

AS 1735.1.1:2022



Lifts, escalators and moving walks

Part 1.1: General requirements



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- Australian Chamber of Commerce and Industry
- Australian Elevator Association
- Australian Industry Group
- Communications, Electrical and Plumbing Union — Electrical Division
- Lift Engineering Society of Australia

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Preface

This Standard was prepared by the Standards Australia Committee ME-004, Lift Installations, to supersede AS 1735.1:2016.

The objective of this document is to provide general requirements including definitions of terms relevant to the AS 1735 series.

The major changes in this edition are —

- (a) updated references; and
- (b) inclusion of examples of compliance certificates.

This document forms part of the AS 1735 series of Standards. A list of all parts in the AS (AS/NZS) 1735 series can be found in the Standards Australia online catalogue.

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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Australian Standard®

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1 Scope

This document sets out uniform requirements and defines terms for lifts, escalators and moving walks.

This document does not apply to the following:

- (a) Temporary lifts and hoists used solely for erecting, demolishing, altering, or repairing buildings or structures in which persons do not travel.
- (b) Temporary lifts used for carrying persons or persons and materials in building and construction work.
- (c) Orchestral and stage lifts.
- (d) Stacking machines, forklift trucks, and similar portable appliances.
- (e) Conveyors used for the handling of materials and good, such as tray elevators, bucket conveyors, and similar appliances.
- (f) Skip hoists.
- (g) Amusement devices.
- (h) Loading ramps and dock levellers.
- (i) Serial hoists.
- (j) Bridge lifting span lifts.
- (k) Railway car lifts.
- (l) Ropeways carrying passenger cabs or chairs.
- (m) Industrial platform hoists.
- (n) Hoists used in taxis and people-moving road vehicles.
- (o) Building maintenance lifts.
- (p) Elevating work platforms.
- (q) Guided hoists.
- (r) Manually powered lifts.
- (s) Vehicle hoists.
- (t) Mine winders.

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.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 1735 (all parts), *Lifts, escalators and moving walks*

AS ISO 22559.1, *Safety requirements for lifts (elevators), Part 1: Global essential safety requirements (GESRs)*

AS ISO 22559.2, *Safety requirements for lifts (elevators), Part 2: Safety parameters meeting the global essential safety requirements (GESRs)*

AS ISO 22559.3, *Safety requirements for lifts (elevators) — Part 3: Global conformity assessment procedures (GCAP)—Prerequisites for certification of conformity of lift systems, lift components and lift functions*

AS ISO 25740.1, *Safety requirements for escalators and moving walks, Part 1: Global essential safety requirements (GESR)*

ISO 14798, *Lifts (elevators), escalators and moving walks — Risk assessment and reduction methodology*

ISO/TS 22559-4, *Safety requirements for lifts (elevators) — Part 4: Global conformity assessment procedures (GCAP) — Certification and accreditation requirements*

PD ISO/TS 25740-2, *Safety requirements for escalators and moving walks — Part 2: Safety Parameters meeting GESRs*

ASME A17.1/CSA B44.01, *Elevator and Escalator Electrical Equipment*

ASME A17.7/CSA B44.7-07, *Performance-Based Safety Code for Elevators and Escalators*

BS EN 81-20, *Safety rules for the construction and installation of lifts. Lifts for the transport of persons and goods — Part 20: Passenger and goods passenger lifts*

BS EN 81-50, *Safety rules for the construction and installation of lifts. Examinations and tests — Part 50: Design rules, calculations, examinations and tests of lift components*

Directive 2006/42/EC, *Machinery Directive*

Directive 2014/ 33/EU, *Lift Directive*

3 Terms and definitions

For the purpose of this document and all other parts of AS 1735 series, the following terms and definitions apply.

3.1 alteration

any change in the design that uses new technology or replacement components and where the risk assessment indicates the level of safety has been altered

Note 1 to entry: Typical examples may include the following:

- (a) Any increase or decrease of —
 - (i) the rated speed;
 - (ii) the rated load;
 - (iii) the mass of the car $\pm 5\%$; and
 - (iv) the travel.
- (b) The change of machine, brake or the traction sheave to one of a different type size or rating.

Note 2 to entry: Alterations only apply to existing installations.

