

LIFTIDE KONSTRUKTSIOONI JA PAIGALDUSE
OHUTUSEESKIRJAD. INIMESTE JA KAUPADE
TRANSPORDIKS MÕELDUD LIFTID. OSA 21: UUED
SÕIDU- JA KAUBALIFTID OLEMASOLEVATES HOONETES

Safety rules for the construction and installation of lifts
- Lifts for the transport of persons and goods - Part 21:
New passenger and goods passenger lifts in existing
building

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 81-21:2022 sisaldab Euroopa standardi EN 81-21:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 81-21:2022 consists of the English text of the European standard EN 81-21:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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EUROPEAN STANDARD

EN 81-21

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 91.140.90

Supersedes EN 81-21:2018

English Version

**Safety rules for the construction and installation of lifts -
Lifts for the transport of persons and goods - Part 21: New
passenger and goods passenger lifts in existing building**

Règles de sécurité pour la construction et l'installation
des ascenseurs - Élévateur pour le transport de
personnes et d'objets - Partie 21 : Ascenseurs et
ascenseurs de charge neufs dans les bâtiments
existants

Sicherheitsregeln für die Konstruktion und den Einbau
von Aufzügen - Aufzüge für den Personen- und
Gütertransport - Teil 21: Neue Personen- und
Lastenaufzüge in bestehenden Gebäuden

This European Standard was approved by CEN on 20 April 2022.

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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 81-21:2022) 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 November 2022, and conflicting national standards shall be withdrawn at the latest by May 2024.

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 81-21:2018.

In comparison with the previous edition, the following significant changes have been made:

- normative references have been updated;
- sub-clause 6.3 has been deleted;
- Annex B has been deleted;
- Annex ZA has been modified.

No technical changes have been made in Clause 5 during this revision.

This document is intended to be used in conjunction with EN 81-20:2020, which gives the basic requirements for passenger and goods passenger lifts.

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 given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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.

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 in 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. The main concern dealt with in this document is the reduction of top and pit clearances that may be required due to site conditions. The adopted principle of safety is based on two levels of achievement: first by means of an electrical stopping of the lift car, then by means of a mechanical stopping of the lift car.

In order to have a uniform understanding of the requirements of this document, an existing building within the terms of this document is understood to be one which was already in use before the lift was installed. A building whose internal structure is completely renewed is considered as a new building within the terms of this document.

1 Scope

This document specifies the safety rules related to passenger and goods/passenger lifts installed in existing buildings where limitations enforced by certain building constraints mean that some requirements of EN 81-20:2020 cannot be met.

It addresses the following constraints and gives requirements for alternative solutions:

- existing perforate walls of the lift well;
- reduction in available well area leading to reduced distance between car, counterweight or balancing weight;
- counterweight or balancing weight in a separate existing well;
- reduced building dimensions and clearances leading to:
 - reductions in available space for headroom and pit;
 - reduced car roof balustrade dimensions;
 - reduced height of sill apron;
 - reduced height of machine and/or pulley room;
 - reduced available area for access door/trap door;
 - reduction in available height of landing doors.

This document is not applicable to lifts installed 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 ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13857:2019, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)*

ISO 3864-1:2011, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*