



SLOVENSKI STANDARD
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Varnostne zahteve za dvizne mize - 1. del: Dvizne mize za dvigovanje do dveh nivojev

Safety requirements for lifting tables - Part 1: Lifting tables serving up to two fixed landing

Sicherheitsanforderungen an Hubtische - Teil 1: Hubtische, die bis zu zwei feste Haltestellen anfahren

Exigences de sécurité des tables élévatrices - Partie 1 : Tables élévatrices desservant jusqu'à deux paliers définis

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ICS:

53.020.99 Druga dvigalna oprema Other lifting equipment

oSIST prEN 1570-1:2026

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EUROPEAN STANDARD
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prEN 1570-1

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ICS

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Safety requirements for lifting tables - Part 1: Lifting tables serving up to two fixed landing

Exigences de sécurité des tables élévatrices - Partie 1 :
Tables élévatrices desservant jusqu'à deux paliers
définis

Sicherheitsanforderungen an Hubtische - Teil 1:
Hubtische, die bis zu zwei feste Haltestellen anfahren

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prEN 1570-1:2026 (E)**European foreword**

This document (prEN 1570-1:2026) has been prepared by Technical Committee CEN/TC 98 “Lifting platforms”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1570-1:2024.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

The revisions to the standard are based mainly on the following points, which are embedded throughout the document:

- detailed clarification of the border line between EN 1570-1 and EN 280-1;
- incorporate the results of the GAP analysis;
- alignment to the Machinery Regulation.

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Introduction

This document is a type-C standard as stated in EN ISO 12100.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e.g. for maintenance (small, medium and large enterprises);
- consumers (in the case of machinery intended for use by consumers)

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document. The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or -B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

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prEN 1570-1:2026 (E)

1 Scope

1.1 This document specifies the safety requirements for lifting tables which fulfil the following characteristics:

- serving no more than 2 fixed landings but able to pass a fixed landing and,
- having a vertical travel speed of no more than 0,15 m/s, unless the lifting table is safe by position and,
 - raising or lowering goods (with or without operator(s) and/or authorized person(s)) with a fixed, movable or mobile lifting table or,
 - raising or lowering operator(s) and/or authorized person(s) with or without goods, to positions where they can carry out work from a fixed lifting table that is guided throughout its vertical travel only.

1.2 This document specifies the appropriate technical measures for eliminating and reducing the risks arising from the significant hazards listed in Annex B.

1.3 This document does not apply to the following equipment:

- lifting tables with a vertical travel speed exceeding 0,15 m/s, unless the lifting table is safe by position;
- lifting tables, serving more than 2 fixed landings of a construction, for lifting goods, with a vertical travel speed not exceeding 0,15 m/s (EN 1570-2:2016);
- lifting tables, serving more than 2 fixed landings of a construction, for lifting operators, with a vertical travel speed not exceeding 0,15 m/s;
- lifting tables carrying operators and installed in full enclosures with a vertical travel speed not exceeding 0,15 m/s;
- lifting tables used on ships;
- lifting tables designed for artists and stage set features during artistic performances (EN 17206:2020);
- power operated lifting platforms for persons with impaired mobility (EN 81-41:2010);
- mobile lifting tables for airport ground support equipment (EN 1915-2:2001+A1:2009 and EN 12312-1:2013);
- mobile elevating work platforms (EN 280-1:2022);
- vehicle servicing lifts (EN 1493:2022);
- mobile lifting tables used for firefighting (EN 1777:2010);
- mobile lifting tables with a horizontal travelling speed of more than 1,6 m/s;
- rail dependent storage and retrieval equipment (EN 528:2021);
- scissor lift pallet trucks (EN ISO 3691-5:2015);

- lifting tables suspended from a ceiling.

