

Australian/New Zealand Standard®

**Guidelines for safe working
on new lift installations in new
constructions**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME/4, Lift Installations. It was approved on behalf of the Council of Standards Australia on 3 September 1996 and on behalf of the Council of Standards New Zealand on 15 November 1996. It was published on 5 December 1996.

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ACT WorkCover
Association of Consulting Engineers, Australia
Association of Independent Lift Companies
Australian Assembly of Fire Authorities
Australian Building Codes Board
Australian Chamber of Commerce and Industry
Australian Construction Services, Department of Administrative Services
Building Owners and Managers Association of Australia
Department of Training and Industrial Relations, Qld
Department of Industrial Affairs S.A.
Health and Safety Organization, Vic.
Institution of Engineers, Australia
Lift Manufacturers Association of Australia
Metal Trades Industry Association of Australia
New Zealand Lifts and Escalator Association
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Work Health Authority, N.T.
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**Guidelines for safe working
on new lift installations in new
constructions**

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/4 on Lift Installations.

The objective of this Standard is to provide those responsible for lift installations in new buildings with guidelines to safe working provisions and practices.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Guidelines for safe working on new lift installations
in new constructions**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard recommends safe working provisions and practices (supported by training) for those responsible for, and involved in, new lift installations and new construction. This Standard is not intended to be solely for the lift contractor, but is also intended to provide guidance for the builder and other associated trades.

The recommendations relate to the safety of persons when entering and leaving the work area on a lift installation and while working there; they also relate to the safety of others in the vicinity, whether working or not, who may be endangered by the action of those working on lifts. It should be appreciated that not every recommendation in this Standard can be applied to all types of lifts.

In general, the Standard relevant to a particular type of lift will specify the minimum technical requirements applicable.

1.2 DEFINITIONS For the purpose of this Standard, the definitions contained within AS 1735.1 and that below apply.

1.2.1 Competent person—a person who has acquired through training, qualification, or experience, or a combination of these, the knowledge and skills enabling that person to perform the tasks recommended by this Standard.

1.3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1269 Acoustics—Hearing conservation

1418 Cranes (including hoists and winches) (known as the SAA Crane Code)

1418.7 Part 7: Builders' hoists and equipment

1576 Scaffolding

1576.1 Part 1: General requirements

1576.4 Part 4: Suspended scaffolding

1657 Fixed platforms, walkways, stairways and ladders—Design, construction and installation

1674 Safety in welding and allied processes

1674.1 Part 1: Fire precautions

1735 Lifts, escalators and moving walks

1735.1 Part 1: General requirements

1735.2 Part 2: Passenger and goods lifts—Electrical

1735.3 Part 3: Passenger and goods lifts—Electrohydraulic

1735.10 Part 10: Tests

1891 Industrial safety belts and harnesses

2626 Industrial safety belts and harness—Selection, use and maintenance

AS

3012 Electrical installations—Construction and demolition sites

3190 Approval and test specification —Residual current devices (current-operated earth-leakage devices)

NZS

4332P Non-domestic passenger and goods lifts

SECTION 2 JOB SITE INSPECTION

2.1 ACCESS TO WORK AREAS

2.1.1 Safety assessment Before work commences, an initial site safety assessment should be made by a person who is competent to do so. This assessment should identify and record at least the following, as appropriate:

- (a) There are safe means of access to, and egress from, each place of work.
- (b) The anticipated equipment required to carry out the work and the arrangements made for that equipment to be available at the appropriate time.
- (c) Any potential hazards that may be present in the work area.

2.1.2 Oil refineries, power stations, gas installations, marine installations and chemical works In such cases, certain safe systems of work or permit to work systems might be needed as agreed with the site management.

Particular attention should be paid to the safety of personnel engaged in other work services within the working area.

2.1.3 Atrium areas and liftwells not totally enclosed Before any work is carried out, and while work is being carried out in the atrium areas, or in a liftwell that is not totally enclosed (with the exception of the openings for doors which are covered by Clause 3.4), any open side of the liftwell should be suitably enclosed, or guarded to protect people working in the atrium area or the liftwell where not totally enclosed.

