
Varnostna pravila za konstruiranje in vgradnjo dvigal (liftov) - Posebne aplikacije za osebna in osebno-tovorna dvigala - 72. del: Dvigala za gasilce

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

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

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

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ICS:

13.220.10	Gašenje požara	Fire-fighting
91.140.90	Dvigala. Tekoče stopnice	Lifts. Escalators

oSIST prEN 81-72:2026**en,fr,de**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 81-72

October 2026

ICS 91.140.90

Will supersede EN 81-72:2020

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 ascenseurs - 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 draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 10.

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Ref. No. prEN 81-72:2026 E

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prEN 81-72:2026 (E)**European foreword**

This document (prEN 81-72:2026) 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 CEN Enquiry.

This document supersedes EN 81-72:2020.

The main changes are as follows:

- the assumptions have been deleted from the introduction;
- requirements have been clarified and streamlined;
- informative Annex C (Power supplies for firefighters lifts — Secondary power supplies) has been removed;
- normative Annex D (Water protection in the lift well) has been removed;
- informative Annex E (Water management) has been removed;
- normative Annex F (Information on the building-related conditions in which the lift is installed) has been added;
- Clause 4 (List of significant hazards) moved to informative Annex H;
- the Annex ZA has been updated.

This document is part of the EN 81 series of standards. The structure of the EN 81 series of standards 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 persons 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 in the drafting process of this document.

The lifts 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.

Firefighters lifts are used to bring the firefighters and their equipment to the required floors of a building during an emergency, particularly when carrying heavy equipment. For the safe operation, the building and the firefighters lift includes features such as a fire and smoke protected area at the landings in front of a firefighters lift, secondary power supply, water resistant controls, communication devices between the lift car, machinery space and fire service access level, and a firefighters lift switch that places the lift under control by the fire and rescue services.

These measures help ensure reliable access when stairs could be slow or hazardous, enabling a faster response, evacuation support, and more effective firefighting operation.

1 Scope

1.1 This document specifies the additional requirements to EN ISO 8100-1:2026 for new passenger and goods passenger lifts, which can be used to support firefighting and rescue under firefighters control.

1.2 This document does not apply to:

- lifts for evacuation due to circumstances which introduce other hazards such as explosion threat, chemical or biological attack, flooding, storm damage, or earthquake. In these cases, this document can be used as a basis with further measures as required from risk assessment;
- the provision of evacuation aids to assist when the evacuation lift is unavailable;
- lifts with partially enclosed wells;
- lifts installed in new or existing buildings, which are not included in fire resisting building structure.

1.3 This document does not define the use of other than the highest deck of a multi deck lift for firefighting operations.

1.4 The significant hazards covered by this document are listed in Annex H.

1.5 The following significant hazards are out of the scope of this document:

- fire or smoke in the firefighters lift well, safe areas, machinery spaces or car;
- ingress of water to the lift well during firefighting operations;
- insufficient or incorrectly located firefighters lifts;
- insufficient firefighters lift capacity;
- inability of users to understand the use of the lift in firefighting operations;
- entrapment in waiting area (safe area) due to absence of lift service or adjacent stairs;
- structural collapse or failure of building services (including public supply network, lighting, ventilation) before the firefighting using lifts has been completed;
- presence of harmful gases, potentially explosive atmosphere, extreme climate conditions, transport of dangerous goods;
- unavailability of the firefighters lift.

This document is not applicable to firefighters lifts 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 81-70:2021+A1:2022, *Safety rules for the construction and installation of lifts — Particular applications for passenger and goods passenger lift — Part 70: Accessibility to lifts for persons including persons with disability*

EN 131-1:2015+A2:2025, *Ladders — Part 1: Terms, types, functional sizes*

EN 131-2:2010+A3:2025, *Ladders — Part 2: Requirements, testing, marking*

EN ISO 8100-1:2026, *Lifts for the transport of persons and goods — Part 1: Safety rules for the construction and installation of passenger and goods passenger lifts (ISO 8100-1:2026, including corrected version 2026-05)*

EN 60529:1991,¹ *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

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 and EN ISO 8100-1:2026 and the following apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

control system

system of the lift which responds to input signals and generates output signals causing the equipment under control to operate in the desired manner

3.2

firefighters lift

lift which has protection, controls and signals which enable it to be used under the exclusive control of the firefighters

3.3

firefighters lift switch

switch to initiate firefighters service

¹ This document is impacted by the amendments EN 60529:1991/A1:2000, EN 60529:1991/A2:2013, EN 60529:1991/AC:1993, EN 60529:1991/AC:2016-12 and EN 60529:1991/A2:2013/AC:2019-02.

prEN 81-72:2026 (E)**3.4
fire service access level
FSAL**

entry level in the building intended to be used by firefighters to gain access to the firefighters lift

**3.5
safe area**

fire and smoke protected area at the landing in front of a firefighters lift

Note 1 to entry: For details see also F.4.

Note 2 to entry: The design of the safe area is not covered by this document.

**3.6
dual entry car**
car with two car doors**4 Safety requirements and/or protective measures****4.1 General**

Machinery shall comply with the safety requirements and/or protective/risk reduction measures of this clause. In addition, the machine shall be designed according to the principles of EN ISO 12100:2010 for relevant but not significant hazards which are not dealt with by this document.

4.2 Firefighting lift concept

An example of firefighting lift concept is given in informative Annex A.

4.3 Firefighters lift requirements

4.3.1 The firefighters lift shall be designed in accordance with EN ISO 8100-1:2026 and provided with additional protection, controls and signals in accordance with this document.

4.3.2 The minimum internal dimensions of the firefighters lift car shall be 1570 mm wide by 1 370 mm deep or 1370 mm wide by 1570 mm deep.

