WMTS-460:2016
Grey water diversion device (GWDD)

WaterMark Technical Specification

2016

ABCB

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ATS 5200.460 – 2005 Technical Specification for Plumbing and Drainage Products
Grey water diversion device (GWDD)

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First published as ATS 5200.460—2005.
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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 5200.460 – 2005.

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.

PREFACE

WaterMark Technical Specification WMTS-460: 2016 Technical Specification for plumbing and drainage products, Part 460: Grey water diversion device (GWDD) 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 5200.460 – 2005, 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 19 August 2005.

The following organisations were represented on Committee WS-031 in the preparation of Australian Technical Specification ATS 5200.460 – 2005.

- AUSTAP
- Australian Electrical and Electronic Manufacturers Association
- Australian Industry Group
- Australian Stainless Steel Development Association
- Building Officials Institute of New Zealand
- Building Research Association of New Zealand Inc
- Certification Interests (Australia)
- Consumer Electronics Suppliers Association
- Copper Development Centre, Australia
- Master Plumbers, Gasfitters and Drainlayers New Zealand
- National Fire Industry Association
- Plastics Industry Pipe Association of Australia
- Plumbing Industry Commission
- South Australian Water Corporation
- Water Services Association of Australia

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1 SCOPE

This Technical Specification sets out requirements for grey water diversion devices employing gravity or pumped discharge. The devices are designed to be used in the sanitary drainage system to divert grey water for purposes as permitted by the relevant authority. This document identifies issues related to the connection of such fittings and any operational issues.

Products that require connection to a water service are outside the scope of this Technical Specification.

2 APPLICATION

This Technical Specification will be referenced on the WaterMark Certification Scheme Schedule of Specifications.

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

3 REFERENCED DOCUMENTS

The following documents are referred to in this Technical Specification:

AS/NZS

1260	PVC-U pipes and fittings for drain, waste and vent application
2888	Methods of testing plastics waste fittings
2888.3	Part 3: Method for pressure testing of plastics waste fittings
3500	Plumbing and drainage
3500.0	Part 0: Glossary of terms
3500.2	Part 2: Sanitary plumbing and drainage

4 DEFINITIONS

For the purpose of this Technical Specification, the definitions given in AS/NZS 3500.0 apply.

5 MATERIALS

5.1 General

This Clause specifies requirements for materials utilized in the construction of the product.

5.2 PVC-U

PVC-U materials shall comply with AS/NZS 1260.

5.3 Other materials

Other materials shall comply with requirements and limitations given in AS/NZS 3500.2.

6 MARKING

Grey water device assemblies shall be marked with the following:

(a) Manufacturer's name, brand or trademark.

(b) WaterMark.

(c) Licence number.

(d) A warning stating the following:

'THE USE OF THIS PRODUCT REQUIRES AUTHORIZATION BY THE RELEVANT AUTHORITY'

(e) User operation and maintenance instructions.

(f) The number of this Technical Specification, i.e., WMTS-460.

7 VOID

8 DESIGN

8.1 Grey water storage

The device shall be designed such that it will not retain grey water when it is installed in accordance with the manufacturer's instructions.

8.2 Operation and design

The design of the device shall incorporate the following operational features:

(a) A means of removing material that may cause the device to malfunction.

(b) A means of overflow to the sanitary drainage system, in the event of blockage or malfunction, without hindering or limiting the free flow of wastewater from the building or compromising the health or amenity of building inhabitants.

8.3 Waterway/Capacity

8.3.1 *Gravity-operated systems*

All pipework/fittings and valves/taps through which grey water will flow shall have an internal bore equal to or greater than the inlet connection so as not to restrict the free flow of grey water through or out of the assembly valve.

8.3.2 *Pumped systems*

The design of pumped systems shall be capable of handling peak flows calculated in accordance with AS/NZS 3500.2, including any surges.

8.4 Serviceability

The device shall be constructed in such a manner that the component parts do not rely on regular replacement by users to maintain satisfactory operation. Movable parts shall be capable of being serviced in the installed position (see Note).

NOTE: Valves/taps should be capable of disassembly and reassembly without having to cut and glue connections).