2.2 PERIODIC ASSESSMENT Subsequent to the initial safety assessment, periodic assessment of site conditions should be made.

SECTION 3 SITE ESTABLISHMENT

3.1 SITE ESTABLISHMENT SAFETY

3.1.1 Procedures Procedures should be established for all activities to be performed at the workstation to ensure the safe execution of such tasks.

A minimum of two persons should be on any job site.

Training should be in accordance with Clause 14.1.

3.1.2 Protective equipment Appropriate protective equipment, e.g. safety foot wear, safety helmets, gloves, hearing protectors, respirators, face masks and safety harnesses, should be provided and used by personnel according to site conditions and the work to be done. Such equipment should be maintained in serviceable condition and replaced as necessary.

3.1.3 Emergency and rescue procedures Rescue and recovery procedures for people supported by a safety harness, should be in accordance with Appendix A.

Additional procedures should be set up for other emergencies and rescue situations.

3.2 DELIVERY OF SITE ESTABLISHMENT EQUIPMENT The work area should be checked for structural suitability, and adequate means should be available for the moving of equipment. Off-loading and storage areas should be suitably protected.

3.3 ARRANGEMENT OF LIFTWELL DECKING REQUIREMENTS When it is intended to work in the liftwell at more than one level at a time, protective decking should be provided above each working area. A protection deck should be designed for a distributed safe working load of not less than 5 kPa (510 kg/m²). Installation of heavy equipment should not be carried out whilst persons are working below the protection deck, unless an agreed safe procedure has been developed.

3.4 ENTRANCE PROTECTION

3.4.1 Liftwell enclosures The minimum requirements for the guarding of openings in liftwell enclosures during installation should be as follows:

- (a) Guards to cover the full width and height of the liftwell enclosure openings, with a minimum depth of 600 mm between the guard and the liftwell wall, to be provided and securely fixed.
- (b) A top cover to be provided for the full area of the guard.
- (c) The guard and door to be covered by wire mesh having a maximum aperture of 50 mm × 50 mm × 2.5 mm minimum thickness.
- (d) A hinged door to be provided, with a minimum height of 2000 mm and a minimum width of 1000 mm, and with a night type latch that—
 - (i) is not capable of being locked in the open position;
 - (ii) does not require a key to open it from within the guard enclosure; and
 - (iii) is guarded to prevent the door being opened from outside the guard enclosure by means other than a key.
- (e) The clearance between the bottom of the guard and the floor to be a maximum of 10 mm.
- (f) A toe guard 150 mm high to be provided for the full width of the guard.

- (g) Where guards are removed to allow for completion of wall and floor finishes, the landing doors to be effectively held closed by the door locks, or other means, unless Item (j) applies. Where any significant gaps between the building structure and the landing entrance occur, temporary sealing should be applied to prevent objects entering the liftwell.
- (h) Guards may be removed after the door locks are fitted and mechanically operational. However, where entrances are fitted with external unlocking devices, guards should remain in place.
- (i) Where Item (h) above applies, the minimum depth between the guard and the liftwell may be reduced to 450 mm (see Figure 3.4(B)).
- (j) The lift is not to operate under power without guards, unless the door locks are in circuit.
- (k) The following notice in permanent characters, to be exhibited in a prominent position on every door:

DANGER
ENTRY OF UNAUTHORIZED
PERSONS PROHIBITED

The word 'DANGER' should be in letters not less than 25 mm high and the remainder of the notice in letters not less than 10 mm high.

NOTE: An example for guarding of openings in liftwell enclosures is shown in Figures 3.4(A) and 3.4(B).

