

Office furniture — Visitors chairs

The European Standard EN 13761:2002 has the status of a
British Standard

ICS 97.140

National foreword

This British Standard is the official English language version of EN 13761:2002.

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 international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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This British Standard, having been prepared under the direction of the Consumer Products and Services Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 10 October 2002

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 9 cover and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments

ICS 97.140

English version

Office furniture - Visitors chairs

Mobilier de bureau - Sièges visiteurs

Büromöbel - Besucherstühle

This European Standard was approved by CEN on 28 July 2002.

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Foreword

This document (EN 13761:2002) 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of an identical text or by endorsement, at the latest by March 2003, and conflicting national standards shall be withdrawn at the latest by March 2003.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The dimensions in this standard are based on practical experience of manufacturers and users. Neither the range of adjustment nor the fixed dimensions will accommodate all the variation of anthropometric dimensions of the user population. Considering the field of application and the use of visitors chairs, the dimensions listed hereafter are compromises between different requirements.

1 Scope

This European Standard specifies dimensions and safety requirements for visitors chairs.

The dimensional requirements are not applicable to easy chairs.

2 Normative references

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

EN 1022:1996, *Domestic furniture - Seating - Determination of stability.*

EN 1335-1:2000, *Office furniture - Office work chair - Part 1: Dimensions - Determination of dimensions.*

EN 1335-3:2000, *Office furniture – Office work chair — Part 3: Safety test methods.*

EN 1728:2000, *Domestic furniture - Seating - Test methods for the determination of strength and durability.*

3 Terms and definitions

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

3.1

visitors chair

seating for one person used in the office environment additional to the office work chair. It is used for meetings or consultations as well as for reading, writing, listening and waiting

4 Dimensions

4.1 Dimensional requirements

4.1.1 Seat height [a]

Fixed seat height: between 400 mm and 500 mm.

Adjustable seat height: minimum range from 420 mm to 480 mm.

4.1.2 Seat depth [b]

Seat depth: between 380 mm and 470 mm.

4.1.3 Seat width [d]

Seat width: minimum 400 mm.

4.1.4 Distance between arm rests [r]

Distance between arm rests: minimum 460 mm

4.2 Determination of reference points

4.2.1 Point "A"

For swivelling chairs point "A" shall be determined in accordance with EN 1335-1.

For all other chair types point "A" is the seat loading point determined in accordance with EN 1022.

4.2.2 Back supporting point "S"

The back supporting point "S" shall be determined in accordance with EN 1335-1.

4.3 Determination of dimensions

4.3.1 Seat height [a]

The seat height [a] shall be determined in accordance with EN 1335-1:2000, clause 6.1.

4.3.2 Seat depth [b]

The seat depth [b] shall be determined in accordance with EN 1335-1:2000, clause 6.2.

4.3.3 Seat width [d]

The seat width [d] shall be determined in accordance with EN 1335-1:2000, clause 6.4.

4.3.4 Distance between arm rests [r]

The distance between arm rests [r] shall be determined in accordance with EN 1335-1:2000, clause 6.16.

5 Safety requirements

5.1 General design requirements

5.1.1 Corners and edges, trapping, pinching and shearing

The chair shall be so designed as to minimise the risk of injury to the user.

All parts of the chair with which the user comes into contact, during intended use, shall be so designed that physical injury and damage to property are avoided.

These requirements are met when:

- the safety distance of accessible movable parts is either ≤ 8 mm or ≥ 25 mm in any position during movement;
- accessible corners are rounded with minimum 2 mm radius;
- the edges of the seat, back rest and arm rests which are in contact with the user when sitting in the chair are rounded with minimum 2 mm radius;
- the edges of handles are rounded with minimum 2 mm radius in the direction of the force applied;
- all other edges are free from burrs and rounded or chamfered;
- the ends of hollow components are closed or capped.

5.1.2 Adjusting devices

Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided.

5.1.3 Connections

It shall not be possible for any load bearing part of the chair to come loose unintentionally.

5.1.4 Avoidance of soiling

All parts which are lubricated to assist sliding (greasing, lubricating, etc.) shall be designed to protect users from lubricant stains when in normal use.

5.2 Stability during use

The chair shall not overbalance under the following conditions:

- a) by pressing down on the front edge of the seat surface in the most adverse position;
- b) by leaning sideways on a chair with or without arm rests;
- c) by leaning against the back rest;
- d) by sitting on the front edge.

5.2.1 Swivelling chairs

The first requirement a) is fulfilled if the chair does not overbalance when tested in accordance with 5.1 of EN 1335-3:2000.

