

Australian Standard™

**Tolerances for ISO metric bolts, screws,
studs and nuts—Product grades A, B
and C**

[ISO title: Tolerances for fasteners, Part 1: Bolts, screws, studs and
nuts—Product grades A, B and C]

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Australian Chamber of Commerce and Industry
Institute of Materials Engineering Australasia
Australian Institute of Steel Construction
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PREFACE

This Standard was prepared by the Standards Australia Committee ME-029, Fasteners.

The objective of this Standard is to provide manufacturers, suppliers and users with tolerances for the principle features of product grades A, B and C metric bolts, screws, studs and nuts and product grade A tapping screws.

This Standard is identical with and has been reproduced from ISO 4759-1:2000, *Tolerances for fasteners, Part 1: Bolts, screws, studs and nuts—Product grades A, B and C*.

Statements expressed in mandatory terms in notes are deemed to be requirements of this Standard.

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

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References to international Standards should be replaced by references to Australian or Australian/New Zealand Standards as follows:

<i>Reference to International Standard</i>		<i>Australian Standard or Australian/New Zealand Standard</i>	
ISO		AS	
225	Fasteners—Bolts, screws, studs and nuts—Symbols and designation of dimensions	—	
286	ISO system of limits and fits	1654	ISO system of limits and fits
286-1	Part 1: Bases of tolerances, deviations and fits	1654.1	Part 1: Bases of tolerances, deviations and fits
286-2	Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts	1654.2	Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts
885	General purpose bolts and screws—Metric series—Radii under the head	—	
965	ISO general purpose metric screw threads—Tolerances	—	
965-3	Part 3: Deviations for constructional screw threads	—	
1101	Geometrical Product Specifications (GPS)—Geometrical tolerancing—Tolerances of form, orientation, location and run-out	—	

ISO		AS/NZS	
1478	Tapping screws thread	4411	Tapping screws thread
1479	Hexagon head tapping screws	4402	Hexagon head tapping screws
2692	Technical drawings—Geometrical tolerancing—Maximum material principle	—	
		AS	
4032	Hexagon nuts, style 1—Product grades A and B	1112	ISO metric hexagon nuts
		1112.1	Part 1: Style 1—Product grades A and B
4042	Fasteners—Electroplated coatings	—	
4745	Cross recesses for screws	—	
		AS/NZS	
7053	Hexagon washer head tapping screws	4409	Hexagon washer head tapping screws
7721	Countersunk head screws—Head configuration and gauging	—	
8015	Technical drawings—Fundamental tolerancing principle	—	
10509	Hexagon flange head tapping screws	4410	Hexagon flange head tapping screws
10642	Hexagon socket countersunk head screws	—	
10664	Hexalobular internal driving feature for bolts and screws	—	

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AUSTRALIAN STANDARD

Tolerances for fasteners

Part 1:

Bolts, screws, studs and nuts—Product grades A, B and C

1 Scope

This part of ISO 4759 specifies a selection of tolerances for bolts, screws, studs and nuts with ISO metric threads and with product grades A, B and C and for tapping screws with product grade A.

NOTE The product grades refer to the size of the tolerances where grade A is the most precise and grade C is the least precise.

The tolerances, except tolerances for threads, are selected from the system of limits and fits specified in ISO 286-1 and ISO 286-2. The tolerances for metric threads are taken from the series of tolerance classes specified in ISO 965-3. The tolerances for tapping screw threads are covered in ISO 1478.

The tolerances of form and position are specified and indicated in accordance with ISO 1101, ISO 8015 and ISO 2692.

The tolerances specified in this part of ISO 4759 apply to fasteners prior to coating unless otherwise specified. See also ISO 4042.

Deviations from the tolerances specified in this part of ISO 4759 are only permitted in product standards where there are valid technical reasons. In cases where there is a difference between the tolerance requirements in this part of ISO 4759 and the product standard, the product standard takes precedence.

It is recommended that these tolerances also be used for non-standard fasteners.

Dimensions and tolerances given in this part of ISO 4759 are in millimetres.