

AS 3500.4—1990

FILED
FID 9/12/95

Australian Standard®

**National Plumbing and Drainage
Code**

Part 4: Hot water supply systems



This Australian Standard was prepared by Committee WS/21, Hot Water Supply Systems. It was approved on behalf of the Council of Standards Australia on 11 July 1990 and published on 13 August 1990.

The following interests are represented on Committee WS/21:

Australian Gas Association
Board of Works, Melbourne
Confederation of Australian Industry
Electricity Supply Association of Australia
Engineering and Water Supply Department, S.A.
Federated Master Plumbers of Australia
Gas Appliance Manufacturers Association of Australia
Metal Trades Industry Association of Australia
Public Works Department, N.S.W.
Water Authority of Western Australia
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This Standard was issued in draft form for comment as DR 88225 and DR 88226.

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AS 3500.4 first published in part as AS CA51-1968.
Revised and redesignated AS 1529-1974.
AS 2002 first published 1979.
Second edition 1981.
Third edition 1987.
AS 1529-1974 and AS 2002-1978 revised, amalgamated
and redesignated AS 3500.4-1990.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY NSW

ISBN 0 7262 6446 6

PREFACE

This Standard was prepared by the Standards Australia Committee on Hot Water Systems to supersede AS 1529—1974—*Code of practice for installation of household type hot water supply systems*.

Existing Standard AS 2002 *Solar water heaters* has been amalgamated with the revision of AS 1529 to form Part 4 of the *National Plumbing and Drainage Code*.

Noise levels have not been included as progress on a unified method of analysis has not been agreed upon and requires further research.

The primary purpose of this Standard is to provide a uniformity of installation practices throughout Australia and to enable co-ordination of requirements of the various statutory bodies responsible for the installation of water heaters and hot water reticulation. Account has been taken of current regulations stipulated by water, gas and electricity supply authorities and local government bodies in each State and Territory of Australia. These authorities are the only bodies which can enforce regulations and authorize products for connection to their systems.

Standards Australia gratefully acknowledges the support and assistance given in the preparation of this Code by all sections of the industry and especially that of the statutory bodies concerned.

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FOREWORD

The principal requirement of an installation for the supply of hot water is that water at the required temperature and in sufficient quantity is available at the draw-off points with the minimum of delay.

Full collaboration is essential at the planning stage between the architect or owner, the builder, supply undertakings or fuel suppliers, manufacturers, contractors and statutory authorities.

Local information should be obtained regarding energy supply and condition of the water supply, e.g. the scale-forming and corrosive properties of the water.

The location of the water heater should be such as will provide adequate space for both installation and maintenance, and the unit should be suitably sited taking into account the need to keep hot-water piping as short as practicable in relation to frequently used draw-off points, and for planned pipe runs, fuelling and fuel storage requirements.

Attention is drawn to the relevant statutory requirements with respect to—

- (a) the qualifications of persons permitted by law to do plumbing and drainage work;
- (b) the administrative procedures to be followed by persons performing plumbing and drainage work;
and
- (c) the authorization of certain materials, products fixtures, fittings and other components for connection to public water supply or sewerage systems.

STANDARDS AUSTRALIA

Australian Standard

National plumbing and drainage code

Part 4: Hot water supply systems

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out the requirements for the installation of piping and apparatus for single and multiple domestic type water heaters, from and including the isolating valve on the cold water inlet and the reticulation of hot water.

This Standard applies to the installation of the following types of water heaters which comply with Clauses 4.2.1 or 5.3.1:

- (a) Electric storage water heaters with a rated delivery of up to 630 L per heater.
- (b) Other types of storage water heaters with a capacity of up to 700 L per heater.
- (c) Solar water heaters with a capacity of up to 700 L per heater.
- (d) Heat exchange water heaters in accordance with AS 1361.
- (e) Instantaneous water heaters.
- (f) Other water heaters authorized by the relevant Regulatory Authority.

NOTE: The reference to AS 1361 in (d) is made to positively identify the particular type of heat exchange water heater to which this Standard applies.

This Standard applies to hot water systems using potable water only and does not apply to space heating or swimming pool heating.

1.2 APPLICATION

1.2.1 General This Standard applies to both new installations and alterations and additions to existing installations.

The Standard shall be read in conjunction with the regulations and any special requirements of the relevant Statutory Authority.

1.2.2 New materials and methods This Standard shall not be interpreted to prevent the use of materials or methods not specifically referred to herein. If it is desired to use materials or methods not covered by this Standard, they shall be submitted to the relevant Authority concerned for authorization.

1.2.3 Unusual installations Certain installations or portions of installations which are unusual due to particular circumstances or methods, may not be covered in detail by this Standard.

Details of such installations shall be submitted to the relevant Authority who, having regard to all the circumstances, may authorize the installation.

1.3 REFERENCED DOCUMENTS The documents referred to in this Standard are listed in:

- (a) *Appendix A—'Materials and products'* The Australian Standards containing the requirements necessary to obtain the StandardsMark for materials and products.
- (b) *Appendix B—'Installation'* The other Australian Standards called up in the body of the Standard.
- (c) *Appendix C—'Miscellaneous'* Other national Standards and miscellaneous specifications.

1.4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 3500.0 apply.

1.5 CLASSIFICATION OF SOILS Soils shall be classified in accordance with AS 1726.

1.6 CLASSIFICATION OF BUILDINGS Buildings shall be classified in accordance with the Building Code of Australia.

The classification of a building, or portion of a building, shall be determined by the purpose for which it is designed, constructed or adapted for use.

1.7 WATER QUALITY Water quality can have a significant effect on the performance and life of water heaters. Information on water quality may usually be obtained from the local water supply authority. Where water heaters will not be connected to a town water supply, advice shall be sought from the manufacturer who may request a water sample for analysis. (See Appendix D.)

1.8 LEGIONNAIRES' DISEASE Reference shall be made to AS 3666. (see Clause 8.4.(c)(ii)).