Australian Standard®

Water supply—Backflow prevention devices

Part 2: Air gaps and break tanks

This Australian Standard was prepared by Committee WS/23, Backflow Prevention Devices for Water Supply. It was approved on behalf of the Council of Standards Australia on 30 August 1996 and published on 5 October 1996.

The following interests are represented on Committee WS/23:

Association of Consulting Engineers, Australia
AUSTAP
Australian Association of Certification Bodies
Australian Chamber of Commerce and Industry
Australian Chamber of Manufactures
Australian Valve Manufacturers Association
Brisbane Water
CSIRO—Division of Building, Construction & Engineering
Department of Land and Water Conservation, N.S.W.
Department of Urban Services, A.C.T.
Hunter Water Corporation
Irrigation Association of Australia
Metal Trades Industry Association of Australia
New Zealand Local Government Association
Plastics and Chemicals Industry Association
Queensland Department of Local Government and Planning
South Australian Water Corporation
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PREFACE

This Standard was prepared by the Standards Australia Committee WS/23 on Backflow Prevention Devices for Water Supply.

The object of this Standard is to design suitable break tanks and air gaps to provide protection of the potable water distribution systems.

This Standard covers air gap and break tanks as backflow prevention devices and has been revised to meet requirements in AS 3500.1—1992, *National Plumbing and Drainage Code*, Part 1: *Water supply*.

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.

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Originated as AS 2845.2— 1994.
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FOREWORD

This Standard is designed to provide protection of potable water distribution systems from contamination. It should be read in conjunction with AS 2845.1 and AS 3500.1.

Local variations may apply and therefore the relevant regulatory authority's requirements must be complied with where requested. In particular, testable backflow prevention devices must be registered with the local authority and their testing and maintenance requirements observed.

STANDARDS AUSTRALIA

Australian Standard

Water supply—Backflow prevention devices

Part 2: Air gaps and break tanks

1 SCOPE This Standard specifies requirements for air gaps and break tanks used as backflow prevention devices for the protection of potable water supply.

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

AS
2845 Water supply—Backflow prevention devices
2845.1 Part 1: Materials, design and performance requirements
3500 National Plumbing and Drainage Code
3500.1 Part 1: Water supply
3855 Suitability of plumbing and water distribution systems products for contact with potable water

AS/NZS
3500 National Plumbing and Drainage Code
3500.0 Part 0: Glossary of terms

3 DEFINITIONS For the purpose of this Standard, the definitions given in AS/NZS 3500.0 apply.

4 DESIGN

4.1 General Air gaps and break tanks shall comply with the following:

(a) Air gap dimensions shall comply with AS 3500.1.

(b) Where any fixture, break tank, or receptacle receives water from two or more water services of different diameters, the air gaps shall be no less than the air gaps required for the largest effective opening of the water service outlets.

(c) Break tanks shall comply with storage tank requirements according to AS 3500.1 and be one of the types complying with Clause 4.3.

4.2 Minimum air gap Where the requirements of Clause 4.1 cannot be met, tests shall be conducted in accordance with Appendix A. The air gap shall not permit the backflow of any water into the sight glass.

4.3 Break tanks

4.3.1 *General* Break tanks shall comply with AS 3500.1 and be one of the following types:

(a) *Type A (Figure 4.1) Unobstructed air gap* Where the air gap is measured in accordance with the definition given in AS/NZS 3500.0.

(b) *Type B (Figure 4.2) Air gap with overflow* Where the air gap is measured from the highest point of the break tank spill level to the lowest point of the water inlet pipe.

(c) *Type C (Figure 4.3) Air gap with diverter and overflow* Where the air gap is measured from the lowest point of the air inlet pipe or air inlet orifice to the highest point of the break tank spill level.