This document is a preview generated by EVS

LIFTIDE EHITUSE JA PAIGALDUSE OHUTUSEESKIRJAD. AINULT KAUPADE VEOKS ETTENÄHTUD LIFTID. OSA 30: ELEKTRILISED JA HÜDRAULILISED TEENINDUSLIFTID

Safety rules for the construction and installation of lifts - Lifts for the transport of goods only - Part 30: Electric and hydraulic service lifts

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 81-30:2025 sisaldab Euroopa standardi EN 81-30:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 81-30:2025 consists of the English text of the European standard EN 81-30:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 17.12.2025.	Date of Availability of the European standard is 17.12.2025.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.140.90

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis-ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis-ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

This document is a preview generated by EVS

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 81-30

December 2025

ICS 91.140.90

Supersedes EN 81-3:2000+A1:2008

English Version

Safety rules for the construction and installation of lifts - Lifts for the transport of goods only - Part 30: Electric and hydraulic service lifts

Règles de sécurité pour la construction et l'installation des ascenseurs - Ascenseurs destinés uniquement au transport d'objets - Partie 30 : Monte-charge électriques et hydrauliques

Sicherheitsregeln für die Konstruktion und den Einbau von Aufzügen - Aufzüge für den Transport von Gütern - Teil 30: Elektrisch und hydraulisch betriebene Kleingüteraufzüge

This European Standard was approved by CEN on 29 September 2025.

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.

CEN members are the national standards bodies of 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 United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2025 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 81-30:2025 E

This document is a preview generated by EVS

Contents

Page

This document is a preview generated by EVS

This document is a preview generated by EVS

This document is a preview generated by EVS

European foreword

This document (EN 81-30:2025) has been prepared by Technical Committee CEN/TC 10 “Lifts, escalators and moving walks”, the secretariat of which is held by AFNOR.

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 June 2026, and conflicting national standards shall be withdrawn at the latest by December 2027.

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 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.

This document is part of the EN 81 series of standards “Safety rules for the construction and installation of lifts”. A list of all parts in a series can be found on the CEN website.

This document supersedes EN 81-3:2000+A1:2008.

In comparison with the previous edition, the following technical modifications have been made:

— All Essential Health and Safety Requirements from the Directive 2006/42/EC have been addressed. Specifically added: EMC reference; verification of design; handbooks requirements for erection/test/breakdown;

— Requirements have been updated, taking into account EN 81-20:2020 and EN 81-50:2020. Specifically: carrier material flammability; machinery stopping; rope’s retainers; strength of the doors and of the well, screens, partitions; definitions; data plates;

— Improvements in safety due to changes in proven technology have been reflected. Specifically: performance levels; doors locking; electrical equipment;

— Changes in the state of the art have been incorporated. Specifically: ropes and terminations; lighting; balancing weights; existing buildings; emergency electrical operation; fluid characteristics;

— Reported errors have been eliminated. Specifically: hydraulic formulae;

— The text has been clarified. Specifically: accessible/inaccessible well;

— References to other standards (according to the progress in that field) have been improved. All references now include a date;

— Informative Annex “List of significant hazards” has been added;

— Informative Annex “Building interfaces” has been added;

— Informative Annex “Examinations and tests after important modifications or after accidents” has been deleted;

This document is a preview generated by EVS

— Annex ZA replaces the previous Annex ZA and Annex ZB. The new informative Annex ZA (on the relationship with EU Directive 2006/42/EC) is now 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.

This document is a preview generated by EVS

Introduction

0.1 General

This document is a type C standard as stated in EN ISO 12100:2010.

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 case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate in the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

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, for machines that have been designed and built according to the provisions of this type C standard.

0.2 General notes

0.2.1 The object of this document is to define safety rules related to service lifts with a view to safeguarding persons and objects against the risk of accidents associated with the normal use, inspection and maintenance operation of service lifts[1)].

a) Persons to be safeguarded:

   1) users;

   2) maintenance and inspection personnel;

   3) persons at the landings of the service lift and of the machinery space(s).

b) Property to be safeguarded:

   1) loads in the carrier;

---

1) Within CEN/TC 10 an interpretation committee has been established to answer questions about the spirit in which the experts have drafted the various clauses of this standard. All such interpretations are published within CEN/TS 81-11 until incorporated by amendment into the standards concerned.

This document is a preview generated by EVS

2) components of the service lift installation;

3) building in which the service lift is installed.

0.2.2 A study has been made of the various possible hazards with service lifts; see Annex C of this document.

0.3 Principles

0.3.1 This document does not repeat all the general technical rules applicable to every electrical, mechanical, or building construction including the protection of building elements against fire.

It has, however, seemed necessary to establish certain requirements of good construction, either because they are peculiar to service lift manufacture or because in the case of service lift utilization the requirements can be more stringent than elsewhere.

0.3.2 The standard sets out only the requirements that materials and equipment have to meet in the interests of safe operation of service lifts.

0.4 Assumptions

0.4.1 Relevant risks have been considered of each component that may be incorporated in a complete service lift installation.

