



Institut luxembourgeois de la normalisation  
de l'accréditation, de la sécurité et qualité  
des produits et services

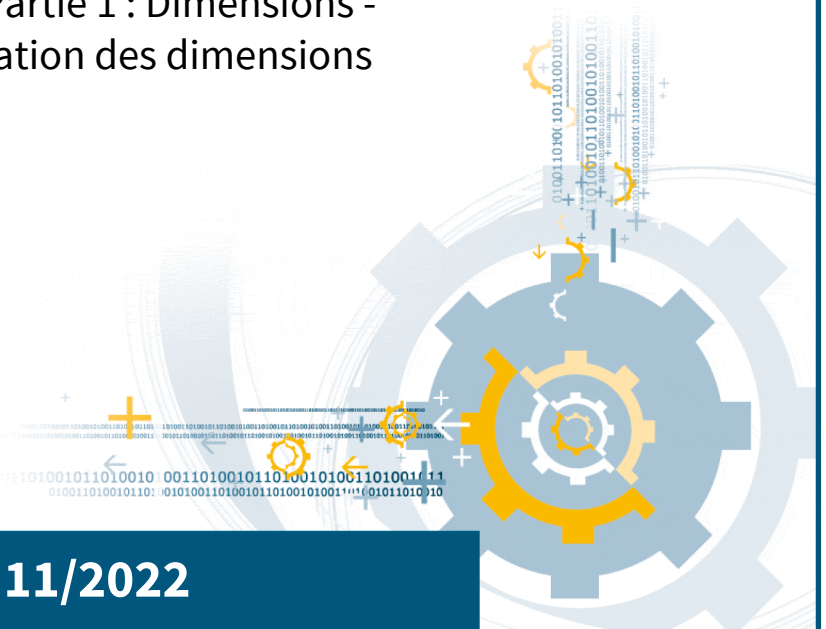
**ILNAS-EN 1335-1:2020+A1:2022**

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

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

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

**11/2022**



## National Foreword

This European Standard EN 1335-1:2020+A1:2022 was adopted as Luxembourgish Standard ILNAS-EN 1335-1:2020+A1:2022.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

<https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html>

### **THIS PUBLICATION IS COPYRIGHT PROTECTED**

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

ILNAS-EN 1335-1:2020+A1:2022

EUROPEAN STANDARD **EN 1335-1:2020+A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2022

ICS 97.140

Supersedes EN 1335-1:2020

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 des dimensions

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

This European Standard was approved by CEN on 27 January 2020 and includes Amendment 1 approved by CEN on 9 October 2022.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

| <b>Contents</b>   | <b>Page</b> |
|---|-------------|
| European foreword.....  | 3           |
| Introduction .....  | 4           |
| 1 Scope .....   | 5           |
| 2 Normative references .....  | 5           |
| 3 Terms and definitions .....   | 5           |
| 4 Definitions of measurements.....  | 7           |
| 5 Measurement conditions.....   | 7           |
| 5.1 General.....  | 7           |
| 5.2 Decision rule for measurement uncertainty .....   | 7           |
| 6 Test equipment including CMD .....  | 7           |
| 7 Measurement methods and procedures.....   | 7           |
| 8 Dimensional requirements.....   | 13          |
| 9 Information for use .....   | 19          |
| 10 Test report.....   | 19          |
| Annex A (informative) Rationale for determination of office chair dimensions: comparison<br>of current published dimensions with European anthropometric data ..... | 20          |
| Annex B (informative) Example of how to read Table 2 .....  | 29          |
| Annex C (informative) Dimensions of neck rests and headrests .....  | 30          |
| Annex D (informative) Measurement uncertainty.....  | 31          |
| Bibliography .....  | 32          |

## European foreword

This document (EN 1335-1:2020+A1:2022) has been prepared by Technical Committee CEN/TC 207 “Furniture”, the secretariat of which is held by UNI.

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 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1 approved by CEN on 9 October 2022.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

**A1** This document supersedes EN 1335-1:2020 **A1**

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## Introduction

### 0.1 General working condition

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

### 0.2 Basis of dimensions and chair types

The dimensions in this document are based on anthropometric measurements, mechanical design subjective preference and other factors.