8.5 End connections

End connections shall comply with the dimensional requirements of the relevant Australian Standard.

9 PERFORMANCE REQUIREMENTS AND TEST METHODS

9.1 Hydrostatic strength test

When tested in accordance with AS 2888.3 at a test pressure of 10 kPa and a temperature at 60°C the device assembly shall—

(a) not leak; and

(b) exhibit no distortion, splitting, cracking, breakage or other failure at the completion of the test.

10 VOID

11 PRODUCT DOCUMENTATION

11.1 Product data

Product data shall be available. Data shall cover critical product characteristics such as—

(a) minimum delivery volume and flow rate;

(b) maximum allowable operating pressure and temperature;

(c) minimum operating pressure; and

(d) hydrostatic head loss.

11.2 Installation and maintenance instructions

11.2.1 *Installation instructions*

Instructions that give full details of installation procedures for the trap priming valve shall be provided including:

(a) Requirements as specified in AS/NZS 3500.2.

(b) Detailed step-by-step instruction.

(c) Details of any special tools or training that may be required to install the product.

(d) Commissioning procedures and adjustments required.

(e) Troubleshooting guide.

(f) Contact details for after sales service.

11.2.2 *Operating and maintenance instructions*

Operating and maintenance instructions shall be provided that include:

(a) Any regular maintenance requirements.

(b) Spare part information.

(c) Troubleshooting guide.

(d) Contact details for after sales service.

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 is to be demonstrated by a manufacturer under the WaterMark 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 Technical Specification.

The sampling and testing plan, as detailed in Paragraph A5 and Table A1, shall be used by the WaterMark Conformity Assessment Body. Where a batch release testing program is required, it shall be carried out by the manufacturer as detailed in Paragraph A5 and Table A2.

A.4 DEFINITIONS

A.4.1 Batch release test

A test performed by the manufacturer on a batch of components, which has to be satisfactorily completed before the batch can be released.

A.4.2 Production batch

Clearly identifiable collection of units, manufactured consecutively or continuously under the same conditions, using material or compound to the same specification.

A.4.3 Sample

One or more units of product drawn from a batch, selected at random without regard to quality.

NOTE: The number of units of product in the sample is the sample size.

A.4.4 Sampling plan

A specific plan that indicates the number of units of components or assemblies to be inspected.

A.4.5 Type test batch

Schedule of units of the same type, identical dimensional characteristics, all the same nominal diameter and wall thickness, from the same compound. The batch is defined by the manufacturer.

A.4.6 Type testing (TT)

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

A.5 TESTING

A.5.1 Type testing

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

A.5.2 Batch release testing

Table A2 sets out the minimum sampling and testing frequency plan for a manufacturer to demonstrate compliance of product(s) to this Technical Specification on an ongoing basis. However, where the manufacturer can demonstrate adequate process control to the WaterMark Conformity Assessment Body, the frequency of the sampling and testing nominated by the manufacturer's quality plan and/or documented procedures shall take precedence for the purposes of WaterMark product certification.

A.5.3 Retesting

In the event of a batch release test failure, the products within the batch may be retested at a frequency agreed to with the WaterMark Conformity Assessment Body and only those batches found to comply may be claimed and/or marked as complying with this Technical Specification.

Table A1—TYPE TESTS

Characteristic	Clause	Requirement	Test method	Frequency
Materials	5.2	PVC-U	AS/NZS 1260	At any change in materials specification
	5.3	Other materials	AS/NZS 3500.2	
Marking	6	Marking	Visual inspection	At any change in marking process
Design	8.1	Grey water storage	Review of the design	At any change in design
	8.2	Operation and design		
	8.3	Waterway dimensions		
	8.4	Serviceability		
	8.5	End connections	Direct measurement	
Performance	9.1	Hydraulic strength test	AS 2888.3	
Product documentation	11	Product data and installation and operating instructions	Visual inspection	At any change in installation or operation practices

Table A2— BATCH RELEASE TESTS

Characteristic	Clause	Requirement	Test method	Frequency
Marking	6	Marking	Visual inspection	100%
Design	8.5	End connections	Direct measurement	Once per batch
Performance	9.1	Hydraulic strength test	AS 2888.3	Once per batch

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