



WMTS-033:2016

Spraying apparatus/dispensing units with the option of chemical additions – Hose connected

WaterMark Technical Specification

2016



ABC B



WMTS-033:2016

**Spraying apparatus/dispensing units with the option of
chemical additions – Hose-connected**

WaterMark Technical Specification

Document formerly known as:-

ATS 5200.033 – 2004 Spraying apparatus/dispensing units with the option of chemical additions
– Hose-connected

Publication History:-

First published as ATS 5200.033—2004.
Revised and redesignated as WMTS-033:2016.

2016

IMPORTANT NOTICE AND DISCLAIMER

On 25 February 2013 management and administration of the WaterMark Certification Scheme transferred to the Australian Building Codes Board (ABCB). From this date all new technical specifications will be named WaterMark Technical Specifications (WMTS). Within two years all existing ATS will be renamed WMTS. During this initial period both terms may be used and accepted. All new and recertified Certificates of Conformity will reference WMTS. Certificates of Conformity that currently reference ATS will be re-issued referencing the equivalent WMTS during this initial period. The WaterMark Schedule of Specifications lists all current WMTS and, where appropriate, the former ATS name.

This Technical Specification supersedes Standards Australia ATS 5200.033:2004.

The rebranding of this Technical Specification has included additional information about the transition as well as changes to specific details including replacing references to Standards Australia and the National Plumbing Regulators Forum (NPRF) with the ABCB, changing the term Australian Technical Specification (ATS) to WaterMark Technical Specification (WMTS), replacing references to technical committees WS-014 and WS-031 with the WaterMark Technical Advisory Committee (WMTAC).

While the ABCB, the participating Governments and other groups or individuals who have endorsed or been involved in the development of the WMTS, have made every effort to ensure the information contained in this document is accurate and up to date, such information does in no way constitute the provision of professional advice.

The ABCB gives no warranty or guarantee and accepts no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained in this document.

Users should seek appropriate independent professional advice prior to relying on, or entering into any commitment based on material in this document in relation to plumbing or related activities. Its interpretation in no way overrides the approvals processes in any jurisdiction.

The ABCB welcomes suggestions for improvement in the WMTS, and encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact the ABCB via phone on 1300 134 631, email at watermark@abcb.gov.au or write to the WaterMark Administering Body, ABCB, GPO Box 9839, Canberra ACT 2601.

Copyright within the following document is owned by the Australian Government and States and Territories of Australia and its Licensors.

Apart from any use permitted under the Copyright Act 1968, no part may be reproduced without prior permission. Requests and enquires concerning reproduction and rights should be directed to:

General Manager
Australian Building Codes Board
GPO Box 9839
Canberra ACT 2601
Phone 1300 134 631 – Fax 02 6213 7287

PREFACE

WaterMark Technical Specification WMTS-033:2016 Technical Specification for plumbing and drainage products, Spraying apparatus/dispensing units with the option of chemical additions – Hose-connected was originally prepared by the Joint Standards Australia/Standards New Zealand Committee WS-031, Technical Procedures for Plumbing and Drainage Products Certification.

The objective of this Technical Specification is to enable product certification in accordance with the requirements of the Plumbing Code of Australia (PCA).

The word 'VOID' set against a clause indicates that the clause is not used in this Technical Specification. The inclusion of this word allows a common use clause numbering system for the WaterMark Technical Specifications.

The term 'normative' has been used in this Technical Specification to define the application of the appendices to which they apply. A 'normative' appendix is an integral part of a Technical Specification.

The test protocol and information in this Technical Specification was arranged by committee members to meet the authorization requirements given in the PCA.

The WaterMark Schedule of Specifications and List of Exempt Products are dynamic lists and change on a regular basis. Based on this function, these lists have been removed from the WaterMark Certification Scheme document known as Technical Specification for Plumbing and Drainage Products and are now located on the ABCB website (www.abcb.gov.au). These lists will be version controlled with appropriate historic references.

ACKNOWLEDGEMENTS

Australian Technical Specification ATS 5200.033-2004, on which this technical specification is based, was prepared by Standards Australia Committee WS-031, Technical Procedures for Plumbing and Drainage Products Certification. It was approved on behalf of the Council of Standards Australia on 2 December 2003.

