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**DRAFT**  
**prEN 81-82**

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Will supersede EN 81-82:2013

English Version

**Safety rules for the construction and installation of lifts -  
Existing lifts - Part 82: Rules for the improvement of the  
accessibility of existing lifts for persons including persons  
with disability**

Règles de sécurité pour la construction et l'installation  
des ascenseurs - Ascenseurs existants - Partie 82:  
Règles pour l'amélioration de l'accessibilité aux  
ascenseurs existants pour toutes les personnes, y  
compris les personnes avec handicap

Sicherheitsregeln für die Konstruktion und den Einbau  
von Aufzügen - Bestehende Aufzüge - Teil 82: Regeln  
für die Erhöhung der Zugänglichkeit von bestehenden  
Aufzügen für Personen einschließlich Personen mit  
Behinderungen

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

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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## European foreword

This document (prEN 81-82:2023) 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.

The document will supersede EN 81-82:2013.

The main changes compared to the previous edition are listed below:

- a) the methodology for the identification of accessibility barriers (previous Subclause A.1), the evaluation of the effectiveness of measures (previous Table A.1) and guidance for the use of the accessibility checklist (previous Subclause A.2) have been moved to Clause 5.3 respectively 5.4;
- b) all technical requirements for protective measures have been incorporated in the checklist in the normative Annex A which combines now the previous Subclause 5 and the previous checklist in Annex B, Table B.2; this combination prevents duplication of technical requirements in the document and allows simplification of its use;
- c) all references to protective measures have been updated to EN 81-20:2020 and EN 81-70:2021+A1:2022.

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.

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## Introduction

### 0.1 General

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

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 the 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.

### 0.2 General Remarks

This document was developed to establish a methodology to specify at national level procedures for improving the accessibility of existing lifts. Existing lifts were installed to the state of the art appropriate at that time. This level is less than today's state of the art, and in many applications, accessibility has not been considered or only a few features addressing specific disabilities have been installed.

In order to support this aim, this document is intended to help owners, authorities and lift designers/manufacturers to find practical solutions and ways of applying EN 81-20:2020 and EN 81-70:2021+A1:2022 to existing lifts to improve accessibility and usability for persons including persons with disabilities. Where, due to practical reasons, these standards cannot be fully applied, this document provides alternative proposals.

## 1 Scope

This document provides rules on how to apply EN 81-20:2020 and EN 81-70:2021+A1:2022 to existing lifts to improve their accessibility and usability for persons including persons with disability. It is detailing the general requirement for accessibility as referred to in EN 81-80:2019, Annex A, Table A.1, No. 1.1.

NOTE EN 81-70:2018 referenced in EN 81-80:2019 has been replaced by EN 81-70:2021+A1:2022.

This document applies to permanently installed lifts serving defined landing levels, having a car designed for the transportation of persons or persons and goods.

This document does not cover lifts with destination control system.

## 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 81-70:2021+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 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 81-70:2021+A1:2022 apply.

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

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

## 4 List of significant hazards

EN 81-20:2020, Clause 4 (partly for accessibility issues) and EN 81-70:2021+A1:2022, Clause 4 applies.

## 5 Methodology for improving the accessibility of existing lifts

### 5.1 General

All technical solutions for upgrading the accessibility of existing lifts shall be aligned as much as possible to the state-of-the-art solutions applicable for new lifts. The requirements and/or protective measures documented in today's state-of-the-art standards for new lifts shall not be considered as the only possible solution. Alternatives are permitted, provided they lead to an equivalent level of accessibility. Although

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immediate upgrading of all existing lifts would be preferable from the accessibility point of view, this can be not possible in a short period of time due to technical and economic reasons.

This document does not provide legally binding requirements for measures to be carried out or for the period of time for such measures. Such obligations for existing lifts are subject to national legislation. The procedures described in this clause are intended to assist in setting up national regulations and/or providing a systematic approach to the lift owners for improving the accessibility of existing lifts by showing:

- how to identify hazards;
- how to evaluate the existing hazardous situations; and
- how to classify priority levels which apply to the relevant hazards and risk reduction measures.

Before upgrading a lift by one or several of the appropriate measures, the consequences to other parts of the lift shall be considered. This can lead to further modifications to align the interfaces and to prevent lowering the safety or accessibility in other areas of the lift.

After the upgrading of a lift by one or several of the appropriate measures the remaining hazardous situations should be documented and recorded for future upgrades and general awareness to manage any residual barrier.

In a periodic scheme or whenever the use of the lift has changed, a new audit should be carried out in order to check whether the previous assessment needs to be updated.

## **5.2 Identification of accessibility barriers**

Annex A contains a checklist which shall be used for identification of the barriers preventing or restricting accessibility relevant for an individual lift and for determination of appropriate measures. The checklist can be used in the course of any periodical survey or special examination on a given installation, but only technically competent and persons familiar with accessibility issues should be allowed to carry out these examinations. This can be subject to national regulations.

