SLOVENSKI STANDARD
SIST EN 81-73:2020

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Nadomešča:
SIST EN 81-73:2016

Varnostna pravila za konstruiranje in vgradnjo dvigal (liftov) - Posebne izvedbe osebnih in osebno-tovornih dvigal - 73. del: Obnašanje dvigal v primeru požara

Safety rules for the construction and installation of lifts - Particular applications for passenger and goods passenger lifts - Part 73: Behaviour of lifts in the event of fire

Sicherheitsregeln für die Konstruktion und den Einbau von Aufzügen - Besondere Anwendungen für Personen- und Lastenaufzüge - Teil 73: Verhalten von Aufzügen im Brandfall

Règles de sécurité pour la construction et l'installation des élévateurs - Applications particulières pour les ascenseurs et les ascenseurs de charge - Partie 73: Fonctionnement des ascenseurs en cas d'incendie

Ta slovenski standard je istoveten z: **EN 81-73:2020**

ICS:

13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements
91.140.90	Dvigala. Tekoče stopnice	Lifts. Escalators

SIST EN 81-73:2020 **en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 81-73

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ICS 13.220.50; 91.140.90

Supersedes EN 81-73:2016

English Version

Safety rules for the construction and installation of lifts - Particular applications for passenger and goods passenger lifts - Part 73: Behaviour of lifts in the event of fire

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This European Standard was approved by CEN on 8 June 2020.

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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.

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European foreword

This document (EN 81-73:2020) 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of an identical text or by endorsement, at the latest by January 2021, and conflicting national standards shall be withdrawn at the latest by July 2022.

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 81-73:2016.

This document is a revision of EN 81-73:2016 in order to align its Annex ZA to the new format and requirements as laid out in the EU Commission Standardization Request “M/549 C (2016) 5884 final”. During this revision no technical changes are made and the technical requirements of this document remain identical to EN 81-73:2016.

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 Directive 2014/33/EC amended by 2006/42/EC, see informative Annex ZA, which is an integral part of this document.

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, Turkey and the United Kingdom.

Introduction

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

The lifts concerned and the extent to which hazards, hazardous situations and 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 lifts that have been designed and built according to the provisions of this type C standard.

The function described in this document relates to the automatic return of the car(s) to a designated landing and the removal of the lift(s) from service.

This document deals with

a) reducing the risk of passengers being trapped in a car in the event of a fire in a building,

b) helping the firefighters/rescue teams to check that the lift contains no trapped passengers since it will be finally parked at a designated landing,

c) reducing the risk of passengers in the car being exposed to fire and smoke.

The contents of this document are based on the following assumptions:

— recall means initiates the signal to the lift causing a specific reaction of the lift;

— building designers, architects or planners give careful consideration to specifying fire recall to lifts as this document;

— there is a clear separation between the functioning of the recall means and the lift control system; and

— recall means is operating as intended.

This document assumes that negotiation has taken place between the building designer and the lift installer on the following:

— type of recall means and its interface (see EN 81-20:2020, 0.4.2);

— type and protection of switch in case of manual recall device;

— number and location of designated landing(s);

— suitable maintenance and verification plan is implemented; and

— whether the lift parks with doors open or closed at the designated landing.

1 Scope

This document specifies the special provisions and safety rules describing the behaviour of lifts in the event of fire in a building, on the basis of a recall signal(s) to the lift(s) control system.

This document applies to new passenger lifts and goods passenger lifts with all types of drives. However, it may be used as a basis to improve the safety of existing passenger and goods passenger lifts.

This document does not apply to:

— lifts that remain in use in the event of fire, e.g. firefighters lifts as defined in EN 81-72:2020,

— lifts used for the evacuation of a building.

