



NSAI
Standards

Standard Recommendation
S.R. CEN/TS 81-76:2011

Safety rules for the construction and installation of lifts - Particular applications for passengers and goods passenger lifts - Part 76: Evacuation of disabled persons using lifts

S.R. CEN/TS 81-76:2011

Incorporating amendments/corrigenda/National Annexes issued since publication:

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SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:

This document is based on:
CEN/TS 81-76:2011

Published:
15 August, 2011

This document was published under the authority of the NSAI and comes into effect on:
15 August, 2011

ICS number:

91.140.90

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ICS 91.140.90

English Version

**Safety rules for the construction and installation of lifts -
Particular applications for passengers and goods passenger lifts
- Part 76: Evacuation of disabled persons using lifts**

Règles de sécurité pour la construction et l'installation des
élévateurs - Applications particulières pour les ascenseurs
et ascenseurs de charge - Partie 76: Utilisation des
ascenseurs pour l'évacuation des personnes handicapées
en cas d'urgence

Sicherheitsregeln für die Konstruktion und den Einbau von
Aufzügen - Besondere Anwendungen für Personen- und
Lastenaufzüge - Teil 76: Personenaufzüge für die
Evakuierung von Personen mit Behinderungen

This Technical Specification (CEN/TS) was approved by CEN on 14 May 2011 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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Foreword

This document (CEN/TS 81-76:2011) has been prepared by Technical Committee /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.

CEN/CENELEC has embarked on a programme of work to produce a series of related machinery and lift safety standards as part of European standardisation.

This document is part of the EN 81 series of standards: “Safety rules for the construction and installation of lifts”. This is the first edition of this Technical Specification.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

0 Introduction

0.1 Background to this Technical Specification

At present, there are no European and few national regulations for lifts, which include specifications related to the evacuation from buildings of persons with impaired mobility using lifts.

This has the consequence that persons with a disability may experience difficulty and delay whilst waiting for assistance to evacuate.

This document has been developed as a first step towards defining requirements for a European Standard for evacuation of lifts. It is believed that since recommendations have been put in place to provide disabled access to buildings, by using lifts complying with EN 81-70, a standardised evacuations lift design would be a useful step to providing safe evacuation.

In Europe today, the European Lift Directive defines strict safety requirements that must be met by all new lifts going into service. In support of the Lift Directive a number of harmonised standards have been developed namely, EN 81-1 and EN 81-2 which address the fundamental safety requirements of any new lift design. EN 81-73 describes how any lift that is not intended to be used during a fire should be removed from service in an organised manner. Fire fighting lifts designed to EN 81-72 may also be suitable for the evacuation of disabled persons with prior agreement of the fire service. However, some of the features provided by EN 81-72 may not be essential for evacuation use.

0.2 General situation in Europe concerning evacuation

- a) Implementation of fire regulations in buildings are not harmonized and usually differ:
 1. from country to country;
 2. from city to city;
 3. depending on the building type.
- b) Evacuation and fire fighting concepts as well as fire management can also differ. There are however some points of commonality:
 1. in a building, horizontal and vertical circulation corridors and stairs are dimensioned in number and in width so as to allow for building evacuation within defined a time in accordance with the applicable local or national regulation;
 2. lifts are rarely considered as a means of escape;
 3. the normal rule is, "in case of emergency do not use lifts";
 4. this rule is usually communicated by different means to all building occupants:
 - signs;
 - audible messages;
 - training;
 - written evacuation plan and procedures.

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- c) In some particular cases and under particular conditions in some countries, specific lifts can be used for transportation of the disabled in case of emergencies.
- d) In office buildings and buildings where the public may enter, such as hotels etc., personnel are often appointed responsible for evacuation of the building or particular levels. These may be called "evacuation assistants" or "fire wardens". The term evacuation assistant is used throughout this document.

Their task is to:

1. verify in case of an evacuation alert that all areas have been effectively evacuated;
2. help disabled persons and particularly people with impaired mobility to evacuate.

