Australian/New Zealand Standard™

Gate valves for waterworks purposes

Part 2: Resilient seated





AS/NZS 2638.2:2011

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WS-022, Valves for Waterworks Purposes. It was approved on behalf of the Council of Standards Australia on 1 April 2011 and on behalf of the Council of Standards New Zealand on 13 May 2011.

This Standard was published on 27 May 2011.

Water Services Association of Australia

The following are represented on Committee WS-022:

Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Stainless Steel Development Association
Australian Water Association
Engineers Australia
Institute of Instrumentation, Control and Automation Australia
Local Government New Zealand
Plastics Industry Pipe Association of Australia
Plumbing Products Industry Group
Water Corporation Western Australia
Water Industry Alliance
Water New Zealand

Keeping Standards up-to-date

Standards are living documents which 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 Standards may also be withdrawn.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 which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com or Standards New Zealand web site at www.standards.govt.nz and looking up the relevant Standard in the online catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of Standards Australia or the New Zealand Standards Executive at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 2638.2.

Australian/New Zealand Standard™

Gate valves for waterworks purposes

Part 2: Resilient seated

Originated as AS 2638—1983.
Third edition 1991.
AS 2638—1991 revised and redesignated in part as AS 2638.2—1999.
Third edition 2006.
AS 2638.2—2006 revised and redesignated as AS/NZS 2638.2:2011.
Reissued incorporating Amendment No. 1 (August 2017).

COPYRIGHT

- © Standards Australia Limited
- © The Crown in right of New Zealand, administered by the New Zealand Standards Executive

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, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, PO Box 1473, Wellington 6140.

PREFACE

This Standard was prepared by the Joint Standard Australia/Standards New Zealand Committee WS-022, Valves for Waterworks Purposes, to supersede AS 2638.2—2006.

This Standard incorporates Amendment No. 1 (August 2017). 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 specify requirements for PN 16 and PN 25 metal-bodied resilient-seated gate valves for waterworks purposes.

This revision includes the following changes:

- (a) Clarification of definition of 'type test'.
- (b) Inclusion of alternative materials.
- (c) A statement that gate valves are not designed for throttling purposes.

Attention is drawn to the proposed publication of SAI/SNZ Rul PL/2, Rulings to the Australian Standard Gate valves for waterworks purposes. Where rulings of public significance are issued, they will be available from Standards Australia through a subscription service. When rulings are included in an amendment or revision, the specific ruling will be withdrawn at the time of publication of the amendment. Enquiries should be directed to Standards Australia.

Statements expressed in mandatory terms in notes to 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 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.

CONTENTS

		Page
SECTIO	ON 1 SCOPE AND GENERAL	
1.1	SCOPE	4
1.1	APPLICATION	
1.3	NORMATIVE REFERENCES	
1.3	DEFINITIONS	
1.4	DESIGNATION OF SIZE	_
1.6	ALLOWABLE PRESSURES	
1.0	ALLOWABLE FRESSURES	0
SECTIO	ON 2 MATERIALS AND COMPONENTS	
2.1	MATERIALS	9
2.2	COPPER ALLOY COMPONENTS	9
2.3	CONTAMINATION OF WATER	9
2.4	SEALS	9
SECTIO	ON 3 DESIGN	
3.1	GENERAL	10
3.2	DIMENSIONS	10
3.3	END CONNECTIONS	10
3.4	GATE	-
3.5	COMPONENT JOINTING	11
3.6	WATERWAY	11
3.7	SPINDLE	11
3.8	OPERATION	12
3.9	LIFTING DEVICES	12
3.10	SUPPORT FEET	12
3.11	BYPASS ARRANGEMENTS	12
SECTIO	ON 4 COATINGS	
4.1	GENERAL	17
4.1	DESIGN	
4.2	DESIGN	1 /
SECTIO	ON 5 TESTING	
5.1	TYPE TESTS	18
5.2	PRODUCTION TESTS	21
	ON 6 GEARBOXES	
	DESIGN	
	COATINGS	
6.3	MARKINGS	23
SECTIO	ON 7 MARKING AND PACKAGING	
	BODY MARKING	24
	VALVE KEY AND SPINDLE EXTENSION MARKING	
	DIRECTION OF CLOSURE MARKING FOR HANDWHEELS AND CAPS	
7.3 7.4	PACKAGING	
/ . '1	I ACKAOINU	∠+
APPEN		
A	MEANS FOR DEMONSTRATING CONFORMITY WITH THIS STANDARD	25
В	PURCHASING GUIDELINES	
C	ALTERNATIVE MATERIAL REQUIREMENTS	
D	GUIDELINES FOR GEARROX SELECTION AND APPLICATION	33

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard Gate valves for waterworks purposes

Part 2: Resilient seated

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for PN 16 and PN 25 metal-bodied resilient-seated gate valves for waterworks purposes, with a maximum operating temperature of 40°C. This Standard is applicable to the following versions:

- (a) Valves of nominal sizes DN 80 to DN 750 with inside screw and non-rising spindle design, operated by a removable key, with or without a gearbox, for buried applications.
- (b) Valves of nominal size DN 80 to DN 750 with inside screw and non-rising spindle design, operated by a handwheel, with or without a gearbox, for above-ground applications.
- (c) Valves of nominal size DN 80 to DN 300 with outside screw and rising spindle design, operated by a handwheel, for above-ground applications where the position of the gate is required to be visible.
- (d) Valves of nominal sizes DN 450 to DN 750 with an integral bypass arrangement.

NOTES:

- 1 The design criteria of the valve and fasteners should be based on a minimum life expectancy of 50 years.
- 2 Purchasing guidelines are given in Appendix B.

1.2 APPLICATION

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

1.3 NORMATIVE REFERENCES

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

The following are the normative documents referenced in this Standard.

AS

- Elastomeric seals—Material requirements for pipe joint seals used in water and drainage applications
- 681.1 Part 1: Vulcanized rubber
- ISO metric commercial bolts and screws—Product grade C
- 1111.1 Part 1: Bolts
- 1111.2 Part 2: Screws
- 1442 Carbon steels and carbon-manganese steels—Hot-rolled bars and semifinished products
- 1565 Copper and copper alloys—Ingots and castings