

SUPERSEDED BY *AS 1735.7-1986*

Under Revision see DR 85277

AS 1735, Part 7—1982
UDC 621.876-83
SfB (66)

Australian Standard 1735, Part 7—1982

SAA LIFT CODE Part 7—STAIRWAY CHAIR LIFTS



STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter



THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Association of Consulting Engineers Australia
Association of Independent Lift Companies
Australian Chamber of Commerce
Board of Fire Commissioners of New South Wales
Building Owners and Managers Association of Australia Limited
Confederation of Australian Industry
Department of the Capital Territory
Department of Housing and Construction
Department of Industrial Affairs and Employment, S.A.
Department of Industrial Relations, N.S.W.
Department of Labour and Industry, Tas.
Department of Labour and Industry, Vic.
Department of Labour and Industry, W.A.
Department of Employment and Labour Relations, Qld
Department of Mines and Energy, N.T.
Department of Public Works, N.S.W.
Institution of Engineers, Australia
Insurance Council of Australia
Lift Manufacturers Association of Australia
Royal Australian Institute of Architects

This standard, prepared by Committee ME/4, Lift Installations, was approved on behalf of the Council of the Standards Association of Australia on 29 January 1982, and was published on 17 May 1982.

To keep abreast of progress in industry, Australian standards are subject to continuous 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 their standards are up-to-date. Full details of all SAA publications will be found in the Annual List of Australian Standards; these details are supplemented by listings in the SAA monthly journal 'The Australian Standard'. Information on the Annual List and 'The Australian Standard' may be obtained from any sales office of the Association, where details are also available of the current status of individual standards. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

7
AUSTRALIAN STANDARD

THE DESIGN, INSTALLATION, TESTING AND OPERATION OF LIFTS, ESCALATORS AND MOVING WALKS

known as the
SAA LIFT CODE

Part 7 STAIRWAY CHAIR LIFTS

AS 1735, Part 7—1982

First published (as AS CA3, Part VII).....	1973
Revised and issued as AS 1735, Part 7.....	1975
Second edition	1982

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

ISBN 0 7262 2503 7



3 JUN 1982

PREFACE

This edition of this standard was prepared by the Association's Committee on Lift Installations to supersede AS 1735, Part 7—1975.

The standard deals with chair lifts of the type which consists of a power-operated chair to carry one person only, up and down a stairway, mainly in private residences. This type of lift has been treated somewhat as a major household appliance as far as electrical requirements are concerned, since it is essentially a fairly uncomplicated piece of equipment largely used indoors with maximum speed of only 0.16 m/s. Many of these installations being manufactured in Australia are designed to operate from a standard 10 A general purpose outlet, which facilitates their installation and use especially for a short-term hire period, for which there is some demand. At the same time, essential safety features for passenger protection have not been overlooked.

This edition is technically identical with the 1975 edition. A number of editorial changes have been made to bring the standard into line with current SAA editorial policy.

This standard requires reference to the following standards:

AS 1532	Short Pitch Transmission Precision Roller Chains and Chain Wheels
AS 1656	Steel Wire Ropes
AS 1680	Code of Practice for Interior Lighting and the Visual Environment
AS 1735	SAA Lift Code Part 1—General Requirements
AS 3000	SAA Wiring Rules
BS 2W.11	Preformed Corrosion-resisting Steel Wire Rope

© Copyright — STANDARDS ASSOCIATION OF AUSTRALIA 1982

Users of standards are reminded that copyright subsists in all SAA publications. No part of this publication may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing of the Standards Association of Australia.

