

Office furniture — Office work chair —

Part 1: Dimensions — Determination of dimensions

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British Standard

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National foreword

This British Standard is the official English language version of EN 1335-1:2000. It partially supersedes BS 5940-1:1980 which has already been withdrawn.

This Standard includes a National Informative Annex which gives guidance for users to assist in identifying the type of chair which will comply with the European Display Screen Equipment Directive.

The UK participation in its preparation was entrusted to Technical Committee FW/3, Office furniture, 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.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 23 and a back cover.

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 207, Furniture, the Secretariat of which is held by IBN.

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of an identical text or by endorsement, at the latest by October 2000, and conflicting national standards shall be withdrawn at the latest by October 2000.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).

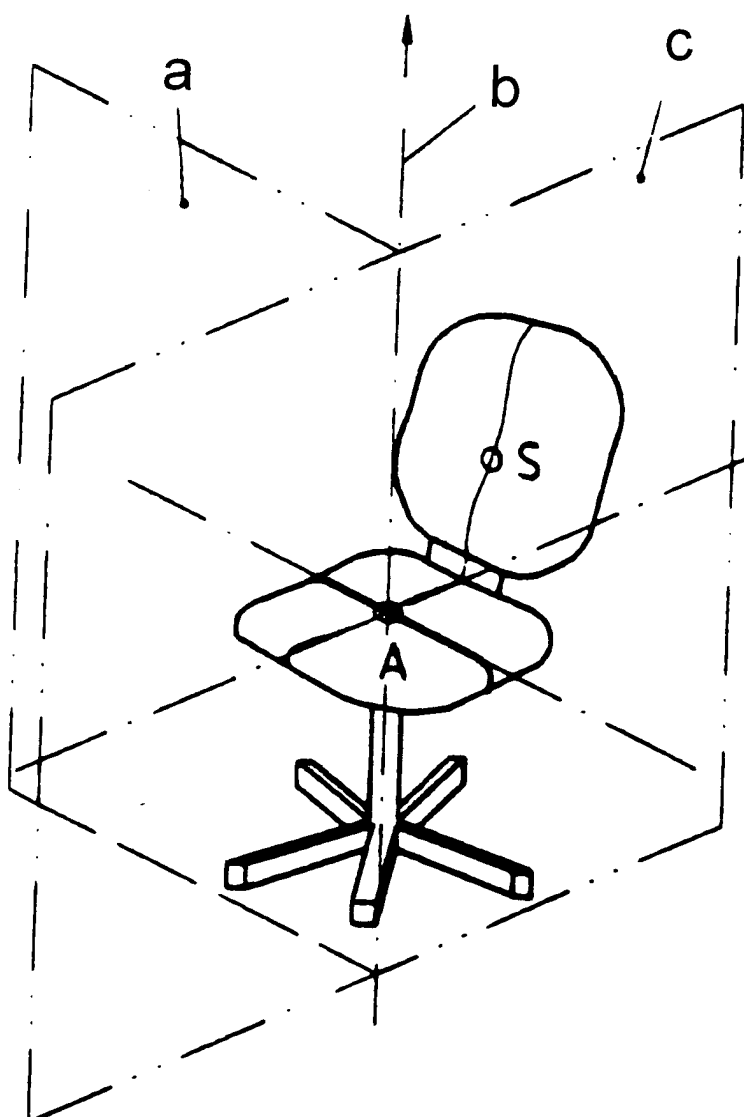
3.6 Back supporting point "S":

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).

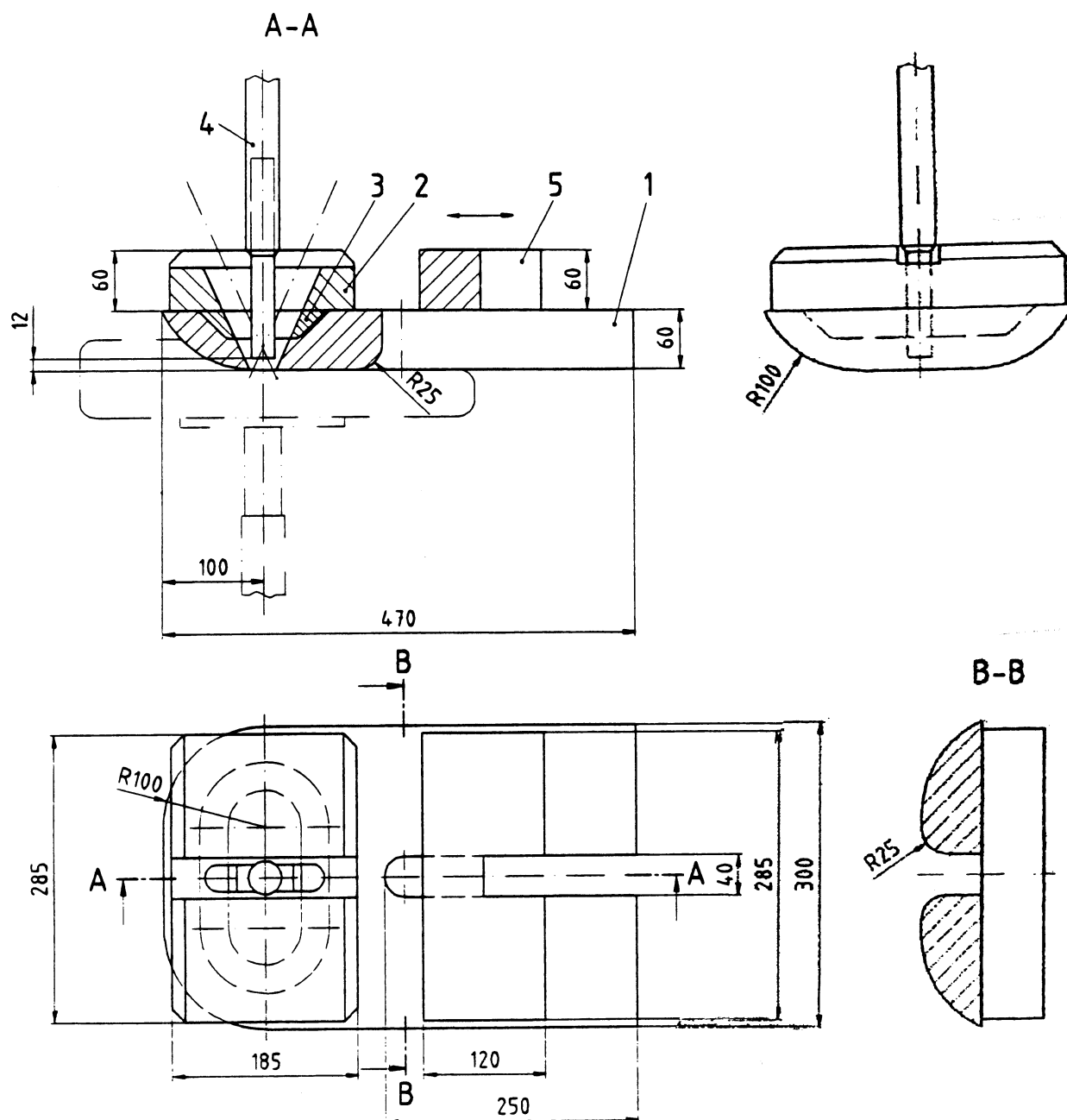
tiltable back rest:

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).



- 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