3.4.2 Bank of lifts in a foyer Where a bank of lifts is situated in a foyer, the foyer may be enclosed at each end by a guard which extends across the full width of the foyer, with the exception of a door, and the following requirements should apply:

- (a) The guard to extend to a minimum height of 2000 mm.
- (b) The guard and door to be covered by solid panels of 10 mm min. thickness or wire mesh which has a maximum aperture of 50 mm × 50 mm × 2.5 mm min. thickness.
- (c) A hinged door to be provided, with a minimum height of 2000 mm and a minimum width of 1000 mm, and with a night type latch that—
 - (i) is not capable of being locked in the open position;
 - (ii) does not require a key to open it from within the guard enclosure; and
 - (iii) is guarded to prevent the door being opened from outside the guard enclosure by means other than a key.
- (d) The following notice, in permanent characters, to be exhibited in a prominent position on every door:

DANGER
ENTRY OF UNAUTHORIZED
PERSONS PROHIBITED

- (e) Every opening in the liftwell enclosure within the enclosed areas to be guarded by a guardrail or fence of a height not less than 900 mm above the floor of the landing together with a toeboard 150 mm high fixed at the level of the floor of the landing.
- (f) The guardrail or fence described in Item (e) the above to be set back not less than 600 mm or more than 900 mm from the line of the liftwell enclosure wall. Where people will be working below the levels at which this guard is provided, the decking required by Clause 3.3 will apply, or full height guarding complying with Clause 3.4.1 will apply.

NOTE: Examples of the above guarding are shown in Figures 3.4(C) and 3.4(D).

3.5 LIGHTING AND POWER

3.5.1 General Adequate lighting for the lift installation and adequate provision of power for safe access, safe working conditions and safe egress should be provided. The lighting and power circuits should be in accordance with AS 3012.

Electrical supply wiring should be from a separate final sub-circuit protected by a residual current device (RCD) of a type II (30 mA maximum) complying with AS 3190.

Main switches should be located and tagged to reduce the chance of being switched off by other persons on site.

Lighting may have either temporary or permanent wiring. Fluorescent lighting units of not less than 36 W or equivalent temporary lighting should be installed to illuminate each workstation. Such lighting should be mechanically protected.

3.5.2 Emergency lighting upon loss of normal lighting. Emergency lighting should be provided to allow safe egress from the workstation upon loss of normal lighting. The emergency lighting should be provided for a minimum of one hour.

3.6 TEMPORARY VENTILATION Adequate ventilation should be provided at the workstation.

Work procedures which generate quantities of dust, fumes, mist, vapours and the like, are to be performed in such a way as to prevent the build-up of hazardous levels. Where this is not practical, measures should be taken to control or reduce the hazard in the workstation, i.e. by providing portable mechanical ventilation to draw fresh air supply to the work area and remove the contaminated air.

If it is not possible to otherwise reduce the hazard, the use of personal protective equipment should be considered as a means of protection only.

Where personal protective equipment is used, all personnel required to use it should be trained in correct selection, use, maintenance and care of such equipment.

