

Australian Standard[®]

**Butterfly valves for waterworks
purposes**



This Australian Standard® was prepared by Committee WS-022, Valves for Waterworks Purposes. It was approved on behalf of the Council of Standards Australia on 7 July 2006. This Standard was published on 30 August 2006.

The following are represented on Committee WS-022:

- Australian Chamber of Commerce and Industry
 - Australian Industry Group
 - Engineers Australia
 - Master Plumbers Australia
 - Plastics Industry Pipe Association of Australia
 - Victorian Employers Chamber of Commerce
 - Water Industry Alliance
 - Water Services Association of Australia
-

This Standard was issued in draft form for comment as DR 05378.

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Standards may also be withdrawn.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.

Australian Standard[®]

**Butterfly valves for waterworks
purposes**

First published as AS 4795—2002.
Second Edition 2006.

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 7703 1

PREFACE

This Standard was prepared by the Joints Standards Australia/Standards New Zealand Committee WS-022, Valves for Waterworks Purposes, to supersede AS 4795—2002.

The objective of this Standard is to provide material requirements and performance tests for butterfly valves used in water supply systems, including potable water, recycled water and screened wastewater systems, together with default compliance requirements for the use of manufacturers and certification bodies.

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) and manufacturers.

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 APPLICATION | 4 |
| 1.3 REFERENCED DOCUMENTS | 4 |
| 1.4 DEFINITIONS | 4 |
| 1.5 DESIGNATION OF SIZE | 5 |
| 1.6 ALLOWABLE OPERATING PRESSURES | 6 |
| SECTION 2 MATERIALS AND COMPONENTS | |
| 2.1 GENERAL | 7 |
| 2.2 CORROSION-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 | 10 |
| 3.3 COMPONENT DESIGN | 10 |
| 3.4 OPERATION..... | 13 |
| 3.5 MANUAL ACTUATORS AND GEARBOXES..... | 13 |
| 3.6 LIFTING DEVICES | 14 |
| 3.7 FASTENERS..... | 15 |
| SECTION 4 PROTECTIVE COATINGS | |
| 4.1 GENERAL | 16 |
| 4.2 COMPONENTS | 16 |
| SECTION 5 PERFORMANCE TESTS | |
| 5.1 GENERAL AND TEST SEQUENCE..... | 17 |
| 5.2 TYPE TESTS | 17 |
| 5.3 BATCH RELEASE TESTS | 19 |
| SECTION 6 MARKING AND PACKAGING | |
| 6.1 MARKING | 20 |
| 6.2 DIRECTION OF CLOSURE FOR HANDWHEELS AND CAPS..... | 20 |
| 6.3 PACKAGING..... | 20 |
| APPENDICES | |
| A MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD | 21 |
| B PURCHASING GUIDELINES..... | 26 |
| C REFERENCED DOCUMENTS | 30 |
| D ALTERNATIVE MATERIAL REQUIREMENTS..... | 32 |
| E ALTERNATIVE COATING — TWO-PACK HIGH-BUILD EPOXY COATING ... | 33 |

STANDARDS AUSTRALIA

Australian Standard
Butterfly valves for waterworks purposes

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for Classes 10, 16, 21 and 35 manually operated resilient-seated wafer, tapped lugged, and flanged butterfly valves for waterworks purposes, with a maximum operating temperature of 40°C.

This Standard covers the following:

- (a) Manual actuators, gearboxes and standard spindle caps.
- (b) Water supply applications that include drinking water and recycled water as well as screened wastewater.
- (c) Valves of the following nominal sizes:
 - (i) Seal-on-disc: DN 300 to DN 2000.
 - (ii) Seal-in-body: DN 80 to DN 2000.
 - (iii) Seal-on-body: DN 80 to DN 2000.
- (d) The capability of the valves to be fitted with electric, hydraulic or pneumatic actuators and to be operated using portable actuators.

NOTE: Purchasing requirements that should be agreed upon at time of inquiry or order are given in Appendix B.

1.2 APPLICATION

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

1.3 REFERENCED DOCUMENTS

The documents referred to in this Standard are listed in Appendix C.

1.4 DEFINITIONS**1.4.1 Allowable operating pressure (AOP)**

The allowable internal pressure, excluding surge, that a component can safely withstand in service.

1.4.2 Allowable site test pressure (ASTP)

The maximum internal hydrostatic pressure that can be applied on site to a component in a newly installed pipeline.

1.4.3 Bonded

Glued or adhered where it can be removed.

1.4.4 Bulkhead test

A test where the testing machine provides external restraint to make a watertight joint at each end of the valve.