Rules have been drawn up accordingly.

0.4.2 Components are:

a) designed in accordance with usual engineering practice and calculation codes, taking into account all failure modes;

b) of sound mechanical and electrical construction;

c) made of materials with adequate strength and of sound quality;

d) free of defects;

e) free from harmful materials, e.g. asbestos.

0.4.3 By design of the load bearing elements, a safe normal operation of the service lift is ensured for loads ranging from 0 % to 100 % of the rated load.

0.4.4 The requirements of this document are such that the possibility of a failure of an electric safety device complying with all the requirements of this document needs not to be taken into consideration.

0.4.5 Users have to be safeguarded against their own negligence and unwitting carelessness when using the service lift in the intended way.

A user can, in certain cases, make one imprudent act. The possibility of two simultaneous acts of imprudence and/or the abuse of instructions for use is not considered.

0.4.6 Persons are not transported inside the well.

0.4.7 Horizontal forces and energies to consider are indicated in the applicable clauses of the standard. Typically, where not otherwise specified in this document, the energy exerted by a person, resulting in an equivalent static force is:

a) 300 N;

b) 1 000 N where impact can occur.

This document is a preview generated by EVS

0.4.8 With the exception of the items listed below, a mechanical device built according to good practice and the requirements of this document will not deteriorate to a point of creating hazard without the possibility of detection, provided that all of the instructions given by the manufacturer have been duly applied.

The following mechanical failures are considered:

a) breakage of the suspension;

b) uncontrolled slipping of the ropes on the traction sheave;

c) breakage and slackening of all linkage by auxiliary ropes, chains and belts;

d) failure of a component associated with the main drive elements and the traction sheave;

e) rupture in the hydraulic system (jack excluded);

f) small leakage in the hydraulic system (jack included).

0.4.9 The possibility of devices providing protection against free fall or descent with excessive speed not setting, should the carrier free fall from a stationary position at the lowest landing, before the carrier strikes the buffer(s) or fixed stop(s) is considered acceptable.

0.4.10 When the speed of the carrier is linked to the electrical frequency of the mains the speed is assumed not to exceed 115 % of the rated speed.

This document is a preview generated by EVS

1 Scope

1.1 This document specifies the safety rules for the construction and installation of permanently installed service lifts, with traction, positive, or hydraulic drive, serving defined landing levels, having a carrier the interior of which is regarded as inaccessible to persons on account of its dimensions and means of construction, suspended by ropes or chains or jack and moving between rigid guide rails inclined not more than 15° to the vertical.

This document covers service lifts with rated load not exceeding 300 kg and not intended to transport persons.

1.2 This document does not cover:

a) service lifts with drives other than those stated in 1.1;

b) services lifts having carrier with dimensions that exceed:

   1) for floor area, 1,0 m^2;

   2) for depth, 1,0 m;

   3) for height, 1,20 m. The height is not limited if the carrier comprises several permanent compartments, each of which satisfies the above dimensions.

c) lifting appliances, such as paternosters, mines lifts, theatrical lifts, appliances with automatic caging, skips and hoists for building and public works sites, ships hoists, platforms for exploration or drilling at sea, construction and maintenance appliances;

d) safety during operations of transport, erection, repairs and dismantling of service lifts;

e) use of glass for the walls of the well, for the carrier and for the landing doors including their vision panels;

f) hydraulic service lifts where the setting of the pressure relief valve exceeds 50 MPa;

g) any form of radiation except EMC (see 4.10.1.1.3);

h) installation in potentially explosive atmosphere, extreme climate conditions, seismic conditions, transporting dangerous goods, etc.;

i) ambient temperature in the well and machinery space(s) lower than +5 °C and higher than +40 °C;

j) health and safety of animals.

However, this document can usefully be taken as a basis.

Noise and vibrations are not dealt with in this document as they are not considered a significant nor relevant hazard for the actual type of the service lift.

Fire propagation is not dealt with in this document.

This document is a preview generated by EVS

1.3 The well is regarded as accessible if the opening giving access have clear dimensions of at least 0,40 m x 0,50 m, and:

a) the horizontal depth of the well is greater than 1 m, or

b) the area of the well is greater than 1 m^2, or

c) the maintenance is intended to be carried out from the carrier roof or pit regardless the well dimensions.

1.4 The machinery space is regarded as accessible if:

a) the door(s)/trapdoor(s) giving access have clear dimensions of at least 0,60 m x 0,60 m, and

b) the height of the passageway is at least 1,80 m.

NOTE A door about horizontal when closed is referred to as a trapdoor.

