

---

**Varnostna pravila za konstruiranje in vgradnjo dvigal (liftov) - Posebna dvigala za prevoz oseb in blaga - 43. del: Dvigala za žerjave**

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

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

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

**Ta slovenski standard je istoveten z: EN 81-43:2025**

<https://standards.iteh.ai/catalog/standards/sist/fbc111d6-678b-4f64-ba10-67498021183f/sist-en-81-43-2025>

---

**ICS:**

53.020.20	Dvigala	Cranes
91.140.90	Dvigala. Tekoče stopnice	Lifts. Escalators

**SIST EN 81-43:2025****en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 81-43**

March 2025

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.

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**

# Contents

Page

European foreword .....	5
Introduction .....	6
1 Scope.....	7
2 Normative references.....	8
3 Terms and definitions .....	9
4 Safety requirements and/or protective measures .....	12
4.1 Design consideration .....	12
4.2 Load actions and proof of competence .....	12
4.2.1 General.....	12
4.2.2 Dead weight .....	16
4.2.3 Rated load.....	17
4.2.4 Impact and dynamic factors due to movement of the lift car .....	18
4.2.5 Loads due to movements and deflection of the crane .....	18
4.2.6 Loads due to wind.....	19
4.2.7 Loads due to seismic accelerations .....	19
4.2.8 Test loads.....	20
4.2.9 Special load actions acting on parts of the lift car.....	20
4.2.10 Proof of competence .....	20
4.3 Base frame.....	21
4.4 Mast, ties and buffers.....	21
4.4.1 Guide rails and masts .....	21
4.4.2 Ties for mast and guide rails .....	21
4.4.3 Buffers.....	21
4.5 Liftway protection and landing access.....	22
4.5.1 General.....	22
4.5.2 Liftway protection .....	22
4.5.3 Landing access .....	24
4.5.4 Materials for enclosure and guarding .....	29
4.5.5 Landing gate locking devices.....	29
4.5.6 Clearances .....	31
4.6 Car .....	31
4.6.1 General.....	31
4.6.2 Car floor.....	32
4.6.3 Car walls .....	32
4.6.4 Car roof .....	32
4.6.5 Car gate .....	32
4.6.6 Overspeed safety device against falling of the car .....	34
4.6.7 Overload detection device .....	35
4.7 Drive unit .....	36
4.7.1 General.....	36
4.7.2 Protection and accessibility .....	36
4.7.3 Suspension system .....	36
4.7.4 Braking system .....	42
4.8 Electric installations and appliances .....	43
4.8.1 General.....	43

4.8.2	Protection against electric faults .....	43
4.8.3	Protection against the effects of external influences .....	44
4.8.4	Electric wiring.....	44
4.8.5	Contactors, relay-contactors .....	44
4.8.6	Electric safety devices.....	44
4.8.7	Safety contacts .....	45
4.8.8	Safety circuits.....	45
4.8.9	Lighting.....	47
4.8.10	Safety functions.....	48
4.9	Control and limiting devices.....	49
4.9.1	General .....	49
4.9.2	Travel limit switches .....	50
4.9.3	Slack rope device .....	50
4.9.4	Mast detection switch .....	50
4.9.5	Erection accessories .....	50
4.9.6	Stopping devices .....	50
4.9.7	Stopping the machine.....	51
4.9.8	Drive unit fault detection device for rack and pinion system with two redundant drive units.....	51
4.9.9	Control modes.....	51
4.10	Breakdown conditions.....	52
4.10.1	Alarm device.....	52
4.10.2	Emergency escape .....	52
4.10.3	Manual lowering device for permanently installed lifts .....	52
4.10.4	Manual lowering device for temporarily installed lifts.....	53
5	Verification of safety requirements and/or protective/risk reduction measures.....	53
5.1	Verification of design .....	53
5.2	Special verification tests .....	55
5.2.1	Introduction .....	55
5.2.2	Locking devices for car and landing gates .....	56
5.2.3	Overspeed safety device and overspeed governors.....	57
5.2.4	Energy accumulation type buffers with buffered return movement and energy dissipation buffers .....	59
5.2.5	Pressure-sensitive protective device .....	59
5.3	Verification tests for fitness for purpose .....	59
6	Information for use.....	59
6.1	Instruction handbook .....	59
6.1.1	Comprehensive information.....	59
6.1.2	Contents of the instruction handbook .....	60
6.2	Markings .....	65
6.2.1	General .....	65
6.2.2	Identification plate within the car.....	65
6.2.3	Mast or guide section identification .....	65
6.2.4	Basic user information sign .....	65
6.2.5	Warning sign at ground level .....	65
6.2.6	Type plate at overspeed safety device .....	66
6.2.7	Drive motor label.....	66
6.2.8	Marking of control elements .....	66
Annex A (informative)	List of significant hazards .....	67
Annex B (informative)	Identification of subclauses applicable either to permanent or installed lifts.....	70

**EN 81-43:2025 (E)**

<b>Annex C (normative) Requirements for the installation of lifts (for cranes) on tower cranes</b>	<b>72</b>
<b>Annex ZA (informative) Relationship between this European Standard and the essential Requirements of EU Directive 2006/42/EC aimed to be covered</b>	<b>74</b>
<b>Bibliography</b>	<b>77</b>

**iTeh Standards**  
**(<https://standards.itih.ai>)**  
**Document Preview**

[SIST EN 81-43:2025](https://standards.itih.ai/catalog/standards/sist/fbc111d6-678b-4f64-ba10-67498021183f/sist-en-81-43-2025)

<https://standards.itih.ai/catalog/standards/sist/fbc111d6-678b-4f64-ba10-67498021183f/sist-en-81-43-2025>

## 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.