

AS 4087:2011

(Incorporating Amendments up to and including No. 2)



STANDARDS
Australia



Metallic flanges for waterworks purposes



AS 4087:2011

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The following are represented on Committee WS-022:

- Australian Building Codes Board
- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Stainless Steel Development Association
- Australian Water Association
- Engineers Australia
- Institute of Instrumentation, Control & Automation Aust
- Master Plumbers Australia and New Zealand
- Plastics Industry Pipe Association of Australia
- Plumbing Products Industry Group
- Water Industry Alliance
- Water Services Association of Australia

This Standard was issued in draft form for comment as DR 4087.

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Metallic flanges for waterworks purposes

Originated as AS 4087—1993.

Third edition 2004.

Revised and redesignated as AS/NZS 4087:2011.

Reissued incorporating Amendment No 2 (June 2023) as AS 4087:2011.

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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WS-022, Valves for Water Supply Purposes, to supersede AS 4087—2004.

A2 This Standard incorporates Amendment No. 1 (September 2012) and Amendment No. 2 (June 2023). The start and end of changes introduced by the Amendment are indicated in the text by tags including the Amendment number 1. **A2**

A2 Amendment No. 2 to this document was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee WS-022, Valves for Water Supply Purposes. As a consequence of Amendment No. 2, which is published as an Australian-only amendment, this document will be redesignated from AS/NZS 4087 to AS 4087. **A2**

The objective of this Standard is to provide manufacturers with requirements for metallic flanges for waterworks purposes and installers of flanged components with guidance on the most appropriate jointing requirements to achieve a satisfactory long-term watertight joint.

The first flange Standard published in Australia was AS B52-1931, which was an endorsement of BS 10, the inch series flange British Standard, *Flanges and bolting for pipes valves and fittings*. Britain metricated in 1970 and adopted European (ISO) dimensions for flanges whilst Australia chose to continue with the same inch series flange dimensions. AS 2129, *Flanges for pipes, valves and fittings*, was published in 1978 to supersede AS B52 but incorporated 'soft metric' dimensions. The AS/NZS 4331 series, *Metallic flanges*, was published in 1995 as an endorsement of ISO hard metric flanges.

The most common AS 2129 flange tables used for waterworks purposes were Tables D, C, E, F and H with pressure ratings of 700, 1200, 1400, 2100 and 3500 kPa respectively. Table C flanges were subsequently re-rated to 1400 kPa in AS 2129—1991 to reflect industry experience.

AS 4087 was first published in 1993 to provide a dedicated flange Standard for waterworks purposes with a rationalized range of flanges. Table E was eliminated and flanges were designated by allowable operating pressure (AOP). The table below indicates bolting compatibility between AS 4087 and AS 2129 flanges.

Bolting compatibility	
A2 AS 4087 A2 Flange classification	AS 2129 Flange classification
PN 14	D, C
PN 16	D, C
PN 21	F, H
PN 35	F, H

The principal changes to this Edition are as follows:

- (a) Incorporation of previous amendments.
- (b) Requirements specified for non-circular flanges, including type tests based on ISO 2531, *Ductile iron pipes, fittings, accessories and their joints for water or gas applications*.
- (c) Inclusion of maximum allowable type test pressures, adopted from AS 2129, *Flanges for pipes, valves and fittings*.
- (d) Amendments to some flange hub dimensions to overcome bolt assembly impracticalities.

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

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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