

AS 1735.8—1986

Australian Standard[®]

SAA LIFT CODE

Part 8—INCLINED LIFTS

This Australian standard was prepared by Committee ME/4, Lift Installations. It was approved on behalf of the Council of the Standards Association of Australia on 12 February 1986 and published on 7 April 1986.

The following interests are represented on Committee ME/4:

Association of Consulting Engineers Australia
Association of Independent Lift Companies
Australian Chamber of Commerce
Australian Uniform Building Regulations Co-ordinating Council
Board of Fire Commissioners of New South Wales
Building Owners and Managers Association of Australia Limited
Confederation of Australian Industry
Department of Employment and Industrial Affairs, Qld
Department of Employment and Industrial Affairs, Vic.
Department of Housing and Construction
Department of Industrial Relations, N.S.W.
Department of Labour, S.A.
Department of Labour and Industry, Tas.
Department of Mines and Energy, N.T.
Department of Occupational Health, Safety and Welfare, W.A.
Department of Public Works, N.S.W.
Department of Territories
Institution of Engineers, Australia
Insurance Council of Australia
Lift Manufacturers Association of Australia Limited
Metal Trades Industry Association of Australia
Royal Australian Institute of Architects

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

Australian Standard[®]

**LIFTS, ESCALATORS, AND
MOVING WALKS**

**Known as the
SAA LIFT CODE**

Part 8 INCLINED LIFTS

First published (as AS CA3, Part VIII)	1973
AS 1735, Part 8 first published	1975
Second edition	1982
Third edition	1986

Incorporating:
Amdt. 1—1989.

PREFACE

This edition of this standard was prepared by the Association's Committee on Lift Installations, to supersede AS 1735, Part 8—1982.

This edition includes the following technical changes:

- (a) Clause 5.6 has been amended to permit smaller clearances beside inclined lifts where the height of the car door is greater than 1.5 m.
- (b) Clause 18.4 has been amended to permit the use of overcurrent circuit-breakers in door-lock circuits.

Other changes of an editorial nature have been made to bring the standard into line with current SAA policy.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
SECTION 1. SCOPE AND GENERAL	
1.1 Scope	6
1.2 Application	6
1.3 Referenced Documents	6
SECTION 2. GENERAL DESIGN	
2.1 Types	7
2.2 Rated Speed	7
2.3 Inclination	7
2.4 Supporting Structures	7
2.5 Weather Resistance	7
SECTION 3. MACHINE ENCLOSURES	
3.1 General	8
3.2 Supported by Car Platform	8
3.3 Not Supported By Car Platform	8
3.4 External Standing Areas	8
3.5 Ventilation	8
3.6 Notice	8
SECTION 4. DRIVING MACHINES	
4.1 General	10
4.2 Types	10
4.3 Racks	10
4.4 Pinions	10
4.5 Drums	10
4.6 Rope Traction	10
SECTION 5. CLEARANCES	
5.1 Application	11
5.2 Car Bottom Buffer Clearance	11
5.3 Top Buffer Clearance	11
5.4 Man Clearance	11
5.5 Mechanical Clearance	11
5.6 Running Clearances	11
SECTION 6. BUFFERS AND STOPS	
6.1 General	12
6.2 Materials	12
6.3 Strength of Buffer and Supports	12
6.4 Buffer Stroke	12
SECTION 7. BOTTOM RUNWAY AREA	
7.1 General	12
7.2 Drainage	12
7.3 Access	12
SECTION 8. GUARD RAILS AND ENCLOSURES	
8.1 Landing Entrance Enclosures	13
8.2 Runway Enclosures	13
8.3 Emergency Egress From Car	13
8.4 Private Installations	13
SECTION 9. LANDINGS	
9.1 Provision	14
9.2 Size and Construction	14
9.3 Lighting	14

SECTION 10. LANDING ENCLOSURE ENTRANCES

10.1	Public Installations	14
10.2	Private Installations	14

SECTION 11. ROPES

11.1	Materials	14
11.2	Diameter	14
11.3	Number	14
11.4	Factor of Safety	14
11.5	Data Plate	14

SECTION 12. ROPE ATTACHMENTS AND FITTINGS

12.1	General	15
12.2	Attachment of Ropes to Platforms	15

SECTION 13. SHEAVES, PULLEYS, AND DRUMS

13.1	Groovings and Flanges	15
13.2	Ratio of Sheave or Drum Diameter to Rope Diameter	15
13.3	Mechanical Design	15
13.4	Sheave Guards	15
13.5	Rope Sheaves and Rope Rollers	15

SECTION 14. GUIDES AND TRACK SUPPORTS

14.1	Running Rails	16
14.2	Guide Rail Material	16
14.3	Metals Other Than Steel For Guide Rails	16
14.4	Supports and Footings	16

