ICS 53.020.20, 91.140.90 SLOVENSKÁ TECHNICKÁ NORMA Jún 2025

STN	**Bezpečnostné pravidlá na konštrukciu a montáž výťahov Špeciálne výťahy určené na dopravu osôb a nákladov Časť 43: Výťahy pre žeriavy**	**STN EN 81-43** 27 4003

Safety rules for the construction and installation of lifts - Special lifts for the transport of persons and goods - Part 43: Lifts for cranes

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/25

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EN 81-43

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ICS 53.020.20; 91.140.90 Supersedes EN 81-43:2009

English Version

Safety rules for the construction and installation of lifts - Special lifts for the transport of persons and goods - Part 43: Lifts for cranes

Règles de sécurité pour la construction et l'installation des élévateurs - Élévateurs particuliers destinés au transport des personnes et des matériaux - Partie 43: Élévateurs pour appareils de levage à charge suspendue

Sicherheitsregeln für die Konstruktion und Installation von Aufzügen - Besondere Aufzüge für den Transport von Personen und Gütern - Teil 43: Kranführeraufzüge

This European Standard was approved by CEN on 15 December 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.

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

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European foreword

This document (EN 81-43:2025) 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 2025, and conflicting national standards shall be withdrawn at the latest by March 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 supersedes EN 81-43:2009.

This document is part of the EN 81 series of standards. The structure of the EN 81 series is described in CEN/TR 81-10:2008.

EN 81-43:2025 includes the following significant technical changes with respect to EN 81-43:2009:

— revision of requirements for design/calculation (4.2) and integration of requirements for earthquakes;

— performance level in accordance with EN ISO 13849-1:2023 have been added;

— a new Annex B (informative) providing information about differences between temporarily installed lifts/permanent installed lifts has been added;

— a new Annex C (normative) for lifts installed on tower cranes have been added.

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.

Introduction

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 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 type-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.

1 Scope

1.1 This document specifies the safety requirements for the construction and installation of power operated lifts attached to cranes and intended for access to workplaces on cranes. The lift serves defined landing levels and has a car which is:

a) designed for the transportation of persons and goods;

b) guided;

c) travelling vertically or along a path within 15 degrees maximum from the vertical;

d) supported by rack and pinion or suspended by steel wire ropes;

e) travelling with a speed not more than 1,0 m/s for permanent installed lifts and not more than 0,4 m/s for temporarily installed lifts.

1.2 This document identifies hazards as listed in Annex A that arise during the various phases in the life of such equipment and describes methods for the elimination or reduction of these hazards when used as intended by the manufacturer.

This document deals with significant hazards, hazardous situations and events relevant to lifts for cranes, when it is used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer. This document specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards (see Annex A).

1.3 This document does not specify requirements for:

a) noise;

b) lightning;

c) potentially explosive atmospheres;

NOTE Directive 2014/34/EU concerning equipment and protective systems intended for use in potentially explosive atmospheres can be applicable to the type of machine or equipment covered by this document. The present standard is not intended to provide means of complying with the essential health and safety requirements of Directive 2014/34/EU.

d) electromagnetic compatibility (emission, immunity);

e) handling of loads the nature of which could lead to dangerous situations (e.g. molten metal, acids/bases, radiating materials, fragile loads);

f) the use of combustion engines;

g) hydraulic drive units.

1.4 This document is not applicable to:

a) builders hoists according to EN 12158-1:2021, EN 12158-2:2000+A1:2010 and EN 12159:2024 and transport platforms according to EN 16719:2018;

b) elevating control stations according to EN 14502-2:2005+A1:2008;

c) lifts according to EN 81-20:2020.

1.5 This document deals with the complete lift design but excludes the design of the crane. It includes the base frame and base enclosure of the lift but excludes the design of any concrete, hard core, timber or other foundation arrangement. It includes the design of mast ties and the design of anchorage parts between the mast tie and the crane structure. This document also includes the design of the landing gates and their fixings.

1.6 This document does not apply to lifts for cranes manufactured before the date of publication of this document by CEN.

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 81-20:2020, *Safety rules for the construction and installation of lifts - Lifts for the transport of persons and goods - Part 20: Passenger and goods passenger lifts*

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 894-1:1997+A1:2008, *Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 1: General principles for human interactions with displays and control actuators*

EN 1808:2015, *Safety requirements for suspended access equipment - Design calculations, stability criteria, construction - Examinations and tests*

EN 1998-1:2004, *Eurocode 8: Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings*

EN 1999-1-1:2023, *Eurocode 9 - Design of aluminium structures - Part 1-1: General rules*

EN 13001-1:2015, *Cranes - General design - Part 1: General principles and requirements*

EN 13001-2:2021, *Crane safety - General design - Part 2: Load actions*

EN 13001-3-1:2012+A2:2018, *Cranes - General Design - Part 3-1: Limit States and proof competence of steel structure*

EN 13586:2020, *Cranes - Access*

EN 14439:2006+A2:2009, *Cranes - Safety - Tower cranes*

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

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

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

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

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 13854:2019, *Safety of machinery - Minimum gaps to avoid crushing of parts of the human body (ISO 13854:2017)*

EN ISO 13856-3:2013, *Safety of machinery - Pressure-sensitive protective devices - Part 3: General principles for design and testing of pressure-sensitive bumpers, plates, wires and similar devices (ISO 13856-3:2013)*

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 14118:2018, *Safety of machinery - Prevention of unexpected start-up (ISO 14118:2017)*

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)*

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

ISO 4309:2017, *Cranes — Wire ropes — Care and maintenance, inspection and discard*

ISO 6336-1:2019, *Calculation of load capacity of spur and helical gears — Part 1: Basic principles, introduction and general influence factors*

ISO 6336-2:2019, *Calculation of load capacity of spur and helical gears — Part 2: Calculation of surface durability (pitting)*

ISO 6336-3:2019, *Calculation of load capacity of spur and helical gears — Part 3: Calculation of tooth bending strength*

ISO 6336-5:2016, *Calculation of load capacity of spur and helical gears — Part 5: Strength and quality of materials*