
**Safety rules for the construction
and installation of lifts — Existing
lifts — Part 80: Rules for the
improvement of safety of existing
passenger and goods passenger
lifts**

ICS: 91.140.90



**Mauritius Standards Bureau
Moka**

GR 15

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National foreword

This Mauritian Standard is identical with the European Standard **EN 81- 80: 2003** – *Safety rules for the construction and installation of lifts — Existing lifts — Part 80: Rules for the improvement of safety of existing passenger and goods passenger lifts*. It was adopted by the Mauritius Standards Bureau in 2011 on the recommendation of the **Mechanical Standards Committee** and approval of the **Standards Council** on 02 February 2011. It was notified in the Government Gazette on 26 February 2011*.

For the purposes of this standard the following changes should be made:

- (i) the words “European Standard” should be replaced by “Mauritian Standard”,
- (ii) the “decimal comma” to be replaced by “decimal point”.

*Gazette no 439 of 2011

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Foreword

This document (EN 81-80:2003) 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of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

Regulations concerning the safety upgrading of existing lifts vary from member state to member state and have not, to date, been harmonised at either international or European level.

CEN/CENELEC have embarked on a programme of work to produce a series of related machinery and lift safety standards as part of the process of European harmonisation. This standard both makes use of and refers to EN 292 parts 1 and 2 and most of the EN 81 series of standards (see clause 2).

This standard is part of the EN 81 series of standards: "*Safety rules for the construction and installation of lifts*". This is the first edition of the standard.

Annexes A and B are informative.

This document includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

PREVIEW

Introduction

Background of this standard

More than 3 million lifts are in use today in EU and EFTA and almost 50 % were installed more than 20 years ago. Existing lifts were installed to the safety level appropriate at that time. This level is less than today's state of the art for safety.

New technologies and social expectations have led to today's state of the art for safety. This has led to the situation today of different levels of safety across Europe causing accidents. However, users and authorised persons expect a common acceptable level of safety.

In addition, there is a growing trend for people to live longer and for disabled people to expect access and design for all. Therefore it is especially important to provide a safe means of vertical transport for disabled and elderly persons without supervision.

Lift attendants and in many cases building caretakers are not so common anymore, so it is important that relevant safety features for the rescue of trapped persons should be provided.

Furthermore the life cycle of a lift is longer than most other transportation systems and building equipment, which therefore means that lift design, performance and safety can fall behind modern technologies. If existing lifts are not upgraded to today's state of the art of safety the number of injuries will increase (especially in buildings which can be accessed by the general public).

With the freedom of movement of people within the EU for both users and authorised persons, familiarisation with the different installations is becoming more and more difficult.

Approach of this standard

This standard

- categorises various hazards and hazardous situations, each of which has been analysed by a risk assessment;
- is intended to provide corrective actions to progressively and selectively improve, step by step, the safety of all existing passenger and goods passenger lifts towards today's state of the art for safety;
- enables each lift to be audited and safety measures to be identified and implemented in a step by step and selective fashion according to the frequency and severity of any single risk;
- lists the high, medium and low risks and corrective actions which can be applied in separate steps in order to eliminate the risks.

Other designs to previous national regulations or standards, providing they have an equivalent safety level, may be acceptable.

Use of this standard

This standard can be used as a guideline for:

- a) national authorities to determine its own programme of implementation in a step by step process via a filtering process (see annex A) in a reasonable and practicable¹⁾ way based on the level of risk (e.g. extreme, high, medium, low) and social and economic considerations;
- b) owners to follow their responsibilities according to existing regulations (e.g. Use of Work Equipment Directive);

1) "Reasonable and practicable" is defined as follows: "In deciding what is reasonably practicable the seriousness of a risk to injury should be weighted against the difficulty and cost of removing or reducing that risk. Where the difficulty and costs are high, and a careful assessment of the risk shows it to be comparatively unimportant, action may not need to be taken. On the other hand where the risk is high, action should be taken at whatever cost."

- c) maintenance companies and/or inspection bodies to inform the owners on the safety level of their installations;
- d) owners to upgrade the existing lifts on a voluntary basis in accordance with c) if no regulations exist.

In making an audit of an existing lift installation annex B can be used to identify the hazards and corrective actions in this standard. However, where a hazardous situation is identified which is not covered in this standard a separate risk assessment should be made. This risk assessment should be based on ISO/TS 14798 (see bibliography).

PREVIEW

1 Scope

1.1 This European Standard gives rules for improving the safety of existing lifts with the aim of reaching an equivalent level of safety to that of a newly installed lift by the application of today's state of the art for safety.

NOTE Due to situations such as the building design etc. it may not be possible in all cases to reach today's state of the art for safety.

1.2 This standard applies for permanently installed

- electric lifts, with traction or positive drive;
- hydraulic lifts

serving defined landing levels, having a car designed for the transportation of persons or persons and goods and moving between guide rails inclined not more than 15° to the vertical.

1.3 This standard includes the improvement of safety of existing passenger and goods passenger lifts for:

- a) users;
- b) maintenance and inspection personnel;
- c) persons outside the well, machine room and the pulley room (but in their immediate vicinity);
- d) any authorised persons.

1.4 This standard is not applicable to:

- a) lifts with drive systems others than those defined in EN 81-1 or EN 81-2;
- b) lifting appliances such as paternosters, mine lifts, theatre lifts, appliances with automatic caging, skips, lifts and hoists for building and public works sites, ships' hoists, platforms for exploration or drilling at sea, construction and maintenance appliances;
- c) installations where the inclination of the guide rails to the vertical exceeds 15°;
- d) safety during transport, installation, repairs and dismantling of lifts;
- e) fire fighting operation.

However, this standard can usefully be taken as a reference basis.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE All the parts of EN 81 are normative for terms and definitions purposes.

EN 81-1:1998, *Safety rules for the construction and installation of lifts - Part 1: Electric lifts.*

EN 81-2:1998, *Safety rules for the construction and installation of lifts - Part 2: Hydraulic lifts.*

prEN 81-21, *Safety rules for the construction and installation of lifts - Lifts for the transport of persons and goods - Part 21: New passenger and goods lifts in existing buildings.*

EN 81-28, *Safety rules for the construction and installation of lifts - Lifts for the transport of persons and goods - Part 28: Remote alarm on passenger and goods passenger lifts.*

EN 81-70:2003, *Safety rules for the construction and installations of lifts - Particular applications for passenger and good passenger lifts - Part 70: Accessibility to lifts for persons including persons with disability.*

prEN 81-71, *Safety rules for the construction and installation of lifts - Particular applications to passenger lifts and goods passenger lifts - Part 71: Vandal resistant lifts.*