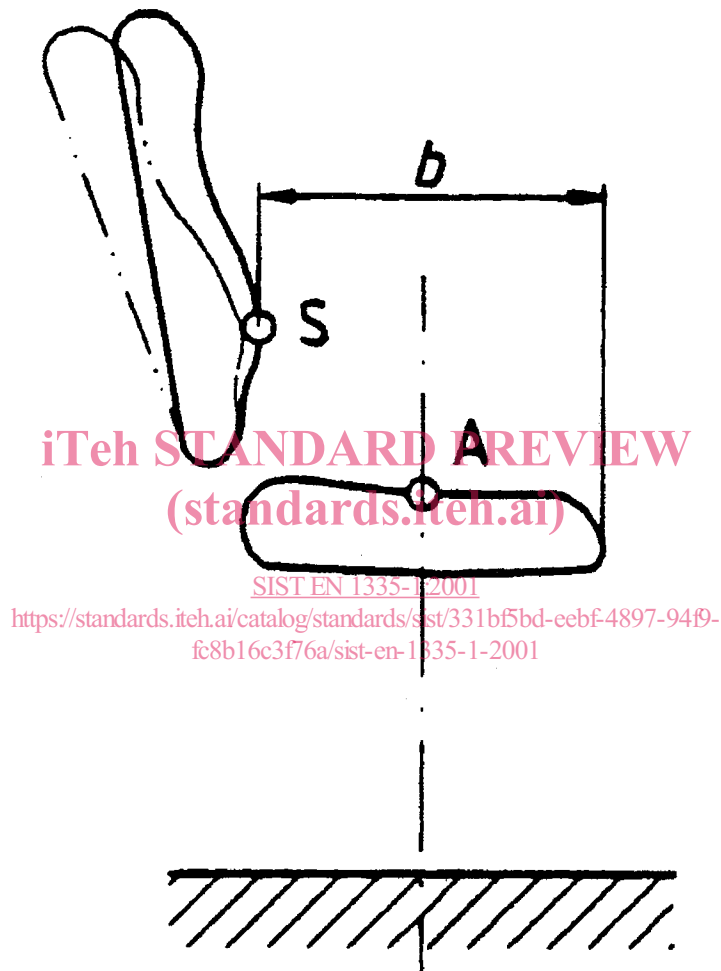


Figure 5 - Determination of the seat depth b