

English Version

**Safety rules for the construction and installation of lifts - Basics
and interpretations - Part 10: System of the EN 81 series of
standards**

Règles de sécurité pour la construction et l'installation des
élévateurs - Eléments de base et interprétations - Partie 10
: Système de la série des normes EN 81

Sicherheitsregeln für die Konstruktion und den Einbau von
Aufzügen - Grundlagen und Auslegungen - Teil 10: System
der Normenreihe EN 81

This Technical Report was approved by CEN on 25 August 2008. It has been drawn up by the Technical Committee CEN/TC 10.

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Foreword

This document (CEN/TR 81-10:2008) has been prepared by Technical Committee CEN/TC 10 “Lifts, escalators and moving walks”, the secretariat of which is held by AFNOR.

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 CEN/TR 81-10:2004.

This document is part of the EN 81 series of standards.

CEN/TR 81-10 structure had been set for the following reasons:

- avoid redundancy in requirements;
- deal with all type of lift drives, in accordance with a mandate given by the European Commission;
- address all type of interested parties;
- foresee a number of dedicated standalone standards.

CEN/TR 81-10 structure was proposed, discussed and adopted within CEN/TC 10 in 2003. Since new foreseen standards (Part 70, 71, 28, 72) are now published and the necessary revision of EN 81-1/2:1998 standards in order to:

- comply with CEN Guide 414 format, and
- base requirements on risk analysis.

When integrating revised EN 81-1 & 2 interested parties expressed some concerns related to the splitting into several parts. This created the need to revise CEN/TR 81-10:2004, still with the aim of avoiding redundancy and simplifying the structure of EN 81 series of standards. Part 20 and Part 50 address this.

- Part 20 groups all technical requirements for designing electric (EN 81-1) and hydraulic (EN 81-2) lifts, and in the future, other types of drives;
- Part 50 groups all examinations, calculations and tests, because many lift components are commonly used on passenger or goods passenger lifts as well as on goods only lifts.

This is the second edition of CEN/TR 81-10 which takes into account:

- the removal from the EN 81 family of standards structure of the following standards:
 - EN 12159 - Builders hoists for persons and materials with vertically guided cages;
 - EN 12158-1 - Builders hoists for goods – Part 1: Hoists with accessible platforms;
 - EN 12158-2 - Builders hoists for goods – Part 2: Inclined hoists with non-accessible load carrying devices;
- revision of:

- EN 81-3:2000 - Safety rules for the construction and installation of lifts – Part 3: Electric and hydraulic service lifts as EN 81-30 - Safety rules for the construction and installation of lifts – Part 30: Electric and hydraulic service lifts;
- CEN/TR 81-10:2003 - new family of EN 81 standards structure integrating:
 - all the interpretations to all parts of EN 81 series of standards in only one technical specification: CEN/TS 81-11, and
 - the revised EN 81-1 and 2 will both be incorporated in EN 81-20 (passenger and goods passenger lifts) and EN 81-50 (examinations, calculations and tests of lift components);
- EN 81-1:1998 and EN 81-2:1998 to be split into two standards: one concerning passenger and goods passenger lifts (EN 81-20) and the other one concerning examinations, calculations and tests of lift components (EN 81-50);
- development of new standards and technical specifications as:
 - prCEN/TS 81-76 related to passenger lifts used for evacuation of disabled persons;
 - prEN 81-77 related to lifts subject to seismic conditions;
 - CEN/TS 81-82 related to the improvement of the accessibility of existing lifts for persons with disability;
 - prCEN/TS 81-83 related to the improvement of vandal resistance of existing lifts;
- editorial modifications related to first edition of this technical report.

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

Introduction

The object of this Technical Report is to explain the system of the EN 81 series of standards for lifts (see Clause 3, Terms and definitions).

The series of standards related to escalators and passenger conveyors (EN 115) is not the subject of this Technical Report.

