AS 4087—2004
(Incorporating Amendment No. 1)

AS 4087—2004

Australian Standard™

Metallic flanges for waterworks purposes

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Australian Chamber of Commerce and Industry
Australian Industry Group
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Metallic flanges for waterworks purposes

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PREFACE

This Standard was prepared by the Standards Australia Committee WS-022, Valves For Water Supply Purposes, to supersede AS 4087—1996.

This Standard incorporates Amendment No. 1 (*August 2005*). *The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

The objective of this Standard is to provide manufacturers with requirements for metallic flanges for waterworks purposes and installers of flanged components 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

A1 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 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 Class allowable operating pressure (AOP). The table below indicates bolting compatibility between AS 4087 and AS 2129 flanges.

Bolting compatibility	
AS 4087 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) Replacement of PN 14 with PN 16 for steel flanges.

(b) Amendments to the allowable operating pressures (AOPs) to align with waterworks practices.

(c) Deletion of sizes greater than DN 150 for copper alloys.

(d) Inclusion of additional sizes for ductile cast iron and steel flanges.

(e) Amendments to the specifications for jointing materials.

For applications outside the limits specified in this Standard the appropriate flange details may be determined from AS 2129, *Flanges for pipes, valves and fittings,* and AS/NZS 4331, *Metallic flanges*.

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.