AS 3776—1990

Australian Standard®

Lifting components for Grade T chain slings

This Australian Standard was prepared by Committee ME/25, Lifting Tackle. It was approved on behalf of the Council of Standards Australia on 15 February 1990 and published on 4 June 1990.

The following interests are represented on Committee ME/25:

ACT Administration

Australian Chamber of Manufactures

Confederation of Australian Industry

Department of Defence

Department of Industrial Affairs, Qld

Department of Industrial Relations and Employment, N.S.W.

Department of Industry, Technology and Commerce

Department of Labour, Vic.

Department of Labour and Industry, Tas.

Department of Occupational Health, Safety and Welfare, W.A.

Department of Transport and Communications

Electricity Supply Association of Australia

Metal Trades Industry Association of Australia

Work Health Authority, N.T.

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PREFACE

This Standard was prepared by the Standards Australia Committee on Lifting Tackle.

It is one of a series of Standards for components that are used in lifting systems. Standards for other components are listed below.

AS	
1138	Thimbles for use with wire rope or fibre (natural or synthetic) rope
1353	Flat synthetic-webbing slings
1353.1	Part 1: Product specification
1353.2	Part 2: Care and use
1380	Fibre-rope slings (of natural or synthetic rope)
1438	Wire-coil flat slings
1504	Fibre rope—Three-strand, hawser laid
1666	Wire-rope slings
1752	Fibre rope—Eight-strand plaited
2076	Wire rope grips
2089	Sheave blocks (including ships' cargo blocks) of maximum lift 60 t
2317	Collared eyebolts
2318	Swivels for hoists
2319	Rigging screws and turnbuckles
2321	Short-link chain for lifting purposes (non-calibrated)
2740	Wedge-type sockets
2741	Shackles
2759	Steel wire rope—Application guide
2841	Galvanized steel wire strand
3569	Steel wire ropes
3585	End fittings for flat-webbing slings
3775	Chain slings—Grade T
3777	Shank hooks and large-eye hooks—Maximum 25 t
B291	Lifting rings and links

CONTENTS

FOREWORD

The lifting components specified in this Standard are normally supplied to sling manufacturers or as part of a sling system, but they may also be supplied separately for other applications.

In any lifting, tensioning, or staying system, the safe working load of each component shall take account of the conditions of use and be compatible with any loads inherent in, and applied to, the system, and each component should readily connect with each adjacent component. Therefore, it is important that components of lifting, tensioning, or staying systems be quickly and positively identified in service for size, lifting capacity, and quality grade.

The quality grading system in this Standard is the same as that used by other Australian Standards covering components in lifting, tensioning, and staying systems. It allows for positive identification and easy selection, and relates to the mechanical properties of the finished product and not simply to the strength of the material.

STANDARDS AUSTRALIA

Australian Standard
Lifting components for Grade T chain slings

1 SCOPE. This Standard specifies requirements for forged lifting components for use in chain sling assemblies with corresponding sizes of Grade T chain complying with AS 2321. The components include hooks with eyes, clevises and other joining devices, mechanical connecting devices, and any other terminal fittings used in a lifting system based on Grade T chain.

This Standard does not apply to welded components other than welded master links, welded multilink assemblies, welded joining links, or components subject to an existing Australian Standard.

NOTES:

1. AS 2321 specifies chain in terms of the ISO quality grade designation system. The ISO system also permits Grade T to be designated as Grade 8.
2. Guidance on information that should be supplied with enquiries and orders is given in Appendix A.

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

AS
1065 Non-destructive testing—Ultrasonic testing of carbon and low alloy steel forgings
1171 Methods for magnetic particle testing of ferromagnetic products and components
1199 Sampling procedures and tables for inspection by attributes
1399 Guide to AS 1199—Sampling procedures and tables for inspection by attributes
1418 SAA Crane Code
1418.1 Part 1: General requirements
1444 Wrought alloy steels—Standard and hardenability (H) Series
1627 Metal finishing—Preparation and pretreatment of surfaces
1627.0 Part 0: Method selection guide for preparation and pretreatment of steel surfaces
1816 Method for Brinell hardness test
1816.1 Part 1: Testing of metals
2193 Methods of calibration and grading of force-measuring systems of testing machines
2321 Short link chain for lifting purposes (non-calibrated)
3775 Chain slings—Grade T
3777 Shank hooks and large eye hooks—Maximum 25 t
3900 Quality systems—Guide to selection and use
3904 Quality systems—Guide to quality management and quality system elements

ISO
Guide 44 General rules for ISO and IEC international third-party certification schemes for products

3 DEFINITIONS. For the purpose of this Standard, the definitions below apply.

3.1 Competent person—a person having practical and theoretical knowledge and relevant experience, such as will enable that person to detect and evaluate any defects and any weaknesses that may affect the intended performance of the equipment.

3.2 Self-coloured—a surface colour of closely adhering brown/blue oxides resulting from heat treatment and subsequent handling during manufacture.

3.3 Shall—indicates that a statement is mandatory.

3.4 Should—indicates a recommendation.

3.5 Statutory Authority—an authority with statutory powers to control the use of lifting components.

3.6 Working load.

3.6.1 *Working load limit (WLL)*—the maximum load that may be applied to the lifting component, in tension as intended, under general conditions of use.

3.6.2 *Safe working load (SWL)*—the maximum load that may be applied to the lifting component under the particular conditions of use (see Appendix B).

3.7 Nominal size (of lifting component)—equal to the nominal size of compatible Grade T chain complying with AS 2321 (see Table C1 of Appendix C).