In the 1950s attempts were taken to harmonise the rules for lifts in Europe and in 1964 this was incorporated into the work program of the European Union to reduce trade barriers. The Commission found it was not possible to lay down detailed specifications for lifts and this resulted in the foundation of CEN/TC 10 "Lifts, escalators and moving walks" in the early 1970s.

At that time CEN/TC 10 decided to divide the European Standardisation for lifts into 4 parts and published in 1977 the first edition of EN 81-1 "Safety rules for the construction and installation of lifts and service lifts - Part 1: Electric lifts". This was followed in 1987 by EN 81-2 "Safety rules for the construction and installation of lifts and service lifts - Part 2: Hydraulic lifts". Both standards have been annexed to the EEC directive 84/529/EEC in their different modified versions and have been one of the conditions for the free trade of lifts. Out of the two other parts only EN 81-3 "Safety rules for the construction and installation of lifts - Part 3: Electric and hydraulic service lifts" up to now has been brought up to the formal vote stage.

Due to the changeover of the EU-Directives to the system of the "New Approach", the adoption of the Machinery and Lifts Directives and the mandates given by the Commission to CEN there was a demand to enlarge the activities in lifts standardisation. It is the intent to incorporate under the heading EN 81 the various standards prepared in sub-committees, working groups and teams of CEN/TC 10 as parts of this Technical Report. However the numbering in accordance with the old CEN/TC 10 decision was regarded as unsuitable, since it was not able to allow a clear separation between standards just giving additional provisions and those providing a complete set of requirements related to a specific type of lift.

Therefore CEN/TC 10 together with CMC prepared a new system for a series of standards combining the following aspects:

- logical and suitable structure;
- new numbering system;
- flexibility regarding integration of the work already done and further projects;
- simplification of modifications in the standards;
- retention of well established notations especially due to the acceptance of the European lift standards in other parts of the world;
- improvement of the separation of specific items;
- incorporation of the use of lifts into standardisation;
- aspects related to the improvement of the safety of existing lifts, where necessary.

NOTE This Technical Report is subject to revision not more than once a year in order to take into account any changes to standards or additional draft standards.

1 Scope

This Technical Report describes the system of the EN 81 series of standards.

As long as the internal rules of CEN do not specify provisions to handle interpretations, this Technical Report also describes the procedure for interpretations to be followed by the working groups of CEN/TC 10.

2 Normative references

Not applicable.

3 Terms and definitions

For the purposes of this Technical Report, the following terms and definitions apply.

3.1

lift (*élevateur*), (*Aufzug*)

lifting appliance having a power operated carrier which is guided by rigid guide rails or similar structures, serving defined landings and intended to transport persons and/or goods

3.2

defined landing (*niveau défini*), (*festgelegte Haltestelle*)

level in/at a building(s)/construction where loading and unloading of the carrier occurs

3.3

transport (*transport*), (*Transport*)

process in the course of which persons and/or goods are lifted or lowered to another landing

4 Risk assessment

For the purpose of this Technical Report, a risk assessment is not necessary.

5 System of the EN 81 series of standards

5.1 General

In the system of the EN 81 series of standards all kinds of CEN-Deliverables (publications) may appear. According to their content, they are named European Standard (EN), Technical Specification (CEN/TS), Technical Report (CEN/TR) and are distinguished only by the corresponding sequence of letters in front of the reference number.

The numbering of the different parts of this series of standards follows a systematic order expressed by a three-level title.

The first element of the title "Safety rules for the construction and installation of lifts" is common to all parts of the series. This headline is intentionally generic to cover all types of lifting appliances (meant by the word "lift") under the scope of responsibility of CEN/TC 10.

At present EN 81 family of standards does not cover the act or the process of mounting and erection of lifts or of part, which can be understood in the word "installation". This word designates a piece of equipment, machinery, etc. or a complete system that has been installed ready for use.

As for the word "construction", it shall be understood as the act of putting components together when designing the lift installation.