

Australian Standard[®]

**Water supply—Backflow prevention
devices**

**Part 3: Field testing and
maintenance**

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 3 June 1993 and published on 13 September 1993.

The following interests are represented on Committee WS/23:

Australian Valve Manufacturers Association
Brisbane City Council
Engineering and Water Supply Department, S.A.
Hobart City Council
Hunter Water Corporation
Melbourne Water
Metal Trades Industry Association of Australia
National Building Technology Centre
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PREFACE

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

This Standard includes procedures for field testing and maintenance of all devices complying with AS 2845.1 and includes requirements for air gaps and break tanks as registered by the relevant authorities.

The Standard is to be read in conjunction with the manufacturer's instructions.

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FOREWORD

Attention is drawn to the relevant statutory requirements with respect to the following—

- (a) the qualifications of persons permitted by law to field test and maintain mechanical backflow prevention devices;
- (b) the administrative procedures to be followed by persons performing work in Item (a); and
- (c) the authorization of certain materials, fittings, and other components for connection to a water service.

STANDARDS AUSTRALIA

Australian Standard
Water supply—Backflow prevention devices

Part 3: Field testing and maintenance

S E C T I O N 1 S C O P E A N D G E N E R A L

1.1 SCOPE This Standard specifies requirements for field testing and maintenance of backflow prevention devices specified in AS 2845.1, air gaps and break tanks as specified in the draft Standard on air gaps and break tanks* and as registered by the relevant authorities.

1.2 APPLICATION This Standard is to be read in conjunction with the requirements of the relevant regulatory authority, and the manufacturer's instructions.

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

AS

- | | |
|--------|--|
| 1349 | Bourdon tube pressure and vacuum gauges |
| 2845 | Water supply—Backflow prevention devices |
| 2845.1 | Part 1: Materials, design and performance requirements |
| | • Another part on air gaps and break tanks is in course of preparation |
| 3000 | SAA Wiring Rules |
| 3500 | National Plumbing and Drainage Code |
| 3500.0 | Part 0: Glossary of terms |
| 3500.1 | Part 1: Water supply |

1.4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 3500.0 apply.

* In the course of preparation.

SECTION 2 FIELD TESTING AND MAINTENANCE

2.1 FIELD TESTING Field testing, which includes inspection, shall be carried out at the frequencies given in Table 2.1 for the nominated backflow prevention devices, and shall be performed in accordance with the applicable test Appendices stipulated in the Table.

The line strainer shall be cleaned before commencing the test procedure (see Note 2).

NOTES:

- 1 Prior to conducting field tests, special attention shall be given to the safety guidelines in Appendix A.
- 2 Cleaning after this test can result in fouling of the non-return valves which would invalidate test results.

TABLE 2.1
TEST REQUIREMENTS

Device	Test Appendix	Test frequencies
Registered break tanks and registered air gaps	B	After installation or, after maintenance or repair, and at intervals not exceeding 12 months
Pressure-type vacuum-breaker	C and D	As above
Reduced-pressure-zone device	C and E	As above
Double check-valves	C and F	As above

Test equipment used for the field testing of backflow prevention devices shall be annually calibrated and certified by a registered laboratory to Appendix I.

NOTE: Testers are advised to check gauges more frequently using the test method according to Appendix I. Pressure gauges should comply with AS 1349.

Where parallel backflow prevention devices are provided, they shall both be tested.

Regulatory authorities may require testing at shorter intervals.

2.2 REPORTING OF TEST RESULTS AND REPAIRS These shall be in the format shown in Appendix G or Appendix H.

A copy of the test report shall be retained by the tester and copies forwarded to the following:

- (a) Relevant regulatory authority.
- (b) Owner.

2.3 SAFETY AND MAINTENANCE

2.3.1 Electrical safety precautions—earthing Safety precautions shall comply with AS 3500.1.

2.3.2 Fire brigade The fire brigade shall be notified when a fire protection service is to be shut down.

2.3.3 General Repairs to maintain devices shall be effected immediately a device is known to have failed. During repairs the same level of protection must be maintained or the affected section water supply system shut down. Repairs to be carried out by only registered or licensed persons.

2.3.3.1 Replacement components Identical replacement components or their equivalent manufactured by the manufacturer of the device shall be used for repair. Field testing in accordance with Clause 2.1 shall be performed after any repair.

2.3.3.2 Entrapped air After repairs are completed entrapped air shall be bled off in accordance with manufacturer's instructions. This prevents possible damage to the device.