

AS/NZS 4445.1:1997
ISO 9459.1:1993

Australian/New Zealand Standard[®]

**Solar heating—Domestic water
heating systems**

**Part 1: Performance rating
procedure using indoor test
methods**

AS/NZS 4445.1:1997

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS/28, Solar Water Heaters. It was approved on behalf of the Council of Standards Australia on 22 November 1996 and on behalf of the Council of Standards New Zealand on 22 November 1996. It was published on 5 January 1997.

The following interests are represented on Committee CS/28:

Australian and New Zealand Solar Energy Society
Department of Energy, N.S.W.
Energy Efficiency & Conservation Authority of New Zealand
Energy Management Association
Energy Research Centre
Energy Victoria
Metal Trades Industry Association of Australia
Solar Energy Industries Association of Australia
South Australian Water Corporation
University of New South Wales

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1 The Crescent,
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PREFACE

The Standard was prepared by the Joint Standards Australia/New Zealand Committee CS/28 on Solar Water Heaters. It is identical with and has been reproduced from ISO 9459.1—1993: *Solar heating—Domestic water heating systems, Part 1: Performance rating procedure using indoor test methods*. The objective of this Standard is to provide a uniform indoor test method for rating solar domestic water heating systems for thermal performance, under benchmark conditions. The proposed adoption of ISO 9459.1 will initially exist in parallel with AS 2813—1985, *Solar water heaters—Methods of test for thermal performance—Simulator method*, as an alternate method of test. Once enough experience is gained with the methods of test presented in ISO 9459.1, Committee CS/28 will consider the withdrawal of AS 2813.

This Joint Standard is one of the following series that applies to solar domestic water heating systems:

AS/NZS

- 4445 Solar heating—Domestic water heating systems
4445.1 Part 1: Performance rating procedure using indoor test methods

Other titles in this series will be:

- Performance test for solar only systems.
- Performance test for solar plus supplementary systems.
- System performance characterization by means of component tests and computer simulation.
- System performance characterization by means of whole system tests and computer simulation.

Under arrangements made between Standards Australia, Standards New Zealand and ISO, as well as certain other Standards Organizations, users of this Standard are advised that the number of this Standard is not reproduced on each page, its identity is shown only on the cover.

This Standard is not intended to be a mandatory replacement for any performance rating test methods already in use in Australia or in New Zealand.

Statements expressed in mandatory terms in notes to text, tables and 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 annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

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<i>Reference to International Standard</i>	<i>Australian/New Zealand Standard</i>
ISO	AS
9059 Solar energy—Calibration of field pyrheliometers by comparison to a reference pyrheliometer	—
9060 Solar energy—Specification and classification of instruments for measuring hemispherical solar and direct solar radiation	—
9806.1 Test methods for solar collectors Part 1: Thermal performance of glazed liquid heating collectors including pressure drop	2535 Solar collectors with liquid as the heating transfer fluid— Method for testing thermal performance
	NZS
	4613 Domestic solar water heaters
9845.1 Solar energy—Reference solar spectral irradiance at the ground at different receiving conditions Part 1: Direct normal and hemispherical solar irradiance for air mass 1,5	—
9846 Solar energy—Calibration of a pyranometer using a reference pyrheliometer	—
World Meteorological Organization, <i>Guide to Meteorological Instruments and Methods of Observation</i> , No. 8, 5th Edition, WMO, Geneva, 1983, Chapter 9—World radiometric reference, known as the WRR	

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