

AS 2638—1991
Amdt 1: 1993.02.15

Replaces AS/NZS 2638.1: 1999 and
AS/NZS 2638.2: 1999

Australian Standard®

**Sluice valves for waterworks
purposes**



STANDARDS AUSTRALIA 

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 30 April 1991 and published on 12 July 1991.

The following interests are represented on Committee WS/22:

A.C.T. Electricity and Water
Association of Consulting Engineers Australia
Australian Valve Manufacturers Association
Board of Works, Melbourne
Brisbane City Council
Confederation of Australian Industry
Department of Public Works, N.S.W.
Engineering and Water Supply Department, S.A.
Hunter Water Board, N.S.W.
Metal Trades Industry Association
Rural Water Commission of Victoria
Society of Mechanical Engineers of Australia
Victorian Chamber of Manufacturers
Water Authority of Western Australia
Water Board, Sydney—Illawarra—Blue Mountains
Water Resources Commission, Qld

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

All details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 89198.

Australian Standard®

**Sluice valves for waterworks
purposes**

First published as AS 2638—1983.
Revised and redesignated SAA Int 88006—1988.
SAA Int 88006—1988 withdrawn 1988.
AS 2638—1983 revised 1988.
Third edition 1991.

PREFACE

This Standard was prepared by the Standards Australia Committee on Valves for Water Supply Purposes, to supersede AS 2638—1988.

Performance requirements have been included for the various strength tests, and lists minimum stem diameters according to minimum tensile strengths of materials to meet torques applied, based on ISO 7259.

Other changes include full and raised face flanges and optional types of internal and external coating necessitated by reduced body thicknesses of ductile iron components.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 APPLICATION	4
1.3 REFERENCED DOCUMENTS	4
1.4 DEFINITIONS	5
1.5 DESIGNATION OF SIZE	5
1.6 CLASSIFICATION AND RATING	5
SECTION 2 MATERIALS AND COMPONENTS	
2.1 MATERIALS	6
2.2 DEZINCIFICATION-RESISTANT MATERIALS	6
2.3 CONTAMINATION OF WATER	6
2.4 O-RINGS (ELASTOMERIC TOROIDAL SEALING RINGS)	6
SECTION 3 DESIGN, MANUFACTURE, AND OPERATION	
3.1 DESIGN	9
3.2 END CONNECTIONS	9
3.3 COMPONENT DESIGN	9
3.4 PROTECTIVE COATINGS	11
3.5 OPERATION	12
3.6 FINISH	12
3.7 LIFTING DEVICES	12
SECTION 4 TESTING	
4.1 PRODUCTION TESTS AND TYPE TESTS	17
4.2 TEST PRESSURES	17
4.3 TEST DURATION	17
4.4 TYPES OF TEST	17
4.5 HYDROSTATIC TEST	17
4.6 COATING TEST FOR PROTECTIVE COATINGS	17
4.7 TYPE TEST	18
SECTION 5 MARKING	
5.1 BODY MARKING	20
5.2 DIRECTION OF FLOW	20
5.3 ADDITIONAL INFORMATION	20
APPENDICES	
A PURCHASING GUIDELINES	21
B METHOD FOR WEDGE STRENGTH TEST	22
C MAXIMUM WORKING PRESSURES AND MAXIMUM FIELD HYDROSTATIC TEST PRESSURES FOR PIPELINES INCORPORATING SLUICE VALVES	23

STANDARDS AUSTRALIA

Australian Standard

Sluice valves for waterworks purposes

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for sluice valves of inside screw, solid wedge, metal or resilient seated, non-rising stem design, for waterworks purposes, in nominal sizes of DN 80 to DN 600.

The valves are primarily intended for use with potable water and are usually operated by a removal key or handwheel in buried or above-ground installations.

NOTE: Guidelines for purchasers, on requirements that need to be agreed upon at the time of enquiry or order, are given in Appendix A.

1.2 APPLICATION Sluice valves complying with this Standard are intended for use with water supply pipes and fittings complying with AS 1074, AS 1392, AS 1477, AS 1579, ~~AS 1711~~, AS 1835, AS 1836, AS 2074, AS 2280, AS 2544, and AS 2977.

Deleted by Amdt 1

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

AS	
1074	Steel tubes and tubulars for ordinary service
1110	ISO metric hexagon precision bolts and screws
1111	ISO metric hexagon commercial bolts and screws
1252	High strength steel bolts with associated nuts and washers for structural engineering
1392	Precast concrete pressure pipes
1477	Unplasticized PVC (UPVC) pipes and fittings for pressure applications
1477.1	Part 1: Pipes
1477.4	Part 4: Post-formed bends
1477.6	Part 6: Rubber ring joints
1565	Copper and copper alloys—Ingots and castings
1567	Copper and copper alloys—Wrought rods, bars and sections
1568	Copper and copper alloys—Forging stock and forgings
1579	Arc welded steel pipes for water and gas
1580	Paints and related materials—Methods of test
1580.408.2	Method 408.2 Adhesion—Knife test
1627	Metal finishing—Preparation and pretreatment of surfaces
1627.4	Part 4: Abrasive blast cleaning
<i>Amdt 1</i> 1646	Rubber joint fittings for water supply, sewerage and drainage purposes <i>Elastomer seals for waterworks purposes.</i>
1830	Iron castings—Grey cast iron
1831	Iron castings—Spheroidal or nodular graphite cast iron
1833	Iron castings—Austenitic cast iron
1835	Tubes for pressure purposes—Seamless steel
1836	Tubes for pressure purposes—Welded steel
2074	Steel castings
211	Flanges for pipes, valves and fittings <i>Deleted by Amdt 1</i>
240	Ductile iron pressure pipes and fittings
311	Collared eyebolts
2544	Grey iron pressure pipes and fittings
2837	Wrought alloy steels—Stainless steel bars and semi-finished products
2842	Fluid power—O-rings and housings—Inch series, metric conversion
2977	Unplasticized PVC (UPVC) pipes for pressure applications—Compatible with cast iron pipe outside diameters
2977.1	Part 1: Pipes
3796(Int)	Dezincification resistance of copper alloys
3855(Int)	Suitability of plumbing products for contact with potable water