The following organisations were represented on Committee WS-031 in the preparation of Australian Technical Specification ATS 5200.033-2004:

- AUSTAP
- Australian Industry Group
- Certification Bodies (Australia)
- Copper Development Centre, Australia
- Fire Contractors Federation
- Master Plumbers, Gasfitters and Drainlayers New Zealand
- New Zealand Water & Waste Association
- Plastics Industry Pipe Association of Australia
- Plumbing Industry Commission
- South Australian Water Corporation
- Water Services Association of Australia

TABLE OF CONTENTS

1	Scope	1
2	Application.....	1
3	Void	1
4	Void	1
5	Void	1
6	Marking	1
7	Void	1
8	Design	1
9	Performance requirements and test methods.....	1
10	Void	2
11	Void	2
Appendix A	Means for demonstrating compliance with this technical specification.....	3
Appendix B	Testing of hose-connected spraying apparatus and dispensing unit	5

1 SCOPE

This Technical Specification sets out requirements for hose-connected spraying apparatus/dispensing units that are designed to spray or dispense a mixture other than water at supply or boosted pressures outlets.

2 APPLICATION

Appendix A sets out the means by which compliance with this Technical Specification can be demonstrated by a manufacturer for the purpose of product certification

3 VOID

4 VOID

5 VOID

6 MARKING

Each device shall be marked with the following:

- (a) Manufacturer's name, brand or trademark.
- (b) WaterMark
- (c) Licence number.
- (d) The number of this Specification, i.e., WMTS-033.

7 VOID

8 DESIGN

8.1 Air gap

Each unit shall incorporate an air gap that is unobstructed, open to the atmosphere, and located upstream of the point where the water can potentially mix with any dispensing substance.

9 PERFORMANCE REQUIREMENTS AND TEST METHODS

When tested in accordance with Appendix B, the dispensing unit shall not permit back siphonage through the sight glass.



10 VOID

11 VOID

Appendix A MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS TECHNICAL SPECIFICATION

(Normative)

A.1 SCOPE

This Appendix sets out the means by which compliance with this Technical Specification shall be demonstrated by a manufacturer under the type test product certification scheme.

A.2 RELEVANCE

The long-term performance of plumbing systems is critical to the durability of building infrastructure, protection of public health and safety, and protection of the environment.

A.3 PRODUCT CERTIFICATION

The purpose of product certification is to provide independent assurance of the claim by the manufacturer that products comply with this Technical Specification.

The certification scheme serves to indicate that the products consistently conform to the requirements of this Specification.

The frequency of the sampling and testing plan, as detailed in Paragraph A5, shall be used by the WaterMark Conformity Assessment Body.

A.4 DEFINITIONS

A.4.1 Type test batch

Schedule of units of the same type and nominal size. The batch is defined by the manufacturer.

A.4.2 Type testing

Testing performed to demonstrate that the material, component, joint or assembly is capable of conforming to the requirements given in the Technical Specification.

A.5 TESTING

A.5.1 Type testing

Table A1 sets out the requirements for type testing and frequency of re-verification.

Table A1—MINIMUM SAMPLING AND TESTING FREQUENCY PLAN

Characteristic	Clause	Requirement	Test method	Frequency
Type tests				
Marking	6	Legibility or tagging	Visual examination	Each product
Design	8.1	Recognized gap design	Visual examination	Each product
Performance	9	Back siphonage	Appendix B	At any change in design

Appendix B TESTING OF HOSE-CONNECTED SPRAYING APPARATUS AND DISPENSING UNIT

(Normative)

B.1 TEST EQUIPMENT

A dispensing unit shall be tested with equipment such as-

- (a) a vacuum tank;
- (b) a sight glass;
- (c) a combined pressure/vacuum gauge capable of registering pressures between -100 kPa and +300 kPa;
- (d) associated valves and piping; and
- (e) colour indicator consisting of-
 - (i) a liquid dye, where the dispensing unit is designed to dispense a liquid chemical; or
 - (ii) a water-soluble solid dye, where the dispensing unit is designed to dispense a solid chemical, whether by dissolving the chemical in water or otherwise.

B.2 TEST PROCEDURE

B.2.1 General

The procedure shall be as follows:

- (a) All non-return devices (other than air gaps) shall be rendered inoperative before testing commences.
- (b) Where a tap dispensing unit is fitted with a device that automatically disconnects the unit from its water supply, the tap dispensing unit shall be tested with the unit fastened in such a manner that automatic disconnection from the water supply is prevented.

B.2.2 Tap-dispensing unit

A tap-dispensing unit shall be tested with-

- (a) the tap facing vertically downwards; and
- (b) the tap facing downwards at an angle of 45° to the horizontal plane.

