

Australian Standard™

Sluice valves for waterworks purposes

Part 1: Metal seated



This Australian Standard was prepared by Committee WS/22, Valves for Water Supply Purposes. It was approved on behalf of the Council of Standards Australia on 25 June 1999 and published on 5 September 1999.

The following interests are represented on Committee WS/22:

The Association of Consulting Engineers Australia
Australian Chamber of Commerce and Industry
Australian Chamber of Manufactures
Australian Valve Manufacturers Association
Department of Natural Resources (Qld)
Local Government New Zealand
Master Plumbers Australia
Metal Trades Industry Association of Australia
Society of Mechanical Engineers of Australasia
Water Services Association of Australia (WSAA)

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 Standards may also be withdrawn.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 Standards can be found by visiting the Standards Australia website at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

Australian Standard™

Sluice valves for waterworks purposes

Part 1: Metal seated

Originally issued as part of AS 2638—1983 and SAA Int 88006—1988.
Revised edition AS 2638—1991.
Revised and redesignated in part as AS 2638.1—1999.
Reissued incorporating Amendment No. 1 (April 2001).

COPYRIGHT

© Standards Australia International

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 International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 2821 9

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WS-022, Valves for Water Supply Purposes, to supersede (in part) AS 2638—1991, *Sluice valves for waterworks purposes*.

This Standard incorporates Amendment No. 1 (April 2001). 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.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Committee to produce it as an Australian Standard.

AS 2638—1991 covered both metal and resilient seated valves. The Committee considered that industry would benefit from the issue of separate Standards for these two valve types, as follows:

- AS 2638.1 Sluice valves for waterworks purposes,
Part 1: Metal seated (this Standard)
- AS 2638.2 Sluice valves for waterworks purposes,
Part 2: Resilient seated.

Attention is drawn to the proposed publication of SAA Part PL2, Rulings to the Australian Standard *Sluice 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. Enquires 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.

Support and contribution is acknowledged from the Water Services Association of Australia (WSAA).

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

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	4
1.2 REFERENCED DOCUMENTS.....	4
1.3 DEFINITIONS.....	5
1.4 DESIGNATION OF SIZE.....	5
1.5 ALLOWABLE PRESSURES.....	6
SECTION 2 MATERIALS AND COMPONENTS	
2.1 MATERIALS.....	7
2.2 DEZINCIFICATION-RESISTANT MATERIALS.....	7
2.3 CONTAMINATION OF WATER.....	7
2.4 O-RINGS (ELASTOMERIC TOROIDAL SEALING RINGS).....	7
SECTION 3 DESIGN	
3.1 GENERAL.....	9
3.2 END CONNECTIONS.....	9
3.3 DIMENSIONS.....	9
3.4 WEDGE.....	9
3.5 COMPONENT JOINTING.....	10
3.6 WATERWAY.....	10
3.7 STEM.....	10
3.8 OPERATION.....	11
3.9 LIFTING DEVICES.....	11
3.10 SUPPORT FEET.....	11
SECTION 4 COATINGS	
4.1 GENERAL.....	14
4.2 DESIGN.....	14
SECTION 5 TESTING	
5.1 PRODUCTION TESTS.....	15
5.2 TYPE TESTS.....	16
SECTION 6 GEARBOXES	
6.1 DESIGN.....	18
6.2 COATINGS.....	18
6.3 MARKINGS.....	18
SECTION 7 MARKING AND PACKAGING	
7.1 BODY MARKINGS.....	19
7.2 DIRECTION OF CLOSURE FOR HANDWHEELS AND CAPS.....	19
7.3 PACKAGING.....	19
APPENDICES	
A MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD.....	20
B PURCHASING GUIDELINES.....	22
C GUIDELINES FOR GEARBOX SELECTION AND APPLICATION.....	24

STANDARDS AUSTRALIA

Australian Standard
Sluice valves for waterworks purposes

Part 1: Metal seated

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for inside screw solid wedge, metal-seated sluice valves in non-rising stem design, for waterworks purposes. This Standard is applicable to Class 14, Class 16, Class 21 and Class 35 valves of nominal sizes DN 80 to EN 750, with a maximum working temperature of 60°C.

The valves are usually operated by a removable key, with or without a gearbox, or a handwheel, in buried or aboveground installations.

Means for demonstrating compliance with this Standard are given in Appendix A.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1199	Sampling procedures and tables for inspection by attributes
1565	Copper and copper alloys—Ingots and castings
1646	Elastomeric seals for waterworks purposes
1830	Iron castings—Grey cast iron
1831	Iron castings—Spheroidal or nodular graphite cast iron
1939	Degrees of protection provided by enclosures for electrical equipment
2345	Dezincification resistance of copper alloys
2938	Gears—Spur and helical—Guide to specification and rating
3855	Suitability of plumbing and water distribution systems products for contact with potable water
4087	Metallic flanges for waterworks purposes
B202	General purpose Acme screw threads
AS/NZS 1111	ISO metric hexagon commercial bolts and screws
1252	High strength steel bolts with associated nuts and washers for structural engineering
1567	Copper and copper alloys—Wrought rods, bars and sections
1568	Copper and copper alloys—Forging stock and forgings
2280	Ductile iron pressure pipes and fittings