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Pohištvo - Pogradi in visoke postelje - 1. del: Zahteve za varnost, trdnost in trajnost

Furniture - Bunk beds and high beds - Part 1: Safety, strength and durability requirements

Möbel - Etagenbetten und Hochbetten - Teil 1: Anforderungen an die Sicherheit, Festigkeit und Dauerhaltbarkeit

Meubles - Lits superposés et lits surélevés - Partie 1: Exigences de sécurité, de résistance et de durabilité

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Furniture - Bunk beds and high beds - Part 1: Safety, strength and durability requirements

Meubles - Lits superposés et lits surélevés - Partie 1:
Exigences de sécurité, de résistance et de durabilité

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Anforderungen an die Sicherheit, Festigkeit und
Dauerhaltbarkeit

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 207.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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[SIST EN 747-1:2012](https://standards.iteh.ai/catalog/standards/sist/01d3cb9a-3d3a-4e1f-9c63-2febd01a1077/sist-en-747-1-2012)

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Foreword

This document (prEN 747-1:2010) has been prepared by Technical Committee CEN/TC 207 “Furniture”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 747-1:2007, EN 13453-1:2004.

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Introduction

This part of EN 747 specifies requirements for bunk beds and high beds for use by one occupant per bed.

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1 Scope

This European Standard specifies requirements for the safety, strength and durability of bunk beds and high beds. The loads and forces in the strength and durability tests apply to beds with an internal length greater than 140 cm and a maximum bed base width of 120 cm.

The dimensional requirements are particularly intended to minimise the risk of accidents happening to children.

The strength and durability requirements are intended to represent use of a bed by one occupant only.

Safety requirements for other products included in a bunk bed/high bed, e.g. a table or storage furniture, are not included in this standard.

This European Standard does not apply to bunk beds and high beds for special purposes, including but not limited to prison, military and fire brigades.

2 Normative references

The following referenced documents are indispensable for the application 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.

prEN 747-2, *Furniture – Bunk beds and high beds – Part 2: Test methods*

3 Terms and definitions

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

3.1

bunk bed

set of components that can be assembled as beds, one above the other, the upper surface of the top bed base of which is 800 mm or more above floor level

3.2

high bed

set of components that can be assembled as a bed, the upper surface of the bed base of which is 800 mm or more above floor level, irrespective of the use to which the space below is put

3.3

bed end structures

upright unit at the head and foot of the bed to which the side rails are attached

3.4

bed base

support structure for a mattress

3.5

safety barrier

component intended to prevent an occupant from falling out of the upper bed or the high bed

prEN 747-1 :2010 (E)**3.6****side rail**

longitudinal member attached to the bed end structure by which the bed base can be supported

3.7**tread**

structure intended as a foothold, including ladder rungs and steps, but not parts of the bed structure

4 Safety requirements**4.1 Materials**

Wood and wood-based material shall be visually free of infestation.

4.2 Construction**4.2.1 General**

Accessible edges and corners shall be rounded or chamfered and free from burrs or sharp edges.

There shall be no open ended tubes.

All assembly and pilot holes shall be made by the manufacturer.

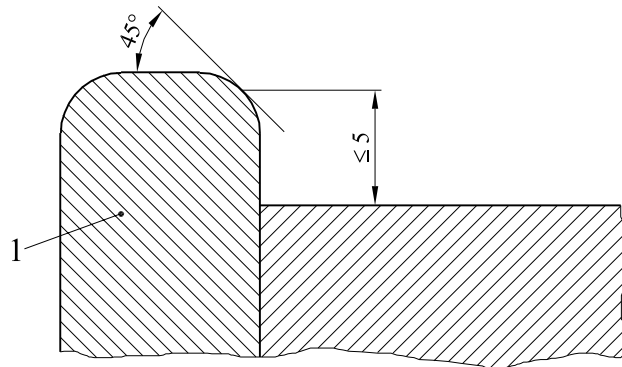
Vertically protruding parts on the top of the upper bed shall either:

- have an uninterrupted minimum horizontal dimension of 300 mm without any other vertical protrusion, or
- have an uninterrupted vertical dimension of at least 400 mm measured from the highest adjacent part, or
- have a maximum height at which a line, drawn at 45° touches it, of more than 5 mm above at least one adjacent/adjoining horizontal component. The maximum vertical protrusion above that component shall not exceed 20 % of the largest horizontal dimension of parts, where the largest dimension is 50 mm or more (see Figure 1), or
- have a maximum height at which a line, drawn at 45° touches it, of more than 5 mm above at least one adjacent/adjoining horizontal component. The maximum vertical protrusion above that component shall not exceed 10 mm (see Figure 1) of parts, where the largest dimension is less than 50 mm.