The aim of this document is to provide dimensions for the office work chairs which can accommodate a larger part of the European population. Due to the wide variation in population heights and other body dimensions, there will be a variation of the office population between each country, which the dimensions will accommodate. People with body dimensions outside this range may need furniture of different dimensions or adaptations to existing workstations e.g. a footrest.

In this document, office work chairs are categorized into types of chairs based on dimensional requirements.

Type Ax and Type A chairs have more adjustability with a greater range of adjustments than Type B and Type C chairs.

Annex A (Rationale) of this document gives the rationale for chair dimensions and information regarding the importance of good fit between the user and the chair.

### 0.3 Design reference seating posture

In order to articulate acceptable requirements for comfort and performance with respect to body dimensions, it is important to specify a design reference posture for purposes of specifying anthropometric data. While empirical evidence has indicated that the posture so specified could be comfortable for users carrying out certain tasks over short periods, it does not represent the optimum posture or the posture to strive for.

The reference seating posture is as follows:

- The sole of the foot is 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.

### 0.4 Seating postures

The purpose of well-designed seating is to provide stable support which allows movement, comfort, and task accomplishment. Together with job content and the design of other furniture elements, seating design plays an important role in encouraging movement. Thus, seat design should allow frequent postural variation by the user in order to avoid muscle stress and circulatory problems.

## 1 Scope

This document specifies the dimensions of four types of office work chairs as well as test methods for their determination.

It does not apply to seating for children for which a European Standard exists.

Annex A (informative) contains a rationale for office chair dimensions.

Annex B (informative) contains an example to clarify the use of Table 2.

Annex C (informative) contains proposals for dimensions for headrests.

Annex D (informative) contains the measurement uncertainty.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 24496:2021, *Office furniture — Office chairs — Methods for the determination of dimensions*

## 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:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **office work chair**

chair for one person, which has an adjustable seat height, can rotate horizontally and is commonly used in conjunction with a work surface

Note 1 to entry: An office work chair may or may not have features such as armrests and/or a headrest,

### 3.2

#### **type Ax work chair**

office work chair with the largest range of adjustments

Note 1 to entry: Type Ax chair has the largest range of adjustment for the seat height, a smaller seat depth dimension and a smaller distance from the backrest to the front of the armrests.

### 3.3

#### **type A work chair**

office work chair with a large range of adjustments

### 3.4

#### **type B work chair**

office work chair with a range of adjustments

### 3.5

#### **type C work chair**

office work chair with limited adjustments

### 3.6 adjustability

intentional change in the position of a component

Note 1 to entry: It can be continuous, within a range or in steps and may be lockable.

### 3.7 tall office work chair

office work chair with a higher seat height, measured from the floor, than the maximum seat height specified in Table 2, also with a foot support

Note 1 to entry: A chair used for high work surfaces and desks.

### **A1** 3.8 foot support

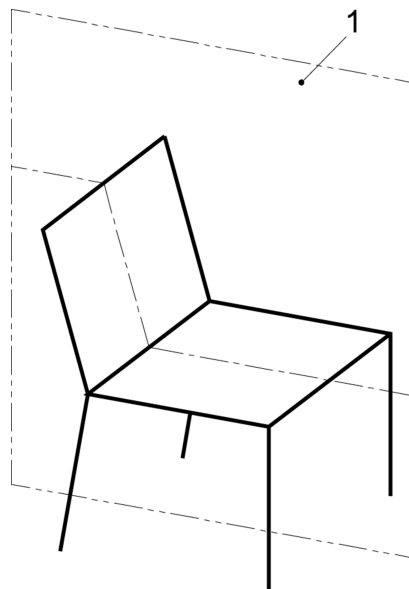
component intended to support the feet of the user and assist the user getting on or off a tall office work chair

Note 1 to entry: A foot support might or might not to be permanently attached to the structure of a tall office work chair. **A1**

### 3.9 median plane

vertical plane running from front to rear through the centre of the seat, dividing the chair into two equal parts

Note 1 to entry: See Figure 1.



#### Key

1 Median plane

**Figure 1 — Illustration of the median plane**