

Australian/New Zealand Standard™

**Solar and heat pump water heaters—
Design and construction**



AS/NZS 2712:2007

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS-028, Solar Water Heaters. It was approved on behalf of the Council of Standards Australia on 20 June 2007 and on behalf of the Council of Standards New Zealand on 8 June 2007.

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Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Australian and New Zealand Solar Energy Society
Department of Energy, Utilities and Sustainability (NSW)
Energy Efficiency and Conservation Authority of New Zealand
Institution of Professional Engineers New Zealand
James Cook University
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OF
AS/NZS 2712:2007
Solar and heat pump water heaters—
Design and construction

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NOTES

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PREFACE

This Standard was prepared by the Standards Australia Committee CS-028, Solar Water Heaters, to supersede AS/NZS 2712—2002, *Solar and heat pump water heaters—Design and construction*.

This Standard incorporates Amendment No. 1 (May 2011), Amendment No. 2 (November 2011) and Amendment No. 3 (November 2014). 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.

A3 | The objective of this Standard is to provide designers, manufacturers, installers and interested parties with performance-based design and construction requirements for solar hot water supply systems and heat pump hot water supply systems.

This Standard necessarily deals with existing types of systems, but is not intended to discourage innovation or to exclude material, equipment and methods that may be developed in the future. Revisions will be made from time to time in view of such developments, and amendments to this edition will be made when necessary.

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.

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

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Australian/New Zealand Standard**Solar and heat pump water heaters—Design and construction**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies performance-based requirements for the design and construction of both components of solar and heat pump hot water supply systems, and complete systems, for household premises and for commercial and industrial installations comparable with household installations, intended to deliver drinking water of acceptable quality.

Systems may be supplied as packaged systems comprised of a complete set of matched components supplied from one source, or may be custom-built by assembling components from various sources on-site.

NOTES:

- 1 Systems may transfer solar energy directly to the heated water or may use water or other heat exchange fluid for the transfer of heat.
- 2 Some aspects of this Standard may be used for solar water heaters that use plastics as the primary material in the construction of the absorber plate but additional test requirements outside this Standard may be necessary for the evaluation of the durability of such appliances.
- 3 The requirements of this Standard are based on systems with fixed solar orientation and inclination, but they may be applied to tracking systems.
- 4 Requirements for the installation of household solar heated water supply systems are given in AS/NZS 3500.4 and also in AS/NZS 3500.5.
- 5 For the purposes of calculating the thermal performance of solar and heat pump water heaters, refer to Clauses 7.4.2 and 8.2.2 respectively.
- 6 In addition to complying with this Standard, solar and heat pump water heaters may be required to comply with the following Standards.
 - (a) AS/NZS 60335.1
 - (b) AS/NZS 60335.2.21
 - (c) AS/NZS 60335.2.40
 - (d) AS/NZS CISPR 14.1
 - (e) AS 4552
 - (f) NZS/AS 3645.1 and NZS/AS 3645.2
 - (g) AS 3498
 - (h) AS/NZS 4692.1
- 7 Manufacturers making a statement of compliance with a Standard on a product, packaging, or promotional material related to that product are advised to ensure that such compliance is capable of being verified.

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1.2 APPLICATION

Means for demonstrating compliance with this Standard shall be in accordance with Appendix A.