It shall not be possible to dismantle the bed or its components without the use of a tool.

The dimensional requirements apply both before and after testing without re-tightening.

Dimension in millimetres

**Key**

1 Bedpost

Figure 1 — Example of a vertically protruding part**4.2.2 Accessible holes gaps and openings**

There shall be no accessible holes, gaps or openings with a diameter/width greater than 7 mm and less than 12 mm, unless the depth is less than 10 mm.

Additionally, accessible holes, gaps and openings in safety barriers, bed bases and treads, shall fulfill the requirements specified in the respective clauses, i.e. 4.2.3 Safety barriers, 4.2.4 Bed base and 4.2.5 Ladder or other means of access.

All other accessible holes, gaps or openings shall be either:

- at least 12 mm but not more than 25 mm, when tested in accordance with 5.3 of prEN 747-2; or
- at least 60 mm but not more than 75 mm, when tested in accordance with 5.3 of prEN 747-2; or
- at least 200 mm.

4.2.3 Safety barriers

Any bunk bed and high bed shall be equipped with safety barriers all around the bed.

For non-domestic use only, the structure of the building can act as a safety barrier provided the bed is securely fastened to it by the manufacturer.

The safety barriers shall be secured against unintentional loosening. This requirement is fulfilled if the safety barriers do not become damaged or loosened when tested in accordance with 5.4.2 of prEN 747-2.

The distance between the upper edge of the safety barriers and the upper surface of the bed base shall be at least 260 mm.

The top of the mattress shall be at least 160 mm below the upper edge of the safety barriers. The maximum thickness of the mattress shall be permanently marked, see clause 5 d) and clause 6 b).

With the exception of the upper corners of the safety barrier, which may end in a maximum radius of 85 mm, the opening for access shall have a width between 300 mm and 400 mm from the maximum mattress thickness mark (see clause 6 b)) to 160 mm above it (see Figure 2).

prEN 747-1 :2010 (E)

With the exception of the long side where the ladder or other means of access shall be mounted, the horizontal distance between the outside of the top safety barrier and the vertical projection of the outermost point of the legs/posts, shall not exceed 55 mm or shall be more than 230 mm (see Figure 3).

With the exception of the opening for access, the safety barrier shall be designed so that in at least one direction the clear space between two adjacent retaining elements, e.g. bands, filler bars, is either ≤ 5 mm or is at least 60 mm and not more than 75 mm when tested in accordance with 5.3 of prEN 747-2.

4.2.4 Bed base

The bed shall have a means (e.g. fastening) of preventing the side rails from bending outwards, so that the bed base(s) or its elements do not fall down.

All gaps between the bed base and the side or ends shall not exceed 25 mm when measured in accordance with 5.3 of prEN 747-2.

All gaps between bed base components, e.g. slats or springs shall not exceed 75 mm, when measured in accordance with 5.3 of prEN 747-2.

When tested in accordance with 5.4.3, 5.4.4 and 5.4.5 of prEN 747-2, the bed base and/or its elements shall not break, fall down or become detached.

The distance between the upper surface of the lower bed base and the underside of the upper bed base shall be at least 750 mm.

The bed base shall allow ventilation.

4.2.5 Ladder or other means of access

The distance from the floor to the upper surface of the first tread shall not exceed 400 mm. The distance between the upper surfaces of two successive treads shall be (250 ± 50) mm.

The distance between the upper surfaces of the treads shall be equal with a tolerance of ± 5 mm.

The distance between the top tread and the point of access shall not be more than 500 mm.

The clear distance between two successive treads shall be at least 200 mm and the usable width of the tread shall be at least 300 mm.

The front edges of all treads shall lie on a straight line within ± 20 mm.

The gap between any tread and any part of the bed frame shall be:

- less than 7 mm; or
- at least 12 mm but not more than 25 mm; or
- at least 60 mm but not more than 75 mm; or
- at least 200 mm.

The effective step depth shall be at least 90 mm (see Figure 4).

Frame parts of the bed, situated in the vicinity of treads, shall not interfere with the usable area of the tread.