



**SLOVENSKI STANDARD**  
**SIST EN 12520:2025**

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**Pohištvo - Varnost, trdnost in trajnost - Zahteve za sedežno pohištvo za domačo uporabo**

Furniture - Safety, strength and durability - Requirements for domestic seating

Möbel - Sicherheit, Festigkeit und Dauerhaltbarkeit - Anforderungen an Sitzmöbel für den Wohnbereich

Meubles - Sécurité, résistance et durabilité - Exigences relatives aux sièges à usage domestique

**Ta slovenski standard je istoveten z: EN 12520:2024**

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EUROPEAN STANDARD

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## Furniture - Safety, strength and durability - Requirements for domestic seating

Meubles - Sécurité, résistance et durabilité - Exigences  
relatives aux sièges à usage domestique

Möbel - Sicherheit, Festigkeit und Dauerhaltbarkeit -  
Anforderungen an Sitzmöbel für den Wohnbereich

This European Standard was approved by CEN on 2 September 2024.

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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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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<b>Contents</b>		<b>Page</b>
<b>European foreword</b> .....		<b>3</b>
<b>1</b>	<b>Scope</b> .....	<b>4</b>
<b>2</b>	<b>Normative references</b> .....	<b>4</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>4</b>
<b>4</b>	<b>Test sequence</b> .....	<b>5</b>
<b>5</b>	<b>Safety, strength and durability</b> .....	<b>5</b>
<b>5.1</b>	<b>General safety requirements</b> .....	<b>5</b>
<b>5.1.1</b>	<b>General</b> .....	<b>5</b>
<b>5.1.2</b>	<b>Holes in tubular or rigid components</b> .....	<b>6</b>
<b>5.1.3</b>	<b>Shear and compression points</b> .....	<b>6</b>
<b>5.2</b>	<b>Stability</b> .....	<b>6</b>
<b>5.3</b>	<b>Strength and durability</b> .....	<b>6</b>
<b>5.4</b>	<b>Requirements</b> .....	<b>8</b>
<b>6</b>	<b>Information for use</b> .....	<b>9</b>
<b>7</b>	<b>Test report</b> .....	<b>9</b>
<b>Annex A (normative) Seat side-to-side durability test in D-G points</b> .....		<b>10</b>
<b>Annex B (informative) Rationales</b> .....		<b>13</b>
<b>Annex C (normative) Test methods for finger entrapment and shear and compression</b> .....		<b>15</b>
<b>Annex D (normative) Seat loading point for seating with suspended flexible material</b> .....		<b>21</b>
<b>Bibliography</b> .....		<b>22</b>

<https://standards.iteh.ai/catalog/standards/sist/9dcac545-5d4f-4320-9059-584808acc8c4/sist-en-12520-2025>

## European foreword

This document (EN 12520:2024) 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 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

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 supersedes EN 12520:2015.

EN 12520:2024 includes the following significant technical changes with respect to EN 12520:2015:

- updated to reflect the finger entrapment requirements within CEN/TR 17202, including an Annex containing test methods;
- definition of single column seating was added;
- side to side durability test method and requirements for single column seating were added;
- Table 1 updated with information on applicability of test method dependent on type of the seating;
- seat impact test updated with requirements dependent on the seat height adjustability;
- testing of durability of electrically operated seating products added;
- clarification of seat loading point for seating with suspended flexible material by adding Annex D.

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.

## EN 12520:2024 (E)

### 1 Scope

This document specifies the minimum requirements for the safety, strength and durability of all types of domestic seating for adults. It also specifies additional test methods for seat side-to-side durability as well as finger entrapment and shear and compression.

It does not apply to ranked seating, seating for non-domestic use, office work chairs, chairs for educational institutions, outdoor seating and to links for linked seating for which European Standards exist.

It does not include requirements for the durability of upholstery materials, castors, reclining and tilting mechanisms and seat height adjustment mechanisms.

It does not include requirements for electrical safety.

It does not include requirements for the resistance to ageing, degradation, flammability and ergonomics.

The requirements are based on use by persons weighing up to 110 kg.

Annex A (normative) specifies the seat side-to-side durability test in D-G points.

Annex B (informative) gives rationales for some of the tests referred to in Table 1.

Annex C (normative) specifies the test methods for finger entrapment and shear and compression.