1.4 This document does not consider the requirements for:

- operation in severe conditions (e.g. extreme climates, freezer applications, strong magnetic fields);
- operation subject to special rules (e.g. potentially explosive atmospheres, mines);
- handling of loads, the nature of which could lead to dangerous situations (e.g. molten metal, acids, radiating materials, particularly brittle loads, loose loads (gravel, tubes));
- hazards occurring during construction, transportation, and disposal;
- equipment installed on the load platform or the replacing or maintaining of it;
- integration into broader systems or other machines, etc.;
- cable-less controls, i.e. wireless;
- lifting tables where the hydraulic pressure is derived directly from gas pressure;
- lifting tables powered by internal combustion engines.

This document is not applicable to lifting tables manufactured before the date of its publication.

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 280-1:2022, *Mobile elevating work platforms - Part 1: Design calculations - Stability criteria - Construction - Safety - Examinations and tests*

EN 1493:2022, *Vehicle lifts*

EN 12453:2017+A1:2021, *Industrial, commercial and garage doors and gates — Safety in use of power operated doors — Requirements and test methods*

EN 60204-1:2018, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2016, modified)*

EN 60204-32:2008, *Safety of machinery - Electrical equipment of machines - Part 32: Requirements for hoisting machines (IEC 60204-32:2008)*

EN 60529:1991,¹ *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 60947-5-1:2017,² *Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices (IEC 60947-5-1:2016)*

¹ As impacted by EN 60529:1991/AC:2006-12, EN 60529:1991/A1:2000, EN 60529:1991/A2:2013 and EN 60529:1991/A2:2013/AC:2019-02.

² As impacted by EN 60947-5-1:2017/AC:2020-05.

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EN 60947-5-3:2013, *Low-voltage switchgear and controlgear - Part 5-3: Control circuit devices and switching elements - Requirements for proximity devices with defined behaviour under fault conditions (PDDB) (IEC 60947-5-3:2013)*

EN 61310-2:2008, *Safety of machinery - Indication, marking and actuation - Part 2: Requirements for marking (IEC 61310-2:2007)*

EN IEC 61496-1:2020, *Safety of machinery - Electro-sensitive protective equipment - Part 1: General requirements and tests (IEC 61496-1:2020)*

EN IEC 61496-2:2020, *Safety of machinery - Electro-sensitive protective equipment - Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:2020)*

EN 61800-5-2:2017, *Adjustable speed electrical power drive systems - Part 5-2: Safety requirements - Functional (IEC 61800-5-2:2016)*

EN IEC 60947-5-2:2020,³ *Low-voltage switchgear and controlgear — Part 5-2: Control circuit devices and switching elements — Proximity switches*

EN ISO 4413:2010, *Hydraulic fluid power - General rules and safety requirements for systems and their components (ISO 4413:2010)*

EN ISO 11161:2007, *Safety of machinery - Integrated manufacturing systems - Basic requirements (ISO 11161:2007)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13849-1:2023, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2023)*

EN ISO 13850:2015, *Safety of machinery - Emergency stop function - Principles for design (ISO 13850:2015)*

EN ISO 13855:2024, *Safety of machinery - Positioning of safeguards with respect to the approach of the human body (ISO 13855:2024)*

EN ISO 13856-2:2013, *Safety of machinery - Pressure-sensitive protective devices - Part 2: General principles for design and testing of pressure-sensitive edges and pressure-sensitive bars (ISO 13856-2:2013)*

EN ISO 13857:2019, *Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)*

EN ISO 14119:2025, *Safety of machinery - Interlocking devices associated with guards - Principles for design and selection (ISO 14119:2024)*

EN ISO 14120:2015, *Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards (ISO 14120:2015)*

EN ISO 14122-3:2016, *Safety of machinery - Permanent means of access to machinery - Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2016)*

ISO 606:2015, *Short-pitch transmission precision roller and bush chains, attachments, and associated chain sprockets*

³ As impacted by EN IEC 60947-5-2:2020/A11:2022.