3.7 NOISE Work which generates noise should be performed in such a way as to minimize hazardous noise levels.

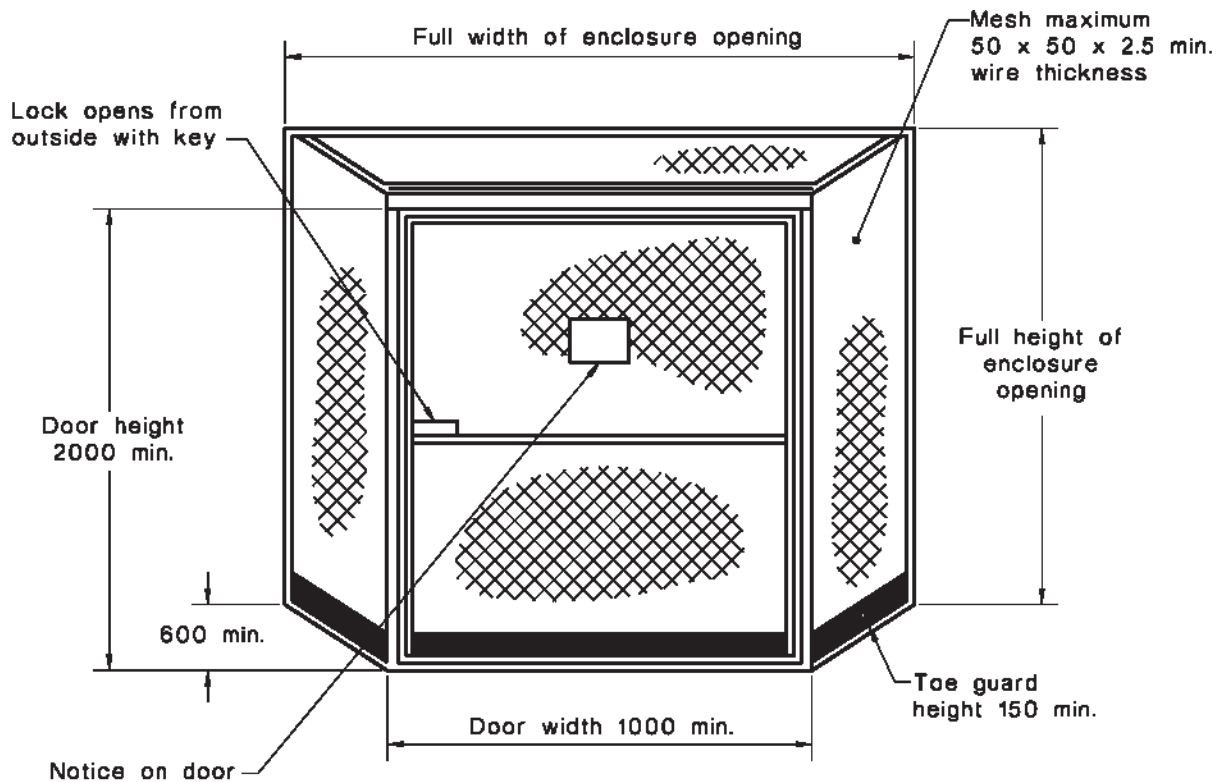
The use of personal protective equipment should be considered only as a last means of protection.

Where personal protective equipment is used, all personnel required to use it should be trained in correct selection, use, maintenance and care of such equipment.

3.8 WEATHERPROOFING Precautions should be taken to ensure that the workstation and environment are maintained in a hazard-free state, for example free from water or moisture build-up, ice or fog which could increase the risk of slippage, electrocution or visual impediment.

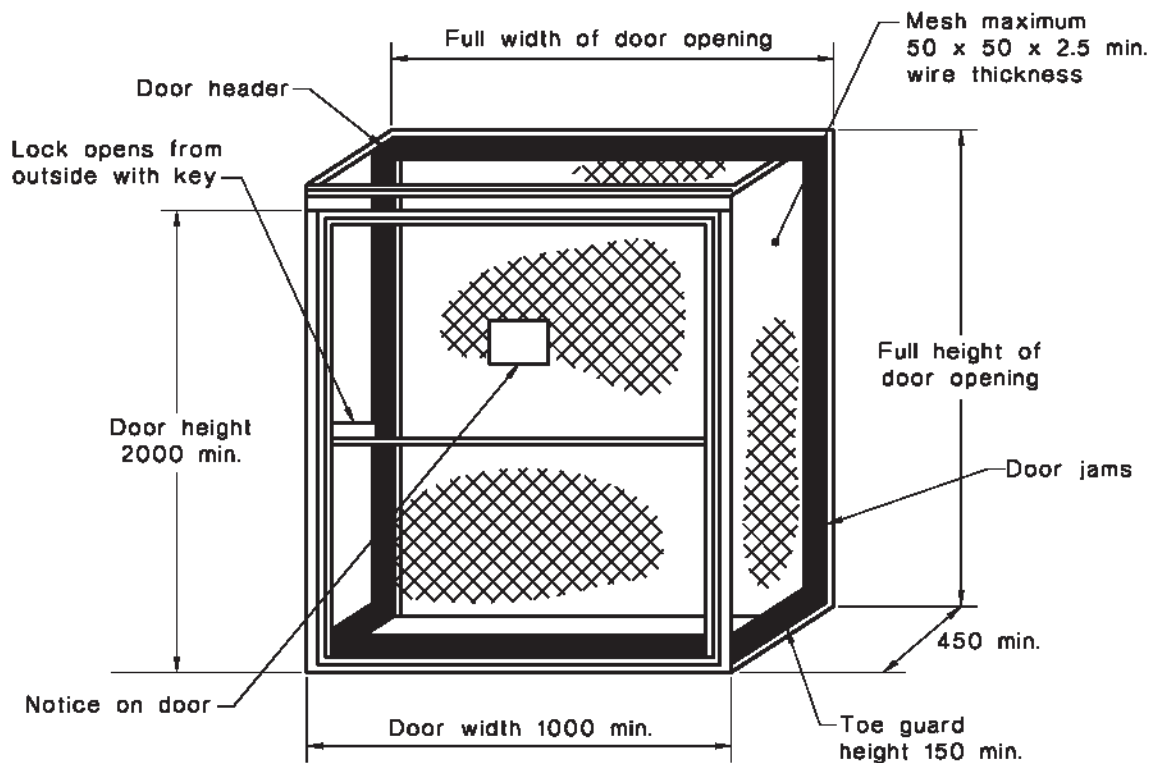
3.9 CONSTRUCTION OPENINGS Ready and safe means of access and egress should be provided in the path of travel of each lift at intervals not exceeding 12.2 m during the initial phases of lift installation work.