CONTENTS

	<i>Page</i>		<i>Page</i>
SECTION 140. SCOPE AND GENERAL		143.4 Terminal Stopping Devices	6
140.1 Scope	4	143.5 Belt Failure Protection	6
140.2 General Design and Construction	4	143.6 Obstruction Shut-off	6
140.3 Capacity, Ratings, Speed	4	143.7 Stops, Buffers	6
140.4 Factors of Safety	4	143.8 Safety Gear Springs	6
SECTION 141. DRIVING MACHINERY AND EQUIPMENT		SECTION 144. ELECTRICAL INSTALLATION	
141.1 Drums and Sheaves	5	144.1 General	7
141.2 Ropes and Chains	5	144.2 Travelling Cables	7
141.3 Machine Brakes	5	144.3 Maximum Voltage	7
141.4 Drive from Motor	5	144.4 Electrical Supply	7
141.5 Final Drive	5	144.5 Earthing	7
141.6 Machine Enclosure	5	144.6 Overspeed Switch	7
SECTION 142. OPERATING CONTROLS		144.7 Protection from Electrical Faults	7
142.1 Chair Controls	5	SECTION 145. INSTALLATION	
142.2 Landing Controls	5	145.1 Free Passageway	7
SECTION 143. SAFETY DEVICES		145.2 Flushing	7
143.1 Rope or Chain Failure	6	145.3 Lighting	7
143.2 Slack Rope or Chain Switch	6	145.4 Anchoring	7
143.3 Shaft or Pinion Failure	6	SECTION 146. PERIODIC INSPECTION AND TESTING	
			7

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

THE DESIGN, INSTALLATION, TESTING AND OPERATION OF LIFTS,
ESCALATORS AND MOVING WALKS

PART 7—STAIRWAY CHAIR LIFTS

SECTION 140. SCOPE AND GENERAL

140.1 SCOPE. This standard sets out requirements for electric stairway chair lifts for use in private residences. Use in other locations is restricted by the Statutory Authority. The standard includes requirements for design, manufacture, installation and operation.

This standard is complementary to AS 1735, Part 1, but the requirements of this standard take precedence over corresponding requirements of that standard.

140.2 GENERAL DESIGN AND CONSTRUCTION.

140.2.1 Types of Stairway Chair Lifts. Stairway chair lifts shall consist of the drum drive or rack type (machined rack or chain rack).

NOTE: This does not preclude the possibility of future designs.

140.2.2 Angle of Inclination. The angle of inclination of the line of travel shall not exceed 45 degrees from the horizontal.

140.2.3 Passenger Supports. The chair lift shall incorporate a seat with footrest, back and arm rests, or other suitable means to support the passenger. Where the seat is not fixed in a single position, the arrangement shall be subject to approval by the Statutory Authority.

140.2.4 Trolley and Guides. The chair shall be securely anchored to a trolley which supports it. The trolley shall be retained in a track or guide rail assembly.

140.2.5 Power Unit. The power unit may be mounted on the trolley or placed at a remote location. If the power unit is remotely located, all intervening pulleys, sheaves, sprockets and racks shall be so placed that the rope, chains or pinions travel in proper alignment.

140.2.6 Guards. All sheaves, pulleys, sprockets and pinions shall be enclosed or guarded.

140.2.7 Marking. A load notice giving the maximum load in kilograms, in lettering not less than 3 mm high, shall be prominently and permanently attached to the chair.

140.3 CAPACITY, RATINGS, SPEED.

140.3.1 Capacity. The capacity shall not exceed one person.

NOTE: By restricting the capacity to one person, a simplified approach has been possible in this standard. At the present time there is no demand for two-person chairs; should sufficient demand arise, then new requirements would have to be written.

140.3.2 Rated Load. The rated load shall be not less than 115 kg.

140.3.3 Rated Speed. The rated speed along the incline shall not exceed 0.16 m/s.

140.4 FACTORS OF SAFETY.

140.4.1 General. The factor of safety used in the design of equipment shall be not less than—

- (a) for carbon steel or other ductile material (i.e. with minimum elongation of 14 percent in a gauge length of 50 mm), based on yield strength 2.5;
- (b) for cast material, based on tensile strength 6.

140.4.2 Suspension Means. Suspension means and their connections shall have a factor of safety of not less than 10, based on maximum static load and tensile strength of materials. Cast iron or other brittle materials shall not be used.