ISO 2408:2017, *Steel wire ropes - Requirements*

ISO 4301-1:2016, *Cranes - Classification - Part 1: General*

ISO 4347:2015, *Leaf chains, clevises and sheaves - Dimensions, measuring forces, tensile strengths and dynamic strengths*

ISO 11228-1:2021, *Ergonomics - Manual handling - Part 1: Lifting, lowering and carrying*

ISO 11228-2:2007, *Ergonomics - Manual handling - Part 2: Pushing and pulling*

ISO 16625:2025, *Cranes and hoists - Selection of wire ropes, drums and sheaves*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

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

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

3.1

lifting table

lifting device with a load supporting platform rigidly guided throughout its travel

Note 1 to entry: A scissor lift or mast lift for example.

3.2

fixed lifting table

lifting table where the place of installation is not intended to be changed, according to the manufacturer's instructions

3.3

movable lifting table

lifting table where the place of installation can be readily changed without integrated devices

Note 1 to entry: By use of a crane, forklift or similar for example.

3.4

mobile lifting table

lifting table which is mobile by one or more integrated devices

Note 1 to entry: By use of wheels or air cushions for example.

3.5

Horizontally guided mobile lifting table

lifting table which runs on a pre-set route

Note 1 to entry: Running on tracks or in rails for example.

3.6

maintenance support

device that can be set up in such a way that maintenance and repair work below the platform can be carried out safely

prEN 1570-1:2026 (E)**3.7****self-propelled lifting table**

lifting table, other than vehicle mounted, which is capable of horizontal movement under its own power

3.8**operator**

person who is trained and authorised/permitted by the duty holder, to operate the lifting table, according to the manufacturer's instructions

Note 1 to entry: The machine owner is considered as the duty holder.

3.9**authorised person**

person whose presence in the area is authorised/permitted by the operator and whose safety is the responsibility of the operator

3.10**fixed landing**

permanent level of the construction for loading and unloading the lifting table

3.11**variable landing**

non-permanent level for loading and unloading of the lifting table

Note 1 to entry: Vehicle serving for example.

3.12**platform**

part of the lifting table (including extensions) designed to accommodate the working load and/or person(s) accompanying the goods or carrying out work; fork arms are considered as a load platform for goods only

3.13**rated load**

load that consists of goods, persons, tools, and material acting vertically on the platform and that the manufacturer has stated the machine is capable of lifting/lowering when used in accordance with the instruction manual

3.14**structural load**

load, excluding rated load, comprising of any equipment that is fixed on the platform

Note 1 to entry: Structural load can include guard-rails, gates, roller conveyors etc.

Note 2 to entry: Structural load shall be considered as part of the lifting table self-weight.

3.15**guard**

part of the machine or the surrounding structure specifically used to provide protection by means of a physical barrier

3.16**maximum working pressure**

highest pressure in the hydraulic system at which it is intended to operate under normal working conditions with rated load and, if any, structural load

3.17**travel zone**

space through which the lifting mechanism and load, platform, and any attachment to it moves

3.18**non-public area**

area to which access is restricted only to persons who are authorised to be in that area, and not accessible to the public

3.19**public area**

space open to persons without specific training, instruction or awareness including children

3.20**vertical travel speed**

average lifting and lowering speed of the platform when measured throughout its normal travel range

3.21**screen**

permanent protection from access to the hazard for the whole body, also called distance guards in EN ISO 14120:2015

3.22**guard-rail**

device for protection against accidental fall or accidental access to a hazardous area, with which stairs, step ladders, landings or platforms and walkways (level surface used for moving from one point to another) can be equipped

3.23**removable guard-rail**

guard-rail designed to be removable without the use of a tool

Note 1 to entry: Bolted guard-rails are not considered removable.