B2.3 Brush-dispensing units

A brush-dispensing unit shall be tested in the following orientations:

- (a) The brush facing downwards at an angle of 90° to the vertical plane transected by the hose and with the hose projecting-
 - (i) upwards at an angle of 80° to the horizontal plane;
 - (ii) upwards at an angle of 45° to the horizontal plane;
 - (iii) horizontally;
 - (iv) downwards at an angle of 45° to the horizontal plane; and
 - (v) downwards at an angle of 80° to the horizontal plane.
- (b) The brush facing upwards at an angle of 90° to the vertical plane transected by the hose and with the hose projecting-
 - (i) upwards at an angle of 80° to the horizontal plane;
 - (ii) upwards at an angle of 45° to the horizontal plane;
 - (iii) horizontally;
 - (iv) downwards at an angle of 45° to the horizontal plane; and
 - (v) downwards at an angle of 80° to the horizontal plane.
- (c) The brush facing downwards-
 - (i) at an angle of 80° to the vertical plane transected by the hose; and
 - (ii) at an angle of 45° to the vertical plane transected by the hose, with the hose projecting horizontally; or

it may be tested in other orientations, which, in the opinion of the certified tester, are appropriate in relation to that type or design of dispensing unit.

B2.4 Hose-dispensing units

A hose-dispensing unit shall be tested in the following orientations and as shown in Figure B2.3:

- (a) The unit axis horizontal-
 - (i) rotated upwards at 45° from the horizontal;

- (ii) rotated;
 - (iii) rotated downwards at 45° from the horizontal; and
 - (iv) rotated downwards at 80° from the horizontal.
- (b) The unit rotated 10° about the unit axis and positions (i) to (iv), Step (a), repeated as above.
- (c) The unit rotated 45° about the unit axis and positions (i) to (iv), Step (a), repeated as above.

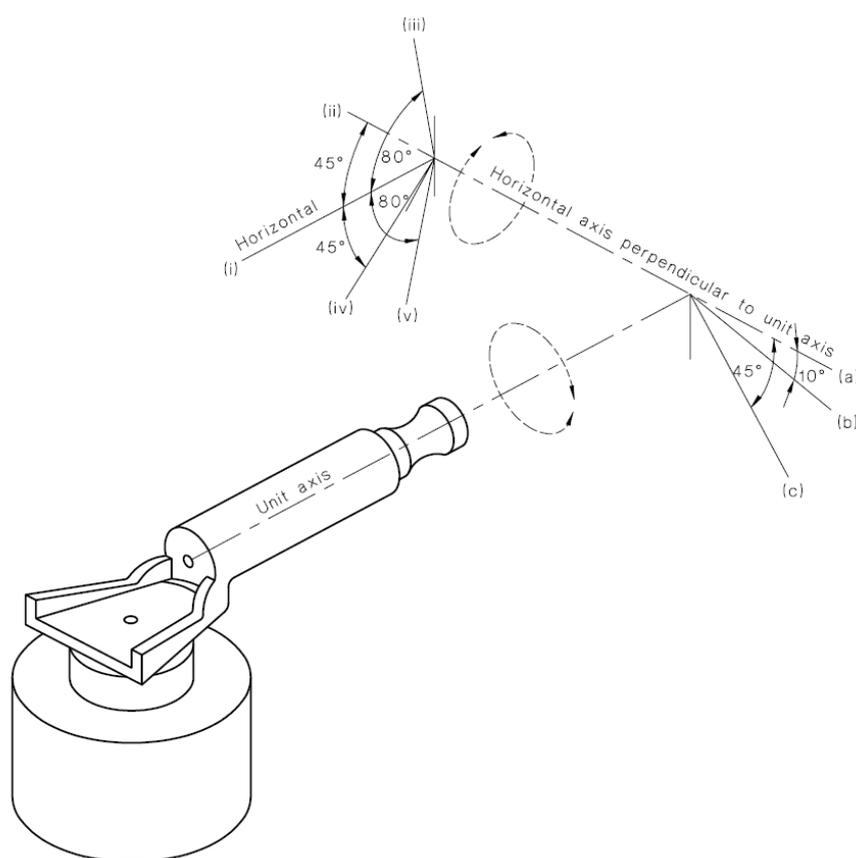


FIGURE B2.3 SHOWING ORIENTATIONS OF UNIT UNDER TEST

B2.5 Test method

The procedure for testing dispensing units shall be as follows:

- (a) Firmly attach the sight glass to the inlet side of the dispensing unit and connected to the water supply and the vacuum tank.

- (b) Fill the dispensing unit with colour indicator to the maximum capacity of its container (as specified by the manufacturer) or, where no maximum capacity is so specified, until its container is completely filled.
- (c) Hold the dispensing unit in a static position and in a manner that ensures its container will not be deformed while the dispensing unit is being tested.
- (d) Open the outlet of the dispensing unit and release water at a maximum pressure of 150 kPa until colour indicator is visible in the discharge.
- (e) Shut off the water supply and immediately apply a negative pressure of 50 +0, -5 kPa to the dispensing unit for 2 mins. No coloured water shall flow through the sight glass.

Australian Building Codes Board
Building Australia's Future

Australian Building Codes Board
GPO Box 9839
Canberra ACT 2601
www.abcb.gov.au