The car dimensions shall be measured inside the car body, from wall to wall, at a height 1,00 m from the floor.

The minimum rated load shall be 1 000 kg.

The clear entrance width to the car shall be a minimum of 900 mm.

4.3.3 Where the firefighters lift shall accommodate a stretcher or bed, then the minimum internal dimensions of the car shall be 1070 mm wide by 2 070 mm deep.

The car dimensions shall be measured inside the car body, from wall to wall, at a height 1,00 m from the floor.

4.3.4 The firefighters lift loaded with 80 % of the rated load in the car, shall be able to reach the highest landing to be served in firefighting operations from the fire service access level within 60 s, from after the closing of the lift doors. However, for lifts with higher travel than 200 m, this time to reach the highest landing may be increased by 1 s for each 3 m additional travel height.

NOTE Experience has shown that a rated speed greater than 4,5 m/s can cause problems due to technical complexity, e.g. size of secondary power supply, turbulence from the pressurized environment and spoilers on the car roof.

4.3.5 The lift shall be designed to operate during firefighting operations according to the following conditions:

- a) electrical/electronic devices on landings, other than at the fire service access level, shall be designed to function correctly in an ambient temperature range of 0 °C to 65 °C or be made non-operational. A malfunction of devices (landing indicators and push buttons) shall not prevent operation of the lift under fire fighting conditions;

NOTE The firefighters lift well might be protected against the ingress of smoke with a pressure differential system (PDS), e.g. EN 12101-13:2022. Where the supply air is taken directly from the environment, this can affect the ambient temperature.

- b) all other electrical/electronic components of the firefighters lift shall be designed to function correctly in an ambient temperature range of 0 °C to + 40 °C;
- c) the correct functioning of the lift control shall be ensured in smoke filled wells and/or machinery spaces;
- d) any ambient temperature sensor shall not stop, or prevent the start, of the firefighters lift.

4.3.6 For a dual entry car, no more than one car door shall be open at any time during firefighting operations.

4.4 Protection of electrical equipment against water

4.4.1 Electrical equipment within the firefighters lift well below the highest landing level located within 1,0 m of any wall containing a landing door and on the car roof and around outer sides of the car walls shall be protected against dripping and spraying water coming from an upper landing with enclosures classified to at least IPX3 according to EN 60529:1991. See Annex C.

Electrical equipment within the firefighters lift well below the highest landing level located more than 1,0 m away from a wall containing a landing door shall be protected against dripping water coming from an upper landing with enclosures classified to at least IPX1 according to EN 60529:1991. See Annex C.

4.4.2 Any electrical equipment which is located less than 1,0 m above the lift pit floor shall be protected to IP67. The socket outlet and lowest lamp of the lighting of the well shall be located at least 0,5 m above the level of the fully compressed car buffer. See Annex C.

4.4.3 Electrical equipment in machinery spaces outside of the well shall be protected from malfunction caused by water.

4.4.4 The car roof shall be designed to prevent accumulating water.

4.5 Rescue means

4.5.1 Emergency trap door

4.5.1.1 An emergency trap door as per EN ISO 8100-1:2026, 4.4.6.1, shall be fitted to the car roof with minimum clear opening dimensions of 0,5 m × 0,7 m. Clear opening dimensions shall be measured with the ladder in the rescue position as defined in 4.5.2.4.

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Emergency trap door shall be provided with a means for manual locking. The locking shall be checked by an electric safety device in accordance with EN ISO 8100-1:2026, 4.11.2. Return of the lift to automatic operation shall only be possible after deliberate relocking.

Emergency trap doors shall have means:

- a) to open it from outside the car without a key;
- b) to open it from inside the car only with a key suited to the triangle defined in EN ISO 8100-1:2026, 4.3.9.3.1.

Emergency trap doors shall not open towards the inside of the car.

Emergency trap doors in the open position shall not project beyond the edge of the car.

4.5.1.2 Access and egress through the emergency trap door shall not be obstructed by any permanent fixture or lighting.

Where a suspended ceiling is fitted, it shall be openable or removable without the use of special tools except the key used for opening the emergency trap door.

The handling force of any part of the suspended ceiling respectively for the emergency trap door shall be less than 250 N.

The release point(s) shall be clearly identified from inside the car and also from outside the car when the emergency trap door is opened for rescue.

Measures shall be taken against the risk of uncontrolled falling of the suspended ceiling after its release.

A hinged suspended ceiling, while being opened, shall not come lower than 1,6 m from the car floor to leave enough space for firefighters.

The position of unlocking triangle can be on the car wall or on the ceiling.

When the unlocking triangle is in a vertical plane, on the wall, the distance of the unlocking triangle from the car floor shall not exceed 2,0 m.

If the unlocking triangle is on the ceiling and the keyhole downwards in the horizontal plane, the following applies.

- The distance of the unlocking triangle hole measured from the car floor shall be maximum 2,70 m;
- The length of the emergency unlocking key shall be at least equal to the distance of the unlocking triangle hole from the car floor minus 2,0 m. The distance can be alternatively measured diagonally from a stepping point or ladder defined in 4.5.3.

Where the emergency unlocking key is of a length greater than 0,20 m it is regarded as a special tool and shall be available in the car. The maximum length of the special tool shall be 700 mm. The special tool shall be stored behind a locked cabinet and shall be marked with pictogram.

4.5.1.3 If the emergency trap door is open it shall not reset its electrical switch if reclosed without making resetting a positive action. Whenever the emergency trap door is opened it shall block further operation of the lift.

4.5.1.4 Information how to perform self-rescue (see Annex E) shall be located in the car and in accordance with EN ISO 8100-1:2026, 4.1.3 and 4.1.4.