SECTION 15. RATED CAR CAPACITY

SECTION 16. CAR CONSTRUCTION

16.1	Car Platforms	17
16.2	Car Frames and Guiding Members	17
16.3	Car Guide Shoes or Rollers	17
16.4	Materials for Car Frames, Platform Frames, and Platforms	17
16.5	Strength of Car Frames and Conditions of Loading	17
16.6	Suspension Rope Hitch Plates	18
16.7	Car Frame with Crosshead Sheaves	18
16.8	Attachments to Car Frame	18
16.9	Car Roof	18
16.10	Car Walls	18
16.11	Notices	18
16.12	Headroom for Cars and Entrances	18
16.13	Ventilation	18
16.14	Lighting	18
16.15	Private Installations	18

SECTION 17. CAR DOORS AND ENTRANCES

17.1	Number	19
17.2	Car Door Contact	19
17.3	Type	19
17.4	Strength	19
17.5	Handgrips	19
17.6	Private Installations	19

	<i>Page</i>	
SECTION 18. ELECTRICAL INSTALLATIONS		
18.1 General	20	
18.2 Circuit-breaker or Switch	20	
18.3 Position of Circuit-breaker or Switch	20	
18.4 Circuitry and Wiring of Door Locks	20	
18.5 Maintenance Isolating Switch	20	
18.6 Clearance Around Controllers	20	
18.7 Lift Circuit Program	20	
SECTION 19. EARTHING		
19.1 General	21	
19.2 Private Installations	21	
SECTION 20. WIRING		
20.1 General	21	
20.2 Travelling Cables to Cars	21	
SECTION 21. OPERATING DEVICES		
21.1 Type	22	
21.2 Control Buttons	22	
21.3 Private Installations	22	
SECTION 22. ELECTRICAL PROTECTIVE DEVICES		
22.1 General	22	
22.2 Overload Weighing Devices	22	
22.3 Private Installations	22	
SECTION 23. TERMINAL STOPPING DEVICES		
23.1 Provision of Limit Gear	23	
23.2 Top Overrun Limit	23	
23.3 Operation of Limit Switches	23	
SECTION 24. SAFETY GEAR		
24.1 General	23	
24.2 Safety Gear Switch	23	
24.3 Means of Application	23	
24.4 Factors of Safety	23	
24.5 Bearings	23	
24.6 Lubricants	23	
SECTION 25. OVERSPEED DEVICES		
25.1 Provision of Overspeed Devices	24	
25.2 Drive	24	
25.3 Pinning or Sealing and Painting	24	
SECTION 26. PERIODIC INSPECTION AND TESTING		24
INDEX	25	

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
LIFTS, ESCALATORS, AND MOVING WALKS
PART 8—INCLINED LIFTS

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard sets out requirements for power-operated inclined lifts of the car of platform type for public and private use, other than—

- (a) stairway lifts (see AS 1735.7);
- (b) temporary lifts or hoists used solely for building work; and
- (c) amusement devices.

This standard is complementary to AS 1735.1 and AS 1735.2, but the requirements of this standard take precedence over corresponding requirements of those standards.

1.2 APPLICATION. An inclined lift consists of a platform protected by side walls which may be built up and provided with a roof to form a completely enclosed car. It is driven by a drum, traction, or rack type machine at a speed of not more than 0.5 m/s. This form of lift, where intended for public use, has been treated with a consideration similar to that given to vertical lifts as far as safety features are concerned, such as man, mechanical, and running clearances, guarding, car construction, electrical protective devices, limits, and safety gear. However, for private installations, where the inclined lift is intended for the convenience of a single family at a private residence, a number of relaxations have been permitted.

1.3 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1170	SAA Loading Code Part 2—Wind Forces
AS 1204	Structural Steels—Ordinary Weldable Grades
AS 1250	SAA Steel Structures Code
AS 1480	SAA Concrete Structures Code
AS 1530	Methods for Flexure Tests on Building Materials, Components and Structures Part 1—Compressibility Test for Materials
AS 1554	SAA Structural Steel Welding Code Part 1—Welding of Steel Structures Part 2—Arc Stud Welding (Steel Studs to Steel) Part 3—Welding of Reinforcing Steel
AS 1556	Steel Wire Ropes (Other than for Mining Purposes)
AS 1637	SAA Code for Fixed Platforms, Walkways, Stairways and Ladders
AS 1735.1	SAA Lift Code, Part 1—General Requirements
AS 1735.2	SAA Lift Code, Part 2—Passenger and Goods Lifts—Electric
AS 1735.7	SAA Lift Code, Part 7—Stairway Chair Lifts
AS 2053	Non-metallic Conduits and Fittings
AS 2758.1	Aggregates and Rock for Engineering Purposes, Part 1—Concrete Aggregates
AS 3000	SAA Wiring Rules