Annex D (normative) specifies the seat loading point for seating with suspended flexible material.

### 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.

EN 1022:2023, *Furniture — Seating — Determination of stability*

EN 1728:2012, *Furniture — Seating — Test methods for the determination of strength and durability*

EN 13759:2012, *Furniture — Operating mechanisms for seating and sofa-beds — Test methods*

### 3 Terms and definitions

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

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

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

— IEC Electropedia: available at <https://www.electropedia.org/>

#### 3.1

##### **accessible part**

part to which access can easily be gained by the user when the seating is in its intended configuration of use and for which the probability of unintentional user contact is high

#### 3.2

##### **foot rest**

part intended to support the feet of the user which assists the user getting on or off an item of seating

[SOURCE: EN 1022:2023, 3.3, modified: Note 1 to entry was deleted.]

### 3.3

#### **leg rest**

extension of the seat area intended to support the legs of the user

Note 1 to entry: A leg rest can or cannot be permanently attached to the structure of the item of seating, and might not be suitable for use as an item of seating itself.

[SOURCE: EN 1022:2023, 3.4]

### 3.4

#### **single column seating**

item of seating, whose upper part, which includes the seat, is mounted on a single support with a diameter of up to 120 mm at its narrowest point

Note 1 to entry: This includes e.g. chairs with gas lifts.

[SOURCE: EN 1022:2023, 3.12, modified: “seat” was changed to “seating” in the term]

### 3.5

#### **stool**

seating unit without back rest or with a back rest, which has a height of  $\leq 100$  mm above the seat surface

## 4 Test sequence

The tests shall be carried out on the same sample and in the order in which they are listed in Table 1. With the exception of test no. 15 (EN 13759:2012), where a separate sample may be used.

## 5 Safety, strength and durability

### 5.1 General safety requirements

#### 5.1.1 General

The seating shall be designed so as to minimize the risk of injury to the user.

All parts of the seating with which the user comes into contact during intended use when the seating is positioned in its intended configuration of use shall be designed so that physical injury and damage are avoided.

This requirement is met when:

- a) the edges and corners of the seating which are directly in contact with the user are rounded or chamfered;
- b) all other edges and corners accessible during intended use are free from burrs and/or sharp edges.

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

Load bearing parts of the seating shall not become loose unintentionally.

All parts that are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use.

**EN 12520:2024 (E)****5.1.2 Holes in tubular or rigid components**

There shall be no holes in the ends of tubular components or holes in rigid components in accessible parts between 7 mm and 12 mm, unless the depth of penetration is less than 10 mm. This requirement is fulfilled if there is no hazard present when tested in accordance with C.1.

**5.1.3 Shear and compression points****5.1.3.1 General**

The requirements contained within 5.1.3.2, 5.1.3.3 and 5.1.3.4 do not apply to electrically operated furniture.

NOTE The requirements for electrically operated furniture will be provided in EN 17684, which is under preparation.

**5.1.3.2 Shear and compression points when setting up and folding**

Unless 5.1.3.3 or 5.1.3.4 are applicable, shear and compression points that are created only during setting up and folding are acceptable, because the user can be assumed to be in control of their movements and to be able to cease applying the force immediately upon experiencing pain.

The edges of parts moving relative to each other and creating shear and compression points shall be as specified in 5.1.1.

**5.1.3.3 Shear and compression points under influence of non-electrically powered mechanisms**

With the exception of operation of doors, flaps and extension elements, there shall be no areas where the distance between two accessible parts moving relative to each other can be less than 25 mm, and more than 8 mm in any position during movement that could present a risk of injury to the user, created by parts of the furniture operated by non-electrically powered mechanisms, e.g. mechanical springs and gas lifts.

This requirement is fulfilled if there is no hazard present when tested in accordance with C.2.3.

**5.1.3.4 Shear and compression points during use**

With the exception of operation of doors, flaps and extension elements, there shall be no areas where the distance between two accessible parts moving relative to each other can be less than 18 mm, and more than 8 mm in any position that could present a risk of injury to the user, created by loads applied during normal use, e.g. attempting to move the seating by lifting the seat or by adjusting the back rest when a person is sitting in the product.

The loads used for durability tests within Table 1 are considered representative of normal use.

This requirement is fulfilled if there is no hazard present when tested in accordance with C.2.3.