All openings should provide access and egress between the liftwell and a permanent floor or landing. Where blind sections of the liftwell exceed 12.2 m between permanent floors or landings, the opening should be provided at the first available permanent floor or landing.



DIMENSIONS IN MILLIMETRES

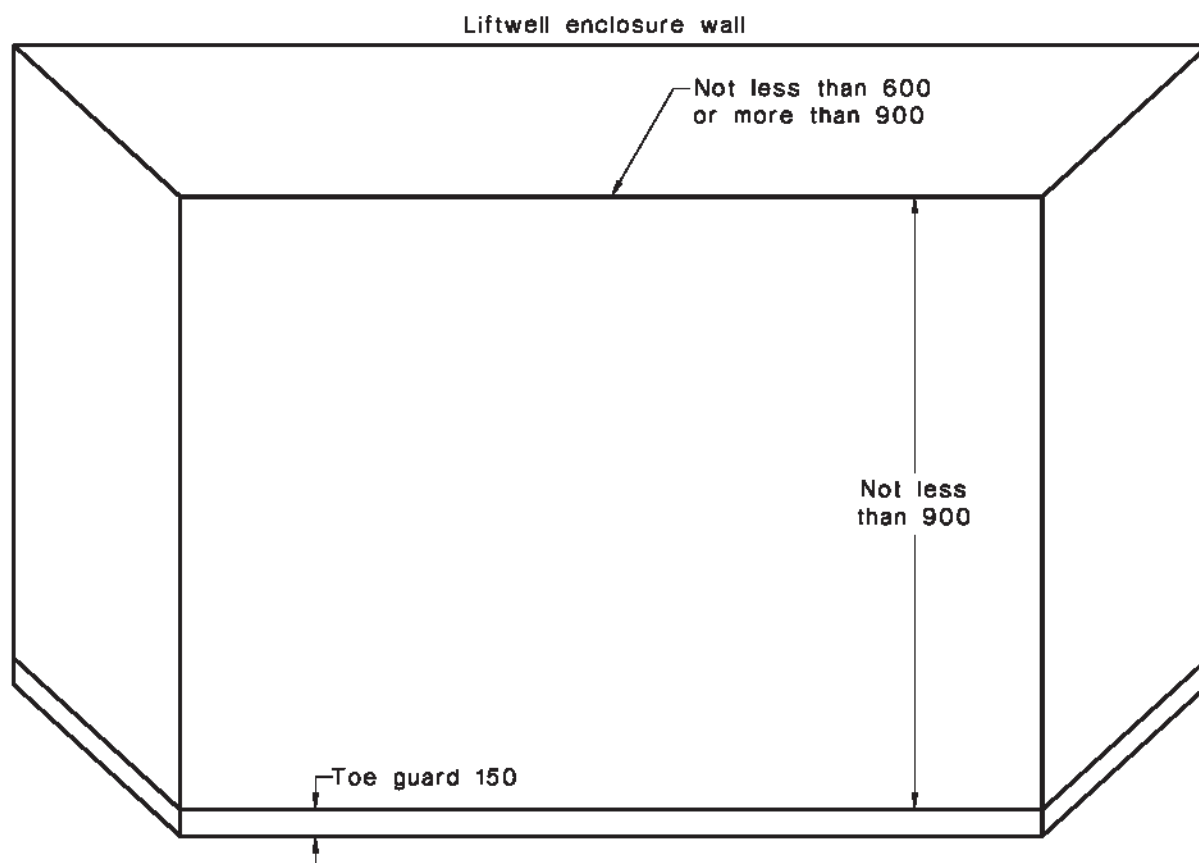
FIGURE 3.4(A) AN EXAMPLE OF GUARDING FOR OPENINGS IN LIFTWELL ENCLOSURES