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 81-72:2020, *Safety rules for the construction and installation of lifts - Particular applications for passenger and goods passenger lifts - Part 72: Firefighters lifts*

EN 81-77:2018, *Safety rules for the construction and installations of lifts - Particular applications for passenger and goods passenger lifts - Part 77: Lifts subject to seismic conditions*

EN ISO 7010:2020, *Graphical symbols - Safety colours and safety signs - Registered safety signs (ISO 7010:2019)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010, EN 81-20:2020 and EN 81-50:2020 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp/ui

3.1
building responsible person
person legally responsible for the building

3.2
building management system
BMS
system capable of making decisions based on information sent to it

3.3
designated landing
floor determined by the building evacuation strategy that allows persons leaving the lift to safely exit the building or area of the building during a fire

3.4
manual recall device
manually operated device, e.g. break glass toggle switch, button or key switch, which, upon operation, activates a signal, causing the lift under control to operate in the desired manner

4 List of significant hazards

This clause contains all the significant hazards, hazardous situations and events, as far as they are dealt with in this document, identified by risk assessment as significant for lifts and which require action to eliminate or reduce the risk. See Table 1.

Table 1 — Significant hazards dealt with in this document

No	Hazards as listed in EN ISO 12100:2010, Annex B	Requirements and clauses in this document
1	Mechanical hazards	5.1.4, 5.1.5, 5.3.4, 5.3.5, 5.3.6, 5.3.7
1	Trapping hazard	5.1, 5.2, 5.3
1	Impact hazard	5.3.2
3	Thermal hazard (Contamination by heat or smoke)	5.1, 5.2, 5.3
8	Inadequate design or location of displaying units	5.1.4, 5.1.6, 5.3.5, 5.3.6

5 Safety requirements and/or protective measures

5.1 Basic requirements

5.1.1 General provision

The lift provided with recall means shall be taken out of normal service in the event of fire, by recalling it to one of the designated landings.

See Figure A.1 for clarification.

5.1.2 Designated landing(s) and input signal(s)

The lift shall serve one or more designated landings. For each designated landing, there shall be a corresponding input signal to the lift control system. The signal(s) shall be provided by a recall means. On receipt of the first activated signal, the lift shall return to the corresponding designated landing in accordance with 5.3. Other signals from recall means shall be ignored until the first signal is reset.

See A.2 for clarification of interface responsibilities.

5.1.3 Recall means

A recall means, which creates signal(s) for the recall of the lift, shall be done by at least one of the following:

a) manual recall device, e.g. key switch, firefighters lift switch (EN 81-72: 2020) of a firefighters lift; or

b) automatic means, e.g. BMS, fire detection system.

5.1.4 Manual recall device

Where a manual recall device is provided, it shall be

a) bi-stable in operation,

b) provided with clear visual indication on which position the switch is to avoid any error about its position,

c) appropriately marked for its purpose. When accessible to all, the size of the sign shall be at least 50 mm and according to EN ISO 7010:2020, P020 “Do not use lift in the event of fire” without text,

d) located in the management centre of the building or at the designated landing, and

e) protected from misuse, e.g. by placing it behind a glass panel or located within a secure area. When accessible to all, special tool is needed to reset. See Introduction.

5.1.5 Reaction of stopped lift

Where a lift is stopped due to a fault condition, a signal from the recall means to the lift control system shall not initiate starting of the lift.

5.1.6 Prohibition sign

A prohibition sign according to EN ISO 7010:2020, P020 “Do not use lift in the event of fire”, shall be displayed near the lift so that it is easily seen on all landings. The size of this sign shall be at least 50 mm.

The following text may be added to the sign “Do not use lift in the event of fire”.

5.2 Interface requirements between the recall means and the lift control system

Interruption of the interface connection shall initiate the fire recall of the lift as described in 5.3.

5.3 Behaviour of the lift on the receipt of a signal from recall means

5.3.1 General

The principle of the reaction of the lift in the event of fire is to return the car to a designated landing and allow any passengers to exit.

Input signals from recall means shall not override any of the following:

a) the electric safety devices;

b) the inspection operation (EN 81-20:2020, 5.12.1.5);

c) the emergency electrical operation (EN 81-20:2020, 5.12.1.6);

d) the behaviour of the lift in seismic mode (EN 81-77:2018, 5.10.4);