



MALAYSIAN STANDARD

MS EN 81-20:2017

**Safety rules for the construction and
installation of lifts - Lifts for the transport of
persons and goods - Part 20: Passenger and
goods passenger lifts
(Second revision)**

ICS: 91.140.90

Descriptors: lifts, building codes, installation, lifts cars, landing doors, lift wells, compensating ropes, shock absorbers, machine rooms, electrical installations, safety, stopping and locking devices

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Fax: 60 3 8319 3131
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Committee representation

The Industry Standards Committee on Mechanical Engineering (ISC F) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Department of Occupational Safety and Health Malaysia
Department of Standards Malaysia
Jabatan Kerja Raya Malaysia
Machinery and Equipment Manufacturers' Association
Malaysian Investment Development Authority
Malaysian Iron and Steel Industry Federation
Ministry of International Trade and Industry
National Institute of Occupational Safety and Health
Petroleum Nasional Berhad
Science and Technology Research Institute for Defence
SIRIM Berhad (Secretariat)
SIRIM QAS International Sdn Bhd
Suruhanjaya Perkhidmatan Air Negara
Suruhanjaya Tenaga
The Institution of Engineers, Malaysia
Universiti Kebangsaan Malaysia
Universiti Malaya
Universiti Sains Malaysia
Universiti Teknologi Malaysia

The Technical Committee on Lifting Devices which supervised the adoption of the EN Standard as Malaysian Standard consists of representatives from the following organisations:

Bekaert
Construction Industry Development Board Malaysia
Department of Occupational Safety and Health Malaysia
Favelle Favco Cranes (M) Sdn Bhd
IKRAM QA Services Sdn Bhd
IQRAMXPERT Sdn Bhd
MS Elevator Engineering Sdn Bhd
Northport (Malaysia) Berhad
SIRIM Berhad (Secretariat)
SIRIM QAS International Sdn Bhd (Testing Services Department - Civil and Construction Section)
Tenaga Nasional Berhad (Bahagian Penghantaran)
The Institution of Engineers, Malaysia
Top Safe OSH Training Solution
Top Slings Trading Sdn Bhd
Universiti Kebangsaan Malaysia

The Working Group on Lifts and Escalators which recommended the adoption of the EN Standard as Malaysian Standard consists of representatives from the following organisations:

Access Elevators Sdn Bhd
Department of Occupational Safety and Health Malaysia
Dover Elevators (M) Sdn Bhd
EITA Elevator (M) Sdn Bhd
Fuji HD Elevator Sdn Bhd
Fujitec (Malaysia) Sdn Bhd
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KONE Elevator (M) Sdn Bhd
Mitsubishi Elevator (M) Sdn Bhd
MS Elevator Engineering Sdn Bhd
Niche Elevators Sdn Bhd
Otis Elevator Company (M) Sdn Bhd
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Soon SL Enterprise
The Institution of Engineers, Malaysia
ThyssenKrupp Elevator (M) Sdn Bhd
Titi Maju Sdn Bhd
Trident Quantum Sdn Bhd

National foreword

The adoption of the EN Standard as a Malaysian Standard was recommended by the Working Group on Lifts and Escalators under the authority of the Industry Standards Committee on Mechanical Engineering.

This Malaysian Standard is identical with 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*, published by the European Committee for Standardization (CEN) with the exceptions as listed below:

- a) in the source text, "this European Standard" should read "this Malaysian Standard";
- b) the comma which is used as a decimal sign (if any), to read as a point;
- c) 5.4.6.1, the note to read as 'when space allows a trap door of 0,50 m x 0,70 m is preferable'. This changes was made because the error to the unit of measurement; and
- d) Clause Annex F.5 a) to read as 'there shall be a clear distance of 150 mm minimum between back of any rung and wall of the pit in the of vertical ladder'. This changes was made because of the inconsistency with 5.2.2.5 d).

This Malaysian Standard cancels and replaces MS EN 81-1:2012, *Safety rules for the construction and installation of lifts - Part 1: Electric lifts (First revision)* and MS 2021:Part 2:2007, *Safety rules for the construction and installation of lifts - Part 2: Hydraulic lifts*.

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English Version

Safety rules for the construction and installation of lifts - Lifts for the transport of persons and goods - Part 20: Passenger and goods passenger lifts

Règles de sécurité pour la construction et l'installation des élévateurs - Elévateurs pour le transport de personnes et d'objets - Partie 20: Ascenseurs et ascenseurs de charge

Sicherheitsregeln für die Konstruktion und den Einbau von Aufzügen - Aufzüge für den Personen- und Gütertransport - Teil 20: Personen- und Lastenaufzüge

This European Standard was approved by CEN on 28 May 2014.