3.2 annunciator car

electrical device in the car which visually indicates the landings at which a lift landing signal-registering device has been actuated

3.3**attendant**

person who has control and supervision of a lift and is duly authorized by the person in charge of a building

3.4**authorized person**

person authorized by legislation or regulation or selected by the owner or person in charge of a building to issue determinations, orders, or other instructions in regards to any subject covered by this document

3.5**back-gearred machine**

driving machine in which spur gearing is interposed between the worm reduction gear and the driving sheave or drum

3.6**balustrading**

enclosure at either side of the moving steps of an escalator or moving treadway of a moving walk and the decking or deckboard adjacent to the moving handrails

3.7**beam crosshead****top member crosshead**

<1> top horizontal member of the car frame, decking or deckboard of an escalator or moving walk

<2> portion of the balustrade outside the moving handrails which is transversely horizontal

3.8**bed passenger lift**

passenger lift designed to carry beds and stretcher trolleys

Note 1 to entry: Bed passenger lifts are normally located in hospitals, nursing homes, or other buildings where bed patients are accommodated.

3.9**bi-parting door****centre opening door**

horizontal or vertical sliding door consisting of two or more leaves arranged so that the leaves or groups of sections open away from each other and close simultaneously

3.10**broken drive-chain device**

device to stop the machine of an escalator or moving walk and to apply the brake in the event of a broken drive chain

3.11**broken input drive-chain****broken V-belt device**

device to stop the machine of an escalator or moving walk and to apply the brake in the event of a broken drive-chain or broken V-belt between the motor and the driving machine

3.12**broken step chain device**

device to stop the machine of an escalator in the event of a broken step chain

3.13**broken treadway device**

device to stop the machine of a moving walk in the event of a break in the treadway belt or a belt rope treadway or a break in the connection such as between pallets on a pallet type treadway

3.14**buffer**

device designed to absorb the impact of the lift car or counterweight

3.14.1**elastomeric buffer**

buffer constructed of elastomeric material designed to absorb the impact of the lift car or counterweight primarily by energy dissipation

3.14.2**oil buffer**

buffer using oil as a medium that absorbs and dissipates the kinetic energy of the descending car or counterweight

3.14.3**oil stroke buffer**

oil-displacing movement of the buffer, plunger or piston excluding the travel of the buffer-plunger accelerating device

3.14.4**solid buffer**

device other than an oil buffer, elastomeric buffer or spring buffer designed to stop a descending car or descending counterweight

3.14.5**spring buffer**

buffer that is capable of absorbing, in a spring, the kinetic energy of the descending car or descending counterweight

3.15**buffer clearance**

<car> distance between the car buffer striker plate and the striking surface of the fully extended car buffer when the car floor is level with the bottom landing

<counterweight> distance between the counterweight buffer striker plate and the striking surface of the fully extended counterweight buffer when the car floor is level with the top terminal landing

3.16**buffer spring**

<load rating> load that is required to compress the spring in an amount equal to its stroke

<stroke> maximum distance that the contact end of the spring is designed to move under a compressive load

3.17**cam**

wedge-shaped device fixed in a lift well, on a car or counterweight, that operates control equipment by means of the movement of the car or counterweight

3.18**car**

load-carrying lift including car frame, platform, enclosure and doors

3.19**car door**

multiple or single leaf door that opens or closes the car entrance

3.20**car enclosure**

<car body work> enclosing body of the lift car which comprises the sides and roof built on the platform

3.21**car entrance**

opening(s) in the car enclosure through which normal access is available between the lift car and landings

3.22**car frame****3.22.1****cantilevered car frame**

car frame where two or more bracket-like arms project from one side of the stiles or uprights and support the car platform and car entrance

3.22.2**overslung car frame**

car frame to which the lifting rope fastenings or lifting rope sheaves are attached to the crosshead or top member of the car frame

3.22.3**sub-post car frame**

car frame whose members are located below the car platform

3.23**car platform**

structure that forms the floor of the car and directly supports the load

3.24**ceiling intersection guard**

guard provided at the intersecting angle of the escalator or moving walk and the adjacent building structure (e.g. ceiling) or another escalator or moving walk

3.25**chain diverting pulley**

wheel that is flanged and grooved to accommodate a driving or suspension chain and used to divert such a chain

3.26**chain wheel**

wheel having teeth suitable for engaging in a driving or suspension chain

3.27**clearance****3.27.1****bottom of car clearance**

clear vertical distance from the pit floor to the lowest structural or mechanical part, equipment, or device installed beneath the car platform when the car rests on its stops or fully compressed buffer

Note 1 to entry: This does not include guide shoes, guide rollers, safety jaw assemblies, and platform aprons or guards.

3.27.2**car at top landing clearance**

clear vertical distance between the top of the car crosshead or between the top of the car where no crosshead is provided and the nearest part of the overhead structure when the car floor is level with the top terminal landing

3.27.3**mechanical bottom**

<of car clearance> clear vertical distance from the pit floor to any fitting attached to the car when the car rests on its stops or fully compressed buffer