1.5 This document covers the safety requirements for service lifts with rated speeds up to 1 m/s.

1.6 This document is not applicable to service lifts which are installed before the date of its publication as EN.

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 81-50:2020, *Safety rules for the construction and installation of lifts — Examinations and tests — Part 50: Design rules, calculations, examinations and tests of lift components*

EN 10305-1:2016, *Steel tubes for precision applications — Technical delivery conditions — Part 1: Seamless cold drawn tubes*

EN 10305-2:2016, *Steel tubes for precision applications — Technical delivery conditions — Part 2: Welded cold drawn tubes*

EN 10305-3:2023, *Steel tubes for precision applications — Technical delivery conditions — Part 3: Welded cold sized tubes*

EN 10305-4:2016, *Steel tubes for precision applications — Technical delivery conditions — Part 4: Seamless cold drawn tubes for hydraulic and pneumatic power systems*

EN 10305-6:2016, *Steel tubes for precision applications — Technical delivery conditions — Part 6: Welded cold drawn tubes for hydraulic and pneumatic power systems*

EN 12015:2020, *Electromagnetic compatibility — Product family standard for lifts, escalators and moving walks — Emission*

EN 12016:2013, *Electromagnetic compatibility — Product family standard for lifts, escalators and moving walks — Immunity*

EN 12385-4:2002+A1:2008, *Steel wire ropes — Safety — Part 4: Stranded ropes for general lifting applications*

This document is a preview generated by EVS

EN 12385-5:2021+A1:2025, *Steel wire ropes — Safety — Part 5: Stranded ropes for lifts*

EN 13015:2001+A1:2008, *Maintenance for lifts and escalators — Rules for maintenance instructions*

EN 13411-3:2022, *Terminations for steel wire ropes — Safety — Part 3: Ferrules and ferrule-securing*

EN 13411-5:2003+A1:2008, *Terminations for steel wire ropes — Safety — Part 5: U-bolt wire rope grips*

EN 13411-6:2004+A1:2008, *Terminations for steel wire ropes — Safety — Part 6: Asymmetric wedge socket*

EN 13411-7:2021, *Terminations for steel wire ropes — Safety — Part 7: Symmetric wedge socket*

EN 13411-8:2011, *Terminations for steel wire ropes — Safety — Part 8: Swage terminals and swaging*

EN 13501-1:2018, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 16005:2023+A1:2024, *Power operated pedestrian doorsets — Safety in use — Requirements and test methods*

EN 50214:2006,[2)] *Flat polyvinyl chloride sheathed flexible cables*

EN 60068-2-6:2008, *Environmental testing — Part 2-6: Tests — Test Fc: Vibration (sinusoidal) (IEC 60068-2-6:2007)*

EN 60068-2-27:2009, *Environmental testing — Part 2-27: Tests — Test Ea and guidance: Shock (IEC 60068-2-27:2008)*

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

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

EN 60529:1991,[3)] *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 60947-5-1:2017,[4)] *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices (IEC 60947-5-1:2016)*

EN 60947-5-5:1997,[5)] *Low-voltage switchgear and controlgear — Part 5-5: Control circuit devices and switching elements — Electrical emergency stop device with mechanical latching function (IEC 60947-5-5:1997)*

---

2) As impacted by EN 50214:2006/AC:2007.

3) As impacted by EN 60529:1991/A1:2000, EN 60529:1991/A2:2013, EN 60529:1991/A2:2013/AC:2019, EN 60529:1991/AC:2016.

4) As impacted by EN 60947-5-1:2017/AC:2020.

5) As impacted by EN 60947-5-5:1997/A1:2005, EN 60947-5-5:1997/A11:2013, EN 60947-5-5:1997/A2:2017.

This document is a preview generated by EVS

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

EN 61810-1:2015,[6] *Electromechanical elementary relays — Part 1: General and safety requirements (IEC 61810-1:2015)*

EN 61810-3:2015, *Electromechanical elementary relays — Part 3: Relays with forcibly guided (mechanically linked) contacts (IEC 61810-3:2015)*

EN ISO 6743-4:2015, *Lubricants, industrial oils and related products (class L) — Classification — Part 4: Family H (Hydraulic systems) (ISO 6743-4:2015)*

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

EN IEC 60664-1:2020,[7] *Insulation coordination for equipment within low-voltage supply systems — Part 1: Principles, requirements and tests (IEC 60664-1:2020)*

EN IEC 60947-4-1:2019,[8] *Low-voltage switchgear and controlgear — Part 4-1: Contactors and motor-starters — Electromechanical contactors and motor-starters (IEC 60947-4-1:2018)*

ISO 1219-1:2012,[9] *Fluid power systems and components — Graphical symbols and circuit diagrams — Part 1: Graphical symbols for conventional use and data-processing applications*

ISO 3864-1:2011, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

IEC 60227-6:2001, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 6: Lift cables and cables for flexible connections*

IEC 60617-13:1993, *Graphical symbols for diagrams — Part 13: Analogue elements*

This document is a preview generated by EVS

---

6) As impacted by EN 61810-1:2015/AC:2017, EN 61810-1:2015/AC:2018, EN 61810-1:2015/A1:2020.

7) As impacted by EN IEC 60664-1:2020/AC:2020.

8) As impacted by EN IEC 60947-4-1:2019/AC:2020, EN IEC 60947-4-1:2019/AC:2021.

9) As impacted by ISO 1219-1:2012/Amd 1:2016.