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Office furniture — Office chairs — Methods for the determination of dimensions

Mobilier de bureau — Sièges de travail pour bureau — Méthodes pour déterminer les dimensions

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 136 *Furniture*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

This second edition cancels and replaces the first edition (ISO 24496:2017), which has been technically revised. The main changes compared to the previous edition are as follows:

— term 3.2 "Angle – Origin and sign convention" has been turned into a new Clause 4.5; numbering of terms and definitions was adapted accordingly, as well as numbering of Figures 2 to 27;

— symbols used in Figures 3 to 7, 9, 10, 13 to 15, 18 to 22, 24 to 26, 52 to 55, and 61 were revised;

— the definition of backrest width has been revised; 3.10, Figure 9 and 6.3.4.4 have been changed accordingly;

— in 6.3.1.1, a specification of the most prominent point has been given and the tolerances adapted;

— specification of the measurement has been described in 6.3.2.2;

— values given in 3.3 and Figure 3, 6.3.4.8 and Figure 61 have been corrected;

— Figure 56 has been revised;

— Annex C has been fully revised;

— Bibliography has been updated.

Introduction

A new office chair measurement method and a new chair measuring device (CMD) was developed in order to end the use of numerous sometimes conflicting chair measurement methods and CMDs with their particular weaknesses used in different countries around the world and make it easier to compare office chairs. The measurement methods and designs of CMDs considered during the development of this standard were from BIFMA CMD-1; BS 5940-1; DIN 4551; EN 1335–1; Sedometer according to 2 PfG 947; NF D 61040; SS 83 91 40 and UNI 7498.

The measurement method and the CMD developed in this standard used the strengths of the above mentioned measurement methods and CMDs.

The list of chair dimensions that can be measured using this standard are the dimensions measured in the standards listed above as well as additional ones which are based on the ergonomic factors listed in ISO 9241-5.

The test methods in this document are based on the manner in which anthropometric dimensions are measured.

Therefore, in order to be able to relate the dimensions of office seating to the anthropometric dimensions, a theoretical reference seating posture has been adopted. However, this posture does 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.

Further information on the anthropometric dimensions can be found in ISO 7250-1, the ISO 20685 series and ISO 14738.

This document describes measurement methods. It can be used in conjunction with other relevant documents giving dimensional requirements.

For the rationale for the provisions contained in this document, see Annex C.

Office furniture — Office chairs — Methods for the determination of dimensions

1 Scope

This document specifies methods for the determination of the dimensions of office chairs.

This document does not contain dimensional specifications or requirements.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

NOTE For the anthropometric equivalents of the terms and definitions, see Annex B.

3.1
angle between backrest and seat
γ
angle between the loaded backrest and the loaded seat

Note 1 to entry: See Figure 1.