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Sikkerhedskrav til løfteplatforme – Del 1: Løfteplatforme, der betjener op til to faste afsatser

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

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English Version

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

This European Standard was approved by CEN on 19 September 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.

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European foreword

This document ([EN 1570-1:2024](#)) has been prepared by Technical Committee CEN/TC 98 “Lifting platforms”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2024, and conflicting national standards shall be withdrawn at the latest by October 2024.

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 1570-1:2011+A1:2014](#).

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

- a wholesale restructure of the document;
- the inclusion for lifting tables in non-industrial applications; Static Elevating Work Platforms and lifting tables used in Skillet lines or Autonomous Ground Vehicles;
- the ability to pass a fixed landing and to carry authorized persons when under operator control;
- the introduction of rated and structural loads;
- the replacement of [EN 1570-1:2011+A1:2014](#), Table 3 – Lift installation safeguard requirements with new flow charts within [Annex I](#) – Guide to travel zone risks;
- where appropriate, risk of falling is now associated with the height of fall rather than the travel height of the machine;
- greater emphasis on protection of the public when the lifting tables are used in public accessible areas;
- the reintroduction of boom barriers and clarity on interlocking and locking requirements for removable guard-rails;
- locking of the lift table when at an upper fixed landing;
- the relaxation of overload monitoring limits due to the lack of appropriate state of the art equipment;
- restrictions on the use of pipe rupture protection devices in hydraulic systems;
- the introduction of rigid / pusher chains and the removal of pneumatic drives.

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.

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.

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Introduction

This document was drafted as a design guidance manual to provide a means of achieving conformance to the essential safety requirements stipulated under Machinery Directive 2006/42/EC.

As lifting tables are used in a wide range of applications, it is equally necessary to perform individual risk assessments in accordance with [EN ISO 12100:2010](#) for the actual operating conditions.

Products sold indirectly to end-users should be built to cover all the risks related to the use and all conditions foreseeable by the manufacturer, as described and detailed in the instruction manual.

Where the text gives an example of a safety measure for the purposes of greater clarity, this should not be considered as the only possible solution. Any other solution leading to the same risk reduction is permissible if an equivalent or increased level of safety is achieved.

While drafting this document, it was assumed that:

- the lifting tables are only operated by persons trained in the use of the equipment in accordance with the manufacturer's instructions, and that the working area is adequately lit;
- the lifting tables are installed or used on hard standing, even, appropriately prepared surfaces;
- where there are special requirements on low noise levels, such as for hospital applications and theatres, etc., the customer should specify these requirements and the manufacturer should then take all appropriate measures.

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

Safety requirements for lifting tables –

Part 1: Lifting tables serving up to two fixed landing

1 Scope

1.1 This document specifies the safety requirements for lifting tables with 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 safe by position and,
- for raising or lowering goods (with or without operator(s) and/or authorized person(s)), or;
- for 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 or movable lifting table that is guided throughout its vertical travel only (see [Annex H](#)).

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 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](#));
- static Group B 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+A1:2022](#));
- scissor lift pallet trucks ([EN ISO 3691-5:2015](#), including [EN ISO 3691-5:2015/AC:2016](#) and [EN ISO 3691-5:2015/A1:2020](#));

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— lifting tables suspended from a ceiling.

1.4 This document does not consider the additional requirements for:

- electromagnetic compatibility;
- 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.

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)*

[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)*

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 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 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](#),⁴⁾ *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 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 14119:2013](#), *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection (ISO 14119:2013)*

[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*

[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 16625:2013](#), *Cranes and hoists — Selection of wire ropes, drums and sheaves*

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

4) As impacted by EN ISO 11161:2007/A1:2010.