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BSI Standards Publication

Safety rules for the construction and installation of lifts - Particular applications to passenger lifts and goods passenger lifts

Part 71: Vandal resistant lifts

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National foreword

This British Standard is the UK implementation of EN 81-28:2018, incorporating corrigendum January 2019. It supersedes BS EN 81-71:2005, which will be withdrawn on 31 May 2020.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by CEN corrigendum January 2019 is indicated in the text by AC AC.

The UK participation in its preparation was entrusted to Technical Committee MHE/4, Lifts, hoists and escalators.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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31 May 2018	Correction to supersession details in National Foreword and Annex ZA added
31 January 2019	Implementation of CEN corrigendum January 2019

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English Version

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

Règles de sécurité pour la construction et l'installation
des ascenseurs - Applications particulières pour les
ascenseurs et ascenseurs de charge - Partie 71 :
Ascenseurs résistants aux actes de vandalisme

Sicherheitsregeln für die Konstruktion und den Einbau
von Aufzügen - Besondere Anwendungen für
Personen- und Lastenaufzüge - Teil 71:
Schutzmaßnahmen gegen mutwillige Zerstörung

This European Standard was approved by CEN on 1 March 2018 and includes the Corrigendum issued by CEN on 23 January 2019.

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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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 81-71:2018+AC:2019) 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 2018, and conflicting national standards shall be withdrawn at the latest by AC May 2020 AC.

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 81-71:2005+A1:2006.

This document includes Corrigendum 1 issued by CEN on 23 January 2019 to correct the date of withdrawal in the European foreword.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags AC AC.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

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

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

The lifts concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

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

When the provisions of this C standard are different from those which are stated in Type A or B standards, the provisions of this document take precedence over the other standards, for lifts that have been designed and built according to the provisions of this document.

This document provides guidance to the building designer, customer etc. and requirements for design, where it is considered additional security or other measures may be required in order to protect against the risk of vandalism. The customer will need to consider the extent of additional protection required, as covered by the enclosed proposals, which may be adopted according to the environment in which the lift installation is situated and the type of vandalism that is likely to be experienced. Every lift is subject to some amount of careless or rough use. Lifts built to EN 81-20 offer a reasonable degree of protection against this and are referred to in this document as Category 0. This document addresses additional protective measures against deliberate acts that may result in equipment damage or injury to persons for lifts referred to in this document as Category 1 or Category 2.

With regard to potential hazards for vandalism the following factors are taken into consideration:

- degree of accessibility to the installation;
- the surrounding area;
- observation by others in the vicinity;
- extent of building security and surveillance of lift(s);
- period of access to the building, including the lift(s) (24 h);
- vulnerability of lift.

The clauses in this document apply to both Category 1 lifts and Category 2 lifts as defined in this document (see Annex A) unless otherwise stated in the text.

The following assumptions were made whilst writing this document:

- the lift is designed to meet the basic requirements detailed in EN 81-20;
- the building and/or the lift structure are at least in accordance with the advice given in Annex A, which form the basis of the negotiations outlined in EN 81-20:2014, 0.4.2;
- the lift, its well, landing and access areas, machinery spaces(s) and all associated equipment are properly maintained in good, safe working order.

The forces exerted on the lift and its equipment will be as a result of manual effort or by item(s) such as those defined in Annex E.

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1 Scope

This document gives additional and deviating requirements to EN 81-20 as applicable in order to ensure the safety of lift users and the availability of lifts, which may be used for vandal resistant purposes. In all other respects such lifts are designed in accordance with EN 81-20. This document deals with the significant hazards, hazardous situations and events relevant to lifts which can be affected by vandalism (as listed in Clause 4) when they are used under the conditions as foreseen by the installer.

It does not cover building security or Category 0 lifts (see definition 3.2).

For other types of lifts, e.g. inclined lifts according to EN 81-22, this standard can usefully be taken as a basis.

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 81-20:2014, *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 81-72, *Safety rules for the construction and installation of lifts — Particular applications for passenger and goods passenger lifts — Part 72: Firefighters lifts*

EN 81-73, *Safety rules for the construction and installation of lifts — Particular applications for passenger and goods passenger lifts — Part 73: Behaviour of lifts in the event of fire*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using test data from reaction to fire tests*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

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 81-20:2014 and the following apply.

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

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

3.1

car ceiling

parts of the car roof accessible from inside the car

3.2

Category 0 lift

lift in conformity with EN 81-20