0.3 Basic principle of evacuation of the disabled taken into account in this document

The principle that stairs are the recognised main means of escape from the building remains unchanged.

The purpose of this document is not to reconsider this principle, but to study under which conditions lifts could be used to supplement stairs with reasonable safety, in order to assist the evacuation of persons with impaired mobility.

Lifts for evacuation should be lifts normally used for daily vertical transportation but include special functions used in cases of evacuation. This is deliberate to ensure the lifts are regularly used thus increasing the probability that when required for an evacuation, they will be working.

This Technical Specification also highlights certain building features that shall be provided in order to ensure the safety and security of the lifts, lift users and those waiting for the lift.

This document describes only a basic "evacuation lift" in order to provide a reasonable and practical solution suitable for implementation in some buildings.

This Technical Specification is not suitable for all building types such as buildings without a person responsible to manage the building and its evacuation, who are not located in the buildings, or residential buildings with multiple owners sharing common escape routes and no one individual responsible in the building. These cases require different solutions than described in this document.

0.4 Aims of the document

This Technical Specification deals with:

- a) the reduction of risk to persons in the lift car that may be exposed to fire and smoke;
- b) the reduction of the risk of persons being trapped in a lift car during an evacuation;
- c) the reduction of evacuation time for persons unable to use the stairs.

0.5 Use of this Technical Specification

The purpose of this Technical Specification is to show how a lift(s) can be designed in order to be used for evacuation and to list the requirements not directly part of the lift itself, but which have to be satisfied in order to make its use practical and safe. See Annex A, B and C.

This Technical Specification can be used as a guideline for:

- a) national authorities to determine its own programme of implementation;
- b) owners to follow their responsibilities according to existing regulations;
- c) a basis for future National, International or European standards on this subject;

- d) assistance to standards making committees that work on building evacuation concepts.

0.6 Relationship between this standard and others in the EN 81-70 series

It is important to understand the relationship between this standard and others in the EN 81-70 series.

EN 81 parts 1 and 2 define the basic safety requirements essential to any lift design. EN 81-70 provides additional requirements that make a lift more easily accessible to all users including those with disabilities.

EN 81-72 defines requirements for a lift suitable for use by fire fighters. At the discretion of the fire service and local legislation, it may be acceptable to use such a lift prior to arrival of the fire service for the evacuation of persons with a disability. This is not acceptable in all countries or desirable in all cases. Local legislation should determine what is acceptable in their jurisdiction.

EN 81-73 defines how a lift can be safely removed from service if local legislation or rules or building management requires that lifts are not used during an emergency. E.g., fire. See also Annex A.

Management can determine on the day if the building is to be evacuated and if they wish to use the evacuation lift. If they do, they can bring the lift back into evacuation service by use of a switch. This is not considered a contradiction with EN 81-73.

1 Scope

1.1 Use of the lift

This Technical Specification gives rules for the intended use of the lift by persons with disabilities in order to assist the evacuation of a building. To achieve this objective, the selected lift(s) should be incorporated within an overall building design that includes all the usual stairs and escape routes without any reduction in their quantity or capacity.

It specifies the special provisions and safety rules to assist persons with a disability to safely evacuate a building using lifts in relative safety with the help of suitably trained evacuation assistants.

This specification does not define the number and size of lift required, or the size of door openings that shall be determined on a case-by-case basis by the building designer in line with applicable national regulations.

1.2 Application of this Technical Specification

This Technical Specification can be applied to permanently installed new:

- a) electric lifts, with traction or positive drive (as defined in EN 81-1);
- b) hydraulic lifts (as defined in EN 81-2).

1.3 Requirements of this Technical Specification

This Technical Specification defines requirements to allow safe lift use where:

- a) the building has not sustained structural damage e.g. from explosion, flood, lightning strike, earthquake, storm etc.
- b) the well and car are safe for persons to use. e.g. free from smoke, etc.
- c) a fire resisting structure for the lift provides suitable protection;
- d) some form of fire detection is provided at least at the lift and safe areas;

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