

საქართველოს სტანდარტი

უსაფრთხოების წესები ლიფტების კონსტრუქციისა და დაყენებისადმი-
სპეციალური გამოყენება სამეზავრო და სატვირთო-სამეზავრო ლიფტებისა-
ნაწილი 72: სახანძრო ლიფტები

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

სსტ ენ 81-72 : 2015/2015

საინფორმაციო მონაცემები

1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს 2015 წლის 27 ოქტომბრის № 69 და 2015 წლის 09 ივლისის № 46 განკარგულებებით

2 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 81-72 : 2015 „უსაფრთხოების წესები ლიფტების კონსტრუქციისა და დაყენებისადმი- სპეციალური გამოყენება სამგზავრო და სატვირთო-სამგზავრო ლიფტებისა- ნაწილი 72: სახანძრო ლიფტები“

3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2015 წლის 27 ოქტომბერი №268-1.3-8007

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

English Version

Safety rules for the construction and installation of lifts - Particular applications for passenger and goods passenger lifts - Part 72: Firefighters lifts

Règles de sécurité pour la construction et l'installation des
élévateurs - Applications particulières pour les ascenseurs
et ascenseurs de charge - Partie 72 : Ascenseurs pompiers

Sicherheitsregeln für die Konstruktion und den Einbau von
Aufzügen - Besondere Anwendungen für Personen- und
Lastenaufzüge - Teil 72: Feuerwehraufzüge

This European Standard was approved by CEN on 14 February 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....4

Introduction6

1 Scope7

2 Normative references8

3 Terms and definitions8

4 List of significant hazards9

5 Safety requirements and/or protective measures 10

5.1 Environment/Building requirements..... 10

5.2 Fundamental firefighters lift requirements 12

5.3 Protection of electrical equipment against water (see Annex D) 13

5.4 Rescue of trapped firefighters in the car 13

5.4.1 Emergency trap door..... 13

5.4.2 Ladders 14

5.4.3 Rescue from outside the car 14

5.4.4 Self-rescue from inside the car 14

5.5 Hydraulic lifts used as firefighters lift 15

5.6 Car doors and landing doors..... 15

5.7 Lift machine and associated equipment 15

5.8 Control Systems 15

5.9 Power supplies for firefighters lifts 19

5.10 Changeover and interruption of electrical supplies..... 19

5.11 Car and landing controls 19

5.12 Fire service communication system..... 20

5.13 Vandal prone areas..... 20

6 Verification of the safety requirements and/or protective measures 20

7 Information for use 22

Annex A (informative) Fire fighting concept for buildings..... 24

A.1 General..... 24

A.2 Introduction 24

A.3 Background 24

A.4 Fire service operations 25

A.5 Firefighters lift..... 25

A.6 Fire service rescue 25

Annex B (informative) Basic layouts for firefighters lift 29

Annex C (informative) Power supplies for firefighters lifts — Secondary Power supplies 32

Annex D (normative) Water protection in the lift well 34

Annex E (informative) Water management 35

E.1 General..... 35

E.2 Measures to address the ingress of water into the lift well 35

E.3 Measures to address the accumulation of water in the lift pit 35

Annex F (informative) Concepts of fire compartments 36

Annex G (normative) Pictogram for a firefighters lift 37

საინფორმაციო ნაწილი. სრული ტექსტის სახსრავად შეიძინეთ სტანდარტი.

Annex H (informative) Examples of rescue concept for firefighters	38
Annex I (informative) Building interface	41
I.1 General	41
I.2 Approval of fire Authorities	41
I.3 Provision of firefighters lifts	42
I.4 Protection of the area in front of landing doors	42
I.5 Separation of the lift well	42
I.6 Fire resistance of shutters and fire door	43
I.7 Smoke control.....	43
I.8 Lift identification.....	43
Annex J (informative) Maintenance requirements.....	44
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directives.....	45
Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directives.....	46
Bibliography.....	47

Foreword

This document (EN 81-72:2015) 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 October 2015 and conflicting national standards shall be withdrawn at the latest by August 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 81-72:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directives 95/16/EC amended by 2006/42/EC and 2014/33/EU, see informative Annexes ZA and ZB, which are integral parts of this document.

EN 81-72:2015 is a full revision of the standard which reflects developments since the publication of EN 81-72:2003 and experience gained from its application. Consequently, most clauses have some changes. The main changes can be identified thus:

- "Safe area" is used in place of "lobby" to be consistent with CEN/TS 81-76. The two terms are interchangeable.
- Revision of the elements dealing with building design and the inclusion of a new informative annex on the building interface. Items to be considered in the use of pressurization of lift wells have been added including the noise level at the fire communication points.
- Deletion of the requirement for a firefighters lift to serve every floor of the building. The floors to be served are assumed to be determined as part of the design of the building for fire.
- New requirements for protection of electrical equipment against water; in the lift well and the roof and walls of the lift car.
- New measures to prevent water ingress into the lift well which are strongly preferred over measures to control the level of water in the lift pit alone. The measures considered are described in a new annex on water management.
- Revision of clauses dealing with the rescue of trapped firefighters with rationalized requirements for movable ladders and reduced maximum distance between consecutive landings. The use of fixed ladders and rope ladders has been removed.
- New requirements for the interface between firefighters lift switches and the control system.
- New requirements for dual entry lift cars where not all the safe areas to be used in firefighting operations are on the same side i.e. more than one car door could be used during firefighting operations.
- Revision of requirements for the control system including new requirements for when a firefighters key switch is used in the lift car (subject to negotiation). Revised requirements, in phase 2, for car doors to close under constant pressure from door close or car call buttons and for opening.
- Inclusion of a new informative annex on maintenance requirements.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

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

Firefighters lifts are used to bring the firefighters and their equipment to the required floors.

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

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

The following assumptions were made in writing this standard.

Negotiations have been made between the owner, customer, building designers, fire authorities or other relevant bodies and installer concerning:

- a) the intended use of the lift;
- b) environmental conditions;
- c) civil engineering problems;
- d) interfaces between the lift and the building management system (BMS) or fire detection system;
- e) the firefighting strategy;
- f) smoke management e.g. pressurizing system impact to the lift system such as sway of travelling cables and operation of landing doors;
- g) water management, and where applicable, the highest permissible water level in the pit e.g. 0,5 m;
- h) other aspects related to the place of the installation and the rescue of persons from within the car;
- i) power supply including regenerative power during secondary power supply operation;
- j) size of safe area(s);
- k) the need for an additional firefighters car key switch and availability of the key.

Developers and architects will need to take account of National Building Regulations in providing a suitable fire resistant structure of the building, safe areas, fire detection and extinguisher systems. Examples are shown in Annex B and Annex F.