## **5.3 Evaluation of effectiveness of measures**

It is recognized that whilst the ideal situation is to apply all the accessibility requirements of EN 81-20:2020 and EN 81-70:2021+A1:2022, it is not always reasonably practical to do so. In deciding the best course of action to remove the physical barriers facing disabled persons when accessing and using lifts, many factors need to be considered.

For example, the size of the lift well will dictate what size of lift can be installed and if it is large enough to accept wheelchairs. However, this should not prevent owners from carrying out other improvements in order to provide benefits to those persons who do not use wheelchairs but might otherwise struggle to use the lift, such as those with reduced mobility, impaired vision and hearing.

Another example is the need for adding power operated doors to a lift which only has manual doors at present. This is of high priority to persons in wheelchairs and those of impaired dexterity. However, for those persons with impaired hearing or impaired speech it can be not as important. What can be seen however is that fitting a light curtain to lifts which already have power operated doors results in a significant benefit to all persons since it is reasonably practical with some effectiveness and there is no reason why it should not be incorporated into accessibility improvements regardless of the anticipated use of the lift.

The above examples show that, when making decisions on the amount and kind of improvements to be undertaken, this needs to be related to the typical use of the lift, the existing environment and the likelihood of persons with different types of disability wishing to use the lift.



Combining the type of disability with the effectiveness of improvements enables the introduction of a quantification of added value to all persons, including persons with disability, using the lift. The effectiveness levels used are:

- some benefit to all;
- benefit;
- important;
- vital.

This quantification is used in Table 1 (accessibility matrix) to demonstrate the effectiveness of the different improvements in relation to the types of disabilities (see EN 81-70:2021+A1:2022, Table A.1).

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Table 1 — Effectiveness ranking

Nr.	Items to be checked	Types of disabilities covered							
		Impaired mobility, wheelchair, walking frame and rollator	Impaired mobility, walking stick and crutches	Impaired endurance, equilibrium	Impaired dexterity	Impaired vision	Impaired hearing	Impaired speech	Learning difficulty
<b>1</b>	<b>Entrances - Door openings</b>								
1.1	Car and landing doors are power operated horizontally sliding doors	4	3	3	3	3	1	1	2
1.2	Minimum door opening	4	3	3	2	3	1	1	1
1.3	Adjustable/sufficient door dwell time	4	4	4	3	4	1	1	2
1.4	Re-opening device without physical contact	4	4	4	2	4	1	1	1
1.5	Stopping and levelling accuracy	4	3	2	2	4	1	1	1
<b>2</b>	<b>Car dimensions and equipment in the car</b>								
2.1	Car dimensions	4	2	1	1	1	1	1	1
2.2	Handrail interrupted in front of car operating panel	1	1	1	3	3	1	1	1

Nr.	Items to be checked	Types of disabilities covered							
		Impaired mobility, wheelchair, walking frame and rollator	Impaired mobility, walking stick and crutches	Impaired endurance, equilibrium	Impaired dexterity	Impaired vision	Impaired hearing	Impaired speech	Learning difficulty
2.3	Handrail dimensions	1	2	2	2	2	1	1	1
2.4	Height of handrail above floor	2	2	3	1	1	1	1	1
2.5	Handrail ends closed and turn in towards the car walls	2	2	1	1	2	1	1	1
2.6	Handrail on one side wall	1	4	4	2	2	1	1	1
2.7	2nd handrail for car types 4 and 5	1	3	3	2	2	1	1	1
2.8	Tip up seat of correct dimensions and support load	1	2	3	1	1	1	1	1
2.9	Device to allow persons in wheelchairs to observe obstacles behind them in cars of type 1 or 2	4	1	1	1	1	1	1	1
2.10	Slip-resistant car floor	1	3	2	1	1	1	1	1

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Nr.	Items to be checked	Types of disabilities covered							
		Impaired mobility, wheelchair, walking frame and rollator	Impaired mobility, walking stick and crutches	Impaired endurance, equilibrium	Impaired dexterity	Impaired vision	Impaired hearing	Impaired speech	Learning difficulty
<b>3</b>	<b>Landing control devices</b>								
<b>3.1</b>	Area of active part (for extra large buttons see 3.17)	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>3.2</b>	Dimension of active part (for extra large buttons see 3.17)	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>3.3</b>	Identification of active parts	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>3.4</b>	Identification of face plate	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>3.5</b>	Operating force	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>3.6</b>	Operating feedback	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>
<b>3.7</b>	Registration feedback	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>3</b>
<b>3.8</b>	Position of symbol (for extra large buttons see 3.18)	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>2</b>