

LOAN COPY
INFORMATION CENTRE
STANDARDS AUSTRALIA

SUPERSEDED BY:
AS 1628-1999

AS 1628—1994

Draft AMD: see DR 96240

Australian Standard[®]

**Water supply—Copper alloy gate,
globe and non-return valves**

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 22 November 1993 and published on 21 February 1994.

The following interests are represented on Committee WS/22:

A.C.T. Electricity and Water
Association of Consulting Engineers Australia
Australia Chamber of Commerce and Industry
Australian Valve Manufacturers Association
Brisbane City Council
Department of Public Works, N.S.W.
Engineering and Water Supply Department, S.A.
Hunter Water Corporation, N.S.W.
Melbourne Water
New Zealand Local Government Association
New Zealand Metal Casting Industry Association
Rural Water Commission of Victoria
Society of Mechanical Engineers of Australasia
Victorian Chamber of Manufacturers
Water Authority of Western Australia
Water Board, Sydney — Murrumbidgee — Blue Mountains
Water Resource 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.

Full 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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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 92063.

STANDARDS AUSTRALIA

Amendment No. 1
to
AS 1628—1994
Water supply—Copper alloy gate, globe and non-return valves

REVISED TEXT

The 1994 edition of AS 1628 is amended as follows; the amendments should be inserted in the appropriate place.

SUMMARY: This Amendment applies to Clauses 3.2.5, 3.4 and 3.4.2.

Published on 5 November 1996.

AMDT
No. 1
NOV.
1996

Page 9 Clause 3.2.5

Delete existing text and *substitute* 'Internally screwed ends shall comply with AS 1722.1 Series RP or AS 1722.2 Series G.'

AMDT
No. 1
NOV.
1996

Page 9 Clause 3.4

Add '(For factory assembled components)' to Clause title.

AMDT
No. 1
NOV.
1996

Page 9 Clause 3.4.2 Item (b)

Delete Item (b).

Australian Standard®

**Water supply—Copper alloy gate,
globe and non-return valves**

First published as AS B310—1971.
Revised and redesignated AS 1628—1974.
Second edition 1977.
Third edition 1994.

PREFACE

This Standard was prepared by the Joint Australia/New Zealand Standards Committee WS/22 on Valves for Water Supply Purposes to supersede AS 1628—1977, *Copper alloy gate valves and non-return valves for use in water supply and hot water services*.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

The Standard includes additional procedures from ISO for performance tests and retains essential dimensions to provide interchangeability in the industry.

© 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

Page

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE	5
1.2 REFERENCED DOCUMENTS	5
1.3 DEFINITIONS	5
1.4 DESIGNATION OF SIZE	5
1.5 MARKING	5
1.6 PRESSURE CLASSIFICATION	6

SECTION 2 MATERIALS

2.1 SCOPE OF SECTION	7
2.2 COPPER	7
2.3 COPPER ALLOY	7
2.4 STAINLESS STEEL	7
2.5 OTHER MATERIALS	7
2.6 CORROSION-RESISTANT METALLIC MATERIALS	8
2.7 CONTAMINATION OF WATER	8

SECTION 3 DESIGN AND MANUFACTURE

3.1 SCOPE OF SECTION	9
3.2 END CONNECTORS	9
3.3 INTERCHANGEABILITY OF PARTS	9
3.4 SCREW THREADS	9
3.5 THICKNESS OF METAL PARTS	9
3.6 OPERATING METHODS FOR GATE AND GLOBE VALVES	9
3.7 WATERWAY AND FLOW CAPABILITY	11
3.8 FLOW-WAY AREA	11
3.9 FINISH	11

SECTION 4 TESTING REQUIREMENTS

4.1 SCOPE OF SECTION	12
4.2 PRESSURE TESTS	12
4.3 WATERTIGHTNESS	12
4.4 STRENGTH OF OPERATING MECHANISM	12
4.5 STRENGTH OF VALVE ASSEMBLY	12
4.6 TYPE TESTS	12

SECTION 5 GATE AND GLOBE VALVES

5.1 SCOPE OF SECTION	13
5.2 BODY SEATS	13
5.3 FACE-TO-FACE DIMENSIONS	13
5.4 GATES	13
5.5 STEMS	14
5.6 BONNETS	14
5.7 GLANDS	14

SECTION 6 NON-RETURN VALVES

6.1	SCOPE OF SECTION	15
6.2	DESIGN	15
6.3	VALVE BODIES	15
6.4	NON-RETURN MECHANISM	16
6.5	COVERS	16

APPENDICES

A	LIST OF REFERENCED DOCUMENTS	17
B	WATERTIGHTNESS TEST	19
C	TORQUE TEST ON OPERATING MECHANISM	21
D	STRENGTH TEST OF VALVE ASSEMBLY	23

STANDARDS AUSTRALIA

Australian Standard

Water supply—Copper alloy gate, globe and non-return valves

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for copper alloy gate, globe and non-return valves of nominal sizes DN 15 to DN 100 for use in hot and cold water applications where the operating temperature does not exceed 99°C.

1.2 REFERENCED DOCUMENTS A list of the documents referred to in this Standard is given in Appendix A.

1.3 DEFINITIONS For the purpose of this Standard, the definitions given in AS 3500.0 and those below apply.

1.3.1 Component—that part of, or a sub-assembly of parts, which contribute to the construction of a total assembly by choice or design which may offer variations of fitment for the application to the major element of the product, whether produced by that same manufacturer or not. The component shall be deemed a vital part of the total assembly and shall not inhibit the product from complying with the relevant Australian Standard, or the appropriate specification, when submitted for type testing.

1.3.2 Dashpot—a device usually an integral component of a valve designed for the purpose of reducing the fluid velocity or damping vibration in the valve and the associated connected pipework system.

1.4 DESIGNATION OF SIZE The size a valve is nominally designated shall be the nominal size of the pipe with which it is intended to be used.

1.5 MARKING

1.5.1 Marking requirements All valves shall be legibly marked by a casting or indenting process with the following:

- (a) Manufacturer's name or mark.
- (b) The letters 'DN'.
- (c) The hand wheel shall be permanently marked with an arrow showing the open to closure operating direction.
- (d) In the case of non-return valves, with an indication on the top of the valve showing direction of flow.

The marking shall be placed where it will be readily visible after installation. If this is not possible, an additional sticker shall be attached to the valve where it will be visible after installation.

1.5.2 Space for mark of certifying body Provision shall be made on every valve for the reception of the mark of the certifying body. The area shall be of sufficient size to accommodate the mark. Indented marks shall be applied in such a way as not to deform or otherwise damage the valve. Manufacturers may agree with the certifying body whether or not the mark will be applied to individual components in a valve which passes the required tests.