

AS 1357.1—2004
(Incorporating Amendment Nos 1 and 2)

AS 1357.1—2004

Australian Standard[®]

**Valves primarily for use in heated water
systems**

Part 1: Protection valves



This Australian Standard® was prepared by Committee WS-026, Valves Primarily for Use in Warm and Hot Water Systems. It was approved on behalf of the Council of Standards Australia on 5 November 2003.
This Standard was published on 16 April 2004.

The following are represented on Committee WS-026:

- AUSTAP
 - Australian Association of Certification Bodies
 - Business New Zealand
 - Consumers' Federation of Australia
 - Gas Appliance Manufacturers Association of Australia
 - Housing Industry Association
 - Institute of Hospital Engineering Australia
 - Institute of Hospital Engineering Australia
 - Master Plumbers and Mechanical Contractors Association NSW
 - Metal Trades Industry Association of Australia
 - New Zealand Engineering Federation
 - New Zealand Society of Master Plumbers and Gasfitters
 - NSW Health Department
 - South Australian Health Commission
 - Water Corporation Western Australia
-

This Standard was issued in draft form for comment as DR 02412.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting **www.standards.org.au**

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at **mail@standards.org.au**, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

AS 1357.1—2004
(Incorporating Amendment Nos 1 and 2)

Australian Standard[®]

Valves primarily for use in heated water systems

Part 1: Protection valves

Originated as AS B271—1968.
Previous edition AS 1357.1—1992.
Third edition 2004.
Reissued incorporating Amendment No. 1 (October 2005).
Reissued incorporating Amendment No. 2 (February 2007).

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia
ISBN 0 7337 5630 1

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee WS-026, Valves Primarily for Use in Warm and Hot Water Systems, to supersede AS 1357.1—1992, *Water supply—Valves for use with unvented water heaters, Part 1: Protection valves*.

This Standard incorporates Amendment No. 1 (October 2005) and Amendment No. 2 (February 2007). 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.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide manufacturers with design, materials and performance requirements for protection valves.

This Standard includes Amendment No. 1 published in May 1996, Section 7 temperature relief valves and interim specification 426 for high-pressure expansion non-return valves (HPNR), Section 8.

Other standards covering heated water system valves include the following:

AS 1357.2 Vacuum relief valves, Thermosiphon arrestor valves, Inlet pressure control valves, Isolating valves.

AS 4032.1 Thermostatic mixing valves—Materials design and performance requirements

AS 4032.2 Tempering valves and end of line temperature actuated devices.

AS 4032.3 Water supply—Valves for the control of hot water supply temperatures—Requirements for field testing, maintenance or replacement of thermostatic mixing valves, tempering valves and end of line temperature control devices

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.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	6
1.2 REFERENCED DOCUMENTS	6
1.3 DEFINITIONS	6
1.4 INSTRUMENTATION	7
1.5 MARKING	8
SECTION 2 MATERIALS	
2.1 GENERAL	9
2.2 CONTAMINATION OF WATER	9
2.3 CORROSION-RESISTANT METALLIC MATERIALS	9
2.4 COPPER	9
2.5 COPPER ALLOY	9
2.6 DEZINCIFICATION-RESISTANT (DR) COPPER ALLOY	9
2.7 STAINLESS STEEL	10
2.8 DIAPHRAGM, MATERIALS, AND VALVE SEATS	10
2.9 TEMPERATURE-SENSING PROBE	10
2.10 OTHER COMPONENT MATERIALS	10
SECTION 3 GENERAL DESIGN AND CONSTRUCTION	
3.1 GENERAL	11
3.2 STRENGTH	11
3.3 END CONNECTIONS	11
3.4 COMPONENTS AND VALVE SEATS	11
3.5 REMANUFACTURED VALVES	11
3.6 INSULATION OF TEMPERATURE/PRESSURE-RELIEF VALVES, TEMPERATURE-RELIEF VALVES, EXPANSION CONTROL VALVES AND COMBINATION HIGH-PRESSURE EXPANSION NON-RETURN VALVES	12
3.7 INSTRUCTIONS	13
SECTION 4 TEMPERATURE/PRESSURE-RELIEF VALVES	
4.1 GENERAL	14
4.2 INLET AND DRAIN CONNECTIONS AND FLOW DIMENSIONS	14
4.3 VALVE SEAT AND DISC ASSEMBLIES	16
4.4 SPRINGS PRESSURE-RELIEF FUNCTION	16
4.5 TESTING	16
4.6 EASING GEAR TEST	19
4.7 AUXILIARY PRESSURE-RELIEF DEVICE	20
4.8 PRESSURE-RELIEF FUNCTION	20
4.9 TEMPERATURE-RELIEF FUNCTION	21
4.10 MARKING	21
SECTION 5 EXPANSION CONTROL VALVES	
5.1 GENERAL	22
5.2 CONNECTIONS AND FLOW DIMENSIONS	22
5.3 VALVE SEAT AND DISC ASSEMBLIES	23
5.4 SPRINGS	23
5.5 TESTING	23
5.6 EASING GEAR	24

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-