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Contents

Page

Foreword.....	5
0 Introduction.....	7
0.1 General.....	7
0.2 General remarks.....	7
0.3 Principles.....	7
0.4 Assumptions	8
1 Scope	11
2 Normative references	11
3 Terms and definitions	13
4 List of significant hazards	19
5 Safety requirements and/or protective measures	21
5.1 General.....	21
5.2 Well, machinery spaces and pulley rooms	22
5.2.1 General provisions	22
5.2.2 Access to well and to machinery spaces and pulley rooms	26
5.2.3 Access and emergency doors - Access trap doors - Inspection doors.....	27
5.2.4 Notices	28
5.2.5 Well.....	29
5.2.6 Machinery spaces and pulley rooms	42
5.3 Landing doors and car doors	49
5.3.1 General provisions	49
5.3.2 Height and width of entrances	49
5.3.3 Sills, guides, door suspension.....	49
5.3.4 Horizontal door clearances.....	50
5.3.5 Strength of landings and car doors	51
5.3.6 Protection in relation to door operation	55
5.3.7 Local landing lighting and “car here” signal lights	57
5.3.8 Locking and closed landing door check.....	58
5.3.9 Locking and emergency unlocking of landing and car doors	58
5.3.10 Requirements common to devices for proving the locked condition and the closed condition of the landing door.....	61
5.3.11 Sliding landing doors with multiple, mechanically linked panels	61
5.3.12 Closing of automatically operated landing doors	62
5.3.13 Electric safety device for proving the car doors closed.....	62
5.3.14 Sliding or folding car doors with multiple, mechanically linked panels	62
5.3.15 Opening the car door	63
5.4 Car, counterweight and balancing weight	63
5.4.1 Height of car	63
5.4.2 Available car area, rated load, number of passengers	63
5.4.3 Walls, floor and roof of the car.....	68
5.4.4 Car door, floor, wall, ceiling and decorative materials	69
5.4.5 Apron	70
5.4.6 Emergency trap doors and emergency doors	70
5.4.7 Car roof.....	71
5.4.8 Equipment on top of the car	74
5.4.9 Ventilation.....	74
5.4.10 Lighting.....	74

5.4.11	Counterweight and balancing weight.....	75
5.5	Suspension means, compensation means and related protection means	75
5.5.1	Suspension means.....	75
5.5.2	Sheave, pulley, drum and rope diameter ratios, rope/chain terminations	75
5.5.3	Rope traction	76
5.5.4	Winding up of ropes for positive drive lifts	76
5.5.5	Distribution of load between the ropes or the chains	77
5.5.6	Compensation means	77
5.5.7	Protection for sheaves, pulleys and sprockets.....	78
5.5.8	Traction sheaves, pulleys and sprockets in the well.....	79
5.6	Precautions against free fall, excessive speed, unintended car movement and creeping of the car	80
5.6.1	General provisions	80
5.6.2	Safety gear and its tripping means.....	82
5.6.3	Rupture valve.....	88
5.6.4	Restrictors.....	89
5.6.5	Pawl device	90
5.6.6	Ascending car overspeed protection means	91
5.6.7	Protection against unintended car movement	92
5.7	Guide rails	95
5.7.1	Guiding of the car, counterweight or balancing weight	95
5.7.2	Permissible stresses and deflections	95
5.7.3	Combination of loads and forces	98
5.7.4	Impact factors	98
5.8	Buffers	100
5.8.1	Car and counterweight buffers	100
5.8.2	Stroke of car and counterweight buffers	101
5.9	Lift machinery and associated equipment.....	102
5.9.1	General provision	102
5.9.2	Lift machine for traction lifts and positive drive lifts.....	103
5.9.3	Lift machine for hydraulic lifts	108
5.10	Electric installations and appliances	117
5.10.1	General provisions	117
5.10.2	Incoming supply conductor terminations.....	119
5.10.3	Contactors, contactor relays, components of safety circuits	119
5.10.4	Protection of electrical equipment	120
5.10.5	Main switches	120
5.10.6	Electric wiring	122
5.10.7	Lighting and socket outlets.....	123
5.10.8	Control of the supply for lighting and socket outlets.....	123
5.10.9	Protective earthing	123
5.10.10	Electrical identification	124
5.11	Protection against electric faults; failure analysis; electric safety devices	124
5.11.1	Protection against electric faults; failure analysis	124
5.11.2	Electric safety devices	125
5.12	Controls - Final limit switches - Priorities.....	129
5.12.1	Control of lift operations.....	129
5.12.2	Final limit switches.....	136
5.12.3	Emergency alarm device and intercom system	137
5.12.4	Priorities and signals	137
6	Verification of the safety requirements and/or protective measures	138
6.1	Technical compliance documentation	138
6.2	Verification of design	138
6.3	Examinations and tests before putting into service	142
6.3.1	Braking system (5.9.2.2)	142
6.3.2	Electric installation.....	142