3.24**enclosure**

permanent protection where the whole of the travel zone is protected with rigid guards to make the lifting table inaccessible whilst in operation, i.e., safe by position

3.25**automatically controlled lifting table**

lifting table whose operating sequence is determined by a control program, which can be semi-automatic when operations are initiated by an operator, or fully automatic when no operator intervention is required

3.26**gate**

opening part within a guard-rail, enclosure, or screen, to give access from a landing or a platform

3.27**inward opening gate**

platform mounted inward opening gate is always opened towards the centre of the platform; and a landing mounted inward opening gate is opened away from the centre of the platform

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3.28

outward opening gate

platform mounted outward opening gate is always opened away from the centre of the platform; and a landing mounted outward opening gate is opened towards the centre of the platform

3.29

safe by position

condition in which a lifting table, any part of a lifting table, or the load is located so that it cannot be reached or accessed during operation because access is prevented either by fixed or movable guarding measures complying with Clause 4 or by permanent, non-removable structural elements such as parts of the building, thereby avoiding hazards to persons or goods in accordance with EN ISO 13857:2019

3.30

remote control

cable connected control device, fixed or pendant, that is not situated on the platform

3.31

hinged connecting plate

plate mounted to the edge of the platform by a hinge to connect the platform to a landing (fixed or variable)

3.32

unassisted hinged connecting plate

hinged connecting plate that is entirely manually operated

3.33

assisted hinged connecting plate

hinged connecting plate that is counterbalanced to reduce the manual effort of operating the plate

Note 1 to entry: Counterbalanced can be by spring or weights for example.

3.34

power actuated hinged connecting plate

hinged connecting plate that requires no manual effort to operate

3.35

interlocking device

mechanical, electrical, or other type of device, the purpose of which is to prevent the operation of hazardous machine functions under specified conditions (generally as long as a guard is not closed)

[SOURCE: EN ISO 12100:2010, 3.28.1]

3.36

skillet-line

system utilising platforms (skillets) to transport materials or products through various assembly operations providing access around the perimeter of the product, enabling the worker to travel with the product as it is conveyed through the various stages of assembly

3.37

AGV

driverless industrial truck that follows marked lines or wires on the floor, or uses radio or satellite signals, vision cameras, magnets, or lasers for navigation to transport loads

3.38

externally operated non-return valve

non-return check valve that can be overridden by external means e.g., actuated electrically or manually

3.39

rigid guarding

physical, non-flexible, barrier

Note 1 to entry: A physical barrier can be a guard-rail or wall for example.

3.40

fall protection device

device intended to prevent persons from falling from a lifting table or from a fixed landing, by providing a physical barrier, e.g. guard rails, gates, screens

4 Safety requirements and/or protective/risk reduction measures

4.1 General

Machinery shall comply with the safety requirements and/or protective/risk reduction measures of this clause. In addition, the machine shall be designed according to the principles of EN ISO 12100:2010 for relevant, but not significant hazards, not dealt with by this document.

4.2 Calculations

4.2.1 Stresses

4.2.1.1 The lifting table shall be designed in accordance with usual calculation codes and good engineering practice and all failure modes of the material shall be considered, including fatigue failure.

4.2.1.2 The stresses in any part of the lifting table assessed using the permissible stress method shall not, under normal working conditions, exceed the lowest of the following values:

- 1) 0,66 times the yield stress of the material used; or
- 2) 0,50 times the ultimate tensile stress of the material used.

4.2.1.3 The stresses shall be calculated for a lifting table carrying its rated load and, if any, structural load whilst being used in compliance with the instructions for use, see 6.3.

The loads shall include all real static and dynamic forces, both vertical and horizontal, any wind forces, and all forces applied to the platform during loading and unloading. In case of extending part(s) of the platform, the calculations shall consider the extension in the worst condition.

If wind forces are to be considered in the calculations, EN 280-1:2022, 4.2.3.3 shall be applied.

4.2.1.4 The minimum dynamic forces to be used for the calculations set out under 4.2.1.3 shall result from:

- 1) the total vertical load (this includes the rated load and, if any, structural load, and the self-weight of the moving parts of the structure) increased by the dynamic factor for the category of lifting table shown in Table 1;
- 2) the horizontal load coefficient for the category of lifting table shown in Table 1, taken as acting horizontally at the platform level in the direction causing the maximum stress in the part being considered.