**5.2 Stability**

The seating shall fulfil the relevant requirements of EN 1022:2023 after having completed the relevant tests listed in Table 1.

In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in Table 1.

**5.3 Strength and durability**

Seating shall be tested for strength and durability according to and in the order given in Table 1 and in accordance with the test conditions contained in EN 1728:2012.

Tests no. 1, 2, 3.1, 3.2, 5, 6, 7, 8, 9, 10, 11, 12, 15 are considered to be relevant to safety.



Seating with a seat and back made of one piece of flexible material suspended in the upper part of the back rest and the front of the seat shall be tested according to Annex D. For this type of seating, only the tests on seat shall be carried out.

**Table 1 — Tests and test sequence**

Test	Application	Reference	Test parameters	
1. Seat static load and back static load test	All	EN 1728:2012, 6.4	Seat force $F_1$ , N Back force $F_2$ , N Minimum back force, N Load applied to seats not being tested, N Cycles	1 300 450 410 750 10
2. Seat front edge static load test	All	EN 1728:2012, 6.5	Force, N Load applied to seats not being tested, N Cycles	1 300 750 10
3.1 Foot rest static load test <sup>a</sup>	All	EN 1728:2012, 6.8	Force, N Minimum seat force, N Cycles	1 000 750 10
3.2 Leg rest static load test	All	EN 1728:2012, 6.9	Force, N Minimum seat force, N Cycles	1 000 750 10
4. Arm rest sideways static load test	All	EN 1728:2012, 6.10	Force, N Cycles	300 10
5. Arm rest downwards static load test	All	EN 1728:2012, 6.11	Force, N Cycles	750 10
6. Combined seat and back durability test <sup>b</sup>	All	EN 1728:2012, 6.17	Seat force $F_3$ , N Back force $F_4$ , N Load applied to seats not being tested, N Cycles	1 000 300 750 25 000
7. Seat front edge durability test	All	EN 1728:2012, 6.18	Force, N Cycles	800 20 000
8. Seat side-to-side durability test	Only on single column	Annex A	Force, N Cycles Minimum force, N	1 100 10 000 800
9. Arm rest durability test	All	EN 1728:2012, 6.20	Force, N Cycles	400 10 000

## EN 12520:2024 (E)

Test	Application	Reference	Test parameters	
10. Leg forward static load test	All except for swivelling single column	EN 1728:2012, 6.15	Horizontal force, N	400
			Seat load, N	1 000
			Minimum horizontal force, N	<sup>c</sup>
			Cycles	10
11. Leg sideways static load test	All except for swivelling single column	EN 1728:2012, 6.16	Horizontal force, N	300
			Seat load, N	1 000
			Minimum horizontal force, N	<sup>c</sup>
			Cycles	10
12. Seat impact test	All	EN 1728:2012, 6.24	Drop height, mm	180
			Cycles (fixed seat height)	10
			Cycles (adjustable seat height)	5 in highest position 5 in lowest position
13. Backward fall test <sup>d</sup>	All	EN 1728:2012, 6.28	Number of impacts	5
14. Back impact test <sup>e</sup>	All	EN 1728:2012, 6.25	Height of fall, mm	120
			or angle,	28
			Cycles	10
15. Durability of electrically operated seating products	All	EN 13759:2012	Cycles	5 000

<sup>a</sup> For foot rest the test is only applicable to seating with a seat height greater than 600 mm.

<sup>b</sup> The minimum back force is the force that just prevents rearward overturning.

<sup>c</sup> In derogation to EN 1728:2012 there is no minimum force provided.

<sup>d</sup> This test is only for single seating units where the back will be the first part of the structure to strike the floor and the force used to overturn the chair rearwards is less than 30 N.

<sup>e</sup> This test is for all seating not tested in accordance with Test 13.

## 5.4 Requirements

- The product shall comply with the applicable requirements in 5.1 before and after testing according to 5.3.
- If the minimum forces given in any of the tests in Table 1 which are applicable, are not achieved, the product shall be considered to have failed the requirements.

The strength, durability and stability requirements are fulfilled when, after testing in accordance with Table 1:

- there are no fractures of any member, joint or component;
- there is no loosening of joints intended to be rigid;
- seating fulfils its functions after removal of the test loads;
- seating fulfils the stability requirements (5.2).