6.3.3	Checking of the traction (5.5.3)	142
6.3.4	Car safety gear (5.6.2)	143
6.3.5	Counterweight or balancing weight safety gear (5.6.2)	143
6.3.6	Pawl device (5.6.5)	144
6.3.7	Buffers (5.8.1, 5.8.2)	144
6.3.8	Rupture valve (5.6.3)	144
6.3.9	Restrictor/one-way restrictor (5.6.4)	145
6.3.10	Pressure test	145
6.3.11	Ascending car overspeed protection means (5.6.6)	145
6.3.12	Stopping of the car at landings and levelling accuracy (5.12.1.1.4)	145
6.3.13	Protection against unintended car movement (5.6.7)	145
6.3.14	Protection against falling/shearing (5.3.9.3.4)	146
7	Information for use	146
7.1	General	146
7.2	Instruction manual	146
7.2.1	General	146
7.2.2	Normal use	146
7.2.3	Maintenance	147
7.2.4	Examinations and tests	147
7.3	Logbook	147
Annex A	(normative) List of the electric safety devices	149
Annex B	(informative) Technical compliance documentation	151
Annex C	(informative) Periodic examinations and tests, examinations and tests after an important modification or after an accident	152
C.1	Periodic examinations and tests	152
C.2	Examinations and tests after an important modification or after an accident	152
Annex D	(informative) Machinery spaces – Access	154
Annex E	(informative) Building interfaces	155
E.1	General provisions	155
E.2	Support of Guide Rails	155
E.3	Ventilation of car, well and machine rooms	155
E.3.1	General	155
E.3.2	Ventilation of the well and car	156
E.3.3	Ventilation of machine rooms	157
Annex F	(normative) Pit access ladder	158
F.1	Types of pit access ladder	158
F.2	General provisions	158
F.3	Ladder uprights and rungs	158
F.3.1	Ladder uprights	158
F.3.2	Ladder rungs	159
F.4	Specific provisions for non fixed type ladders	159
F.5	Location of the ladder in the pit	159
Annex ZA	(informative) Relationship between this European Standard and the Essential Requirements of EU Directive 95/16/EC amended by Directive 2006/42/EC	161
Bibliography		162

Foreword

This document (EN 81-20:2014) 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 February 2015 and conflicting national standards shall be withdrawn at the latest by August 2017.

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, in conjunction with EN 81-50:2014, supersedes EN 81-1:1998+A3:2009 and EN 81-2:1998+A3:2009.

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.

This standard is the culmination of the progressive development of the EN standards for lifts. Previous versions of the EN 81-1 and EN 81-2 standards incorporated into EN 81-20 and EN 81-50 include:

- EN 81-1:1985, Safety rules for electric lifts
- EN 81-1:1998, Safety rules for electric lifts
- EN 81-1:1998, Corrigendum No 1:1999;
- EN 81-1:1998/A1:2005, incorporating programmable electronic system in safety related applications for lifts;
- EN 81-1:1998/A2:2004, incorporating machine-room-less lifts;
- EN 81-1:1998+A3:2009, Incorporating unintended car movement with open doors;
- EN 81-2:1987, Safety rules for hydraulic lifts
- EN 81-2:1998, Safety rules for hydraulic lifts
- EN 81-2:1998, Corrigendum No 1:1999;
- EN 81-2:1998/A1:2005, incorporating programmable electronic system in safety related applications for lifts;
- EN 81-2:1998/A2:2004, incorporating machine-room-less lifts;
- EN 81-2:1998+A3:2009, incorporating unintended car movement with open doors.

This is the first edition of the standard. The need for replacement was based on the following points:

- improvement in safety due to changes in proven technology;
- the need to reflect changes to the state of the art;