

Safety rules for the construction and installation of lifts -
Special lifts for the transport of persons and goods - Part
44: Lifting appliances in wind turbines

Règles de sécurité pour la construction et l'installation
des élévateurs - Élévateurs particuliers destinés au
transport des personnes et des matériaux - Partie 44 :
Élévateurs pour éolienne

Sicherheitsregeln für die Konstruktion und Installation
von Aufzügen - Besondere Aufzüge für den Transport
von Personen und Gütern - Teil 44: Aufzüge in
Windenergieanlagen

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

European foreword	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Terms, definitions, symbols and abbreviated terms	9
3.1 Terms and definitions	9
3.2 Symbols and abbreviations	11
4 List of significant hazards	13
5 Safety requirements	13
5.1 General.....	13
5.2 Loads and calculations.....	13
5.3 Liftway protection, base enclosure and landing access.....	24
5.4 Base frame.....	36
5.5 Guiding systems and buffers.....	36
5.6 Carrier.....	38
5.7 Drive units.....	40
5.8 Control and limiting devices.....	46
5.9 Electric installations and appliances	55
5.10 Safety devices against falling of the lifting appliance	57
6 Verification.....	59
6.1 General.....	59
6.2 Verification tests on each lifting appliance before first use	68
7 Information for use	69
7.1 General.....	69
7.2 User's manual.....	69
7.3 Information for installation and dismantling	70
7.4 Information for maintenance	70
7.5 User Information available in the carrier.....	71
7.6 User Information available at the bottom landing	71
7.7 Marking	71
Annex A (normative) Lifting appliance verification tests	74
A.1 Test conditions and documentation	74
A.2 Lifting appliance verification test in as installed configuration.....	75
A.3 Carrier verification test.....	85
Annex B (normative) Drive unit verification tests.....	87
B.1 General.....	87
B.2 Traction hoist drive	87
B.3 Rack and pinion drive (One drive system)	89
B.4 Rack and pinion system with two redundant drive units	92

Annex C (normative) Overspeed safety device and fall arrest device verification tests.....	95
C.1 General	95
C.2 Overspeed safety devices and fall arrest devices for traction hoist drives	95
C.3 Overspeed safety device for rack and pinion drive.....	100
Annex D (normative) Other verification tests	102
D.1 General	102
D.2 Landing gate and enclosure verification tests	102
Annex E (informative) Evacuation and rescue.....	103
E.1 Introduction	103
E.2 Evacuation scenario.....	103
Annex F (informative) List of significant hazards	104
Annex G (informative) Guidance on calculation methods	106
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered.....	107
Bibliography	110

European foreword

This document (FprEN 81-44:2024) has been prepared by Technical Committee CEN/TC 10 “Lifts, escalators and moving walks”, the secretariat of which is held by AFNOR.

This document is currently submitted to the second Formal Vote.

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.

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.

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 lifting appliances installed permanently for indoor or outdoor service in wind turbines and intended for access to workplaces on wind turbines, including rescue and evacuation procedures. A lifting appliance serves defined landing levels and can move persons to working positions where they are carrying out work (which could be from the carrier) and has a carrier which is:

- a) designed for the transportation of persons and goods;
- b) guided;
- c) travelling vertically or along a path within 15° maximum from the vertical;
- d) supported or sustained by rack and pinion or rope traction drive;
- e) travelling with a speed not more than 0,7 m/s;
- f) able to operate in a temperature range between – 25 °C to + 55 °C.

1.2 This document does not cover hazards related to:

- a) noise;
- b) the use of the lifting appliance for erection or dismantling of the wind turbine;
- c) lightning protection;
- d) use in potentially explosive atmospheres;
- e) electromagnetic compatibility (emission, immunity);
- f) transporting of goods outside the carrier;
- g) the use of combustion engines;
- h) hydraulic and pneumatic drive units;
- i) the use of lifting appliances in floating wind turbines;
- j) use during earthquakes.

1.3 This document is not applicable to lifting appliances 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 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 81-43:2009, *Safety rules for the construction and installation of lifts - Special lifts for the transport of persons and goods - Part 43: Lifts for cranes*

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

EN 795:2012, *Personal fall protection equipment - Anchor devices*

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 1991-1-3:2003,¹ *Eurocode 1 - Actions on structures - Part 1-3: General actions - Snow loads*

EN 10264-1:2012, *Steel wire and wire products - Steel wire for ropes - Part 1: General requirements*

EN 10264-2:2021, *Steel wire and wire products - Steel wire for ropes - Part 2: Cold drawn non alloy steel wire for ropes for general applications*

EN 10264-3:2023, *Steel wire and wire products - Steel wire for ropes - Part 3: Round and shaped non alloyed steel wire for high duty applications*

EN 10264-4:2012, *Steel wire and wire products - Steel wire for ropes - Part 4: Stainless steel wire*

EN 12385-1:2002+A1:2008, *Steel wire ropes - Safety - Part 1: General requirements*

EN 12385-2:2002+A1:2008, *Steel wire ropes - Safety - Part 2: Definitions, designation and classification*

EN 12385-3:2020, *Steel wire ropes - Safety - Part 3: Information for use and maintenance*

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

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

EN 13411-1:2002+A1:2008, *Terminations for steel wire ropes - Safety - Part 1: Thimbles for steel wire rope slings*

EN 13411-2:2001+A1:2008, *Terminations for steel wire ropes - Safety - Part 2: Splicing of eyes for wire rope slings*

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

EN 13411-4:2021, *Terminations for steel wire ropes - Safety - Part 4: Metal and resin socketing*

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

¹ As impacted by EN 1991-1-3:2003/A1:2015 and EN 1991-1-3:2003/AC:2009.