The second and fourth requirement b) and d) are fulfilled if the chair does not overbalance when tested in accordance with 5.2 and 5.3 of EN 1335-3:2000.

The third requirement c) is fulfilled if either:

- the chair has at least 5 supporting points and the maximum off set [m] of the back rest of the chair is smaller than or equal to $1.34 \times [t]$ (stability dimension [t], see 6.18 of EN 1335-1:2000) when tested in accordance with 5.4.1 of EN 1335-3:2000; or
- the chair does not overbalance when tested in accordance with 5.4.2 respectively 5.4.3 of EN 1335-3:2000.

5.2.2 Non swivelling chairs

The first and fourth requirement a) and d) are fulfilled if the chair does not overbalance when tested in accordance with EN 1022:1996, clause 7.1.

The second requirement b) is fulfilled if the chair does not overbalance when tested in accordance with EN 1022:1996, clause 7.2 or 7.3.

The third requirement c) is fulfilled if the chair does not overbalance when tested in accordance with EN 1022:1996, clause 7.4 or 8.2 or 8.3.

5.3 Rolling resistance of the unloaded chair

This clause is only applicable to chairs fitted with castors.

The unloaded chair shall not roll unintentionally.

This requirement is met when:

- the rolling resistance is ≥ 15 N with castors Type H or ≥ 12 N with castors Type W when tested in accordance with 6.1 of EN 1335-3:2000; and
- the castors are of identical construction.

5.4 Strength and durability

The chair shall be constructed to ensure that it does not create a risk of injury to the user of the chair under the following conditions:

- a) sitting on the seat, both centrally and off-centre;
- b) moving forward, backwards, and sideways while sitting in the chair;
- c) leaning over the arm rests;
- d) pressing down on the arm rests while getting up from the chair.

These requirements are fulfilled when after testing in accordance with Table 1:

- there are no fractures of any member, joint or component;
- there are no loosening of joints intended to be rigid;
- no major structural element is significantly deformed;
- the chair fulfils its functions after removal of the test loads.

Table 1 — Strength and durability tests

Test and sequence	Reference	Test parameter
Seat and back static load test	EN 1728:2000, 6.2.1	Seat : 10 cycles 1600 N Back : 10 cycles 560 N (max.)
Seat front edge static load test	EN 1728:2000, 6.2.2	10 cycles 1300 N
Additional static load test for tilting chairs and intermediate reclining chairs	EN 1728:2000, 6.3	Seat : 10 cycles 1600 N ^a Back : 10 cycles 560 N ^a
Foot rail/foot rest and leg static load test	EN 1728:2000, 6.4	10 cycles 1000 N
Arm sideways static load test	EN 1728:2000, 6.5	10 cycles 400 N
Arm downwards static load test	EN 1728:2000, 6.6	10 cycles 700 N
Seat and back fatigue test for chairs without tilting or reclining mechanism	EN 1728:2000, 6.7	Seat : 100 000 cycles 1000 N Back : 100 000 cycles 300 N (max.)
Seat and back fatigue test for chairs with tilting or reclining mechanism (upright position)	En 1728:2000, 6.7	Seat : 50 000 cycles 1000 N Back : 50 000 cycles 300 N (max.)
Additional fatigue test for tilting chairs and intermediate reclining chairs (reclined position)	EN 1728:2000, 6.9	Seat : 50 000 cycles 1000 N ^a Back : 50 000 cycles 300 N ^a
Seat front edge fatigue test	EN 1728:2000, 6.8	50 000 cycles 1000 N
Arm fatigue test	EN 1728:2000, 6.10	30 000 cycles 400 N
Leg forward static load test	EN 1728:2000, 6.12	10 cycles 500 N (max.) Balancing seat load : 1000 N
Leg sideways static load test	EN 1728:2000, 6.13	10 cycles 400 N (max.) Balancing seat load : 1000 N
Seat impact test	EN 1728:2000, 6.15	10 cycles 180 mm

^a The actual seat and back loads shall be calculated according to EN 1728.

6 Information for use

Each chair shall be accompanied by information for use in the language of the country in which it will be delivered to the end user. It shall contain at least the following details:

- a) information regarding the intended use;
- b) if the chair is fitted with adjusting mechanisms: instruction for operating the adjusting mechanisms;
- c) instruction for the care and maintenance of the chair;
- d) if the chair is fitted with seat height adjustments with energy accumulators, an additional note is required pointing out, that only trained personnel may replace or repair seat height adjustment components with energy accumulators;
- e) if the chair is fitted with castors: information on the choice of castors in relation to the floor surface.

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