DIMENSIONS IN MILLIMETRES

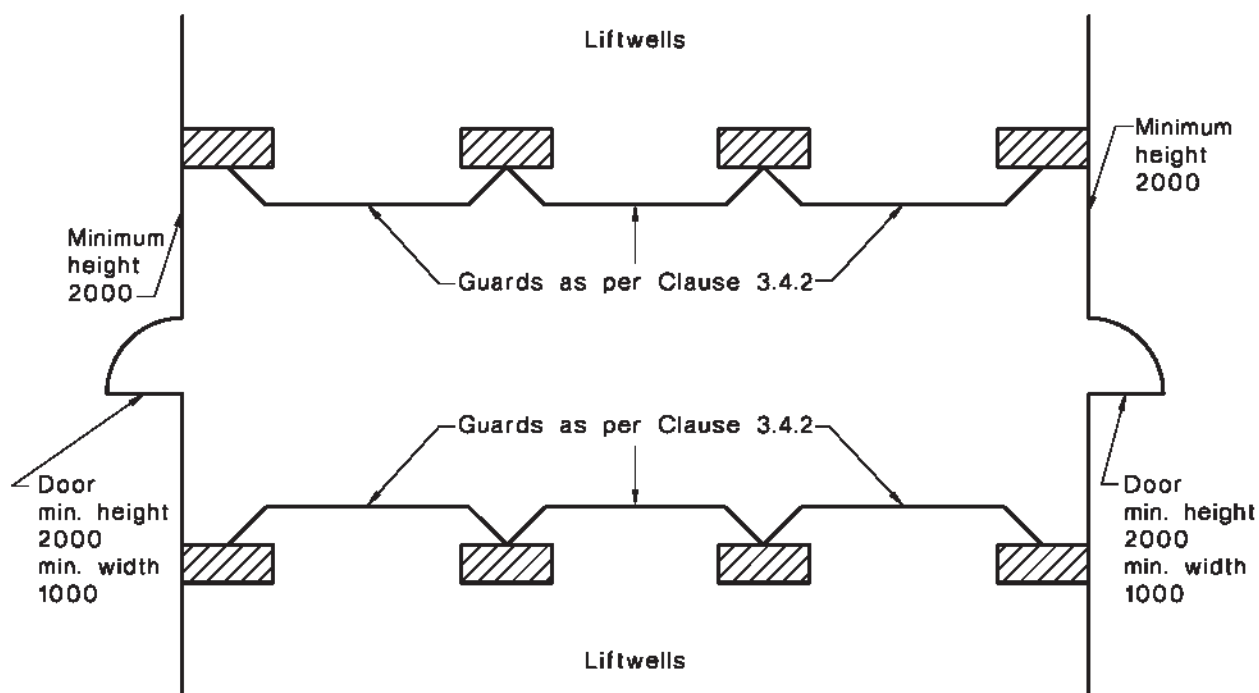
FIGURE 3.4(B) AN EXAMPLE OF GUARDING WITH LANDING DOORS FITTED AND DOOR LOCKS ADJUSTED TO KEEP DOORS CLOSED

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DIMENSIONS IN MILLIMETRES

FIGURE 3.4(C) AN EXAMPLE OF GUARDING IN AN ENCLOSED FOYER AREA



DIMENSIONS IN MILLIMETRES

FIGURE 3.4(D) TYPICAL LAYOUT OF GUARDING IN AN ENCLOSED FOYER AREA WITH LIFT ENTRANCE INSTALLED