

Tasmanian Standard for Non-Urban Water Meters

Introduction

This Standard pertains to the specification, installation, validation and maintenance of non-urban water meters in Tasmania. This Standard is to be read in conjunction with the Australian Standard (AS 4747).

Requirements 1-15 of this *Tasmanian Standard for Non-Urban Water Meters* (this Standard) apply to water meters installed from 10 February 2014.

Requirements 3, 5, 6 and 7 of this Standard apply to all non-urban water meters.

This Standard's primary objective is to provide an acceptable level of confidence that non-urban water meters have been manufactured, installed, commissioned and maintained such that measurement performance under in situ conditions is within the maximum permissible limits of error of plus or minus 5%.

The Australian Standard and this Standard contain detailed and technical specifications for non-urban water meter installation, commissioning, maintenance and validation. Therefore, it is recommended that meters are installed and commissioned by an **Irrigation Australia Limited Certified Meter Installer**¹.

If meters are not installed and commissioned by an **Irrigation Australia Limited Certified Meter Installer**¹, the onus is on the meter installer to install the meter in accordance with this Standard, including the relevant sections of AS 4747 available at: <http://www.saiglobal.com/>

¹ A list of **Irrigation Australia Limited Certified Meter Installers** can be found at: <http://irrigation.org.au/certification/listing-of-other-certified-irrigation-professionals-2#cmi>

Glossary of Terms

Except where terms are otherwise defined in the footnotes of this *Tasmanian Standard for Non-Urban Water Meters*, this Standard adopts in full the Glossary of terms set out in Part 1 of AS 4747.

Requirements for all Meters

1. Water meters shall be validated by a **Certified Validator**² and maintained in accordance with Part 8 of AS 4747.
2. A **Certified Validator**² shall complete the validation form provided in Appendix A of this Standard.
3. Records shall be kept of a completed validation form and a meter maintenance plan, in accordance with Part 8 of AS 4747 and this Standard. When directed by the Minister, the meter owner shall provide the Minister with the records in the form specified by the Minister.
4. The water meter shall have the capability to produce a meter reading as an electronic output and shall be capable of being fitted with an electronic data logger and automatic reading device that will allow remote reading of the meter.
5. Meter reading access structures shall be constructed to comply with the relevant Australian Standards and with the *Workplace Health and Safety Act 2012*, and regulations thereunder.
6. The water meter shall be installed so that its register can be easily read from a position directly above the centre of the pipe, and from a normal standing position.

²Where AS 4747 or this Standard refers to a **Certified Validator**, the Department interprets this as meaning an Irrigation Australia Limited Certified Meter Installer.

7. If the water licence holder is directed by the Minister, the meter installation shall provide for in-situ testing of the accuracy of the meter in a manner specified by the Minister.

Requirements for Closed Conduit Meters

8. Water Meters should comply with Sections 2 and 3 of Part 2 of AS 4747.
9. Water Meters shall be **certified**³ to measure volumetric flow within the maximum permissible limit of error of plus or minus 5%.
10. The water meter shall be installed such that it operates within the maximum permissible limit of error of plus or minus 5%. Meter installation shall be in accordance with either a **manufacturer's or reputable testing authority's meter installation design**⁴, or in accordance with:
 - a) Clause 2.5 of Part 5 of AS 4747; and
 - b) Section 3 of Part 5 of AS 4747 (except where this Section refers to pattern-approved meters); and
 - c) Section 4 of Part 5 of AS 4747; and
 - d) the relevant meter installation diagram in Appendix B of Part 5 of AS 4747.
11. Water meter commissioning shall be in accordance with Clause 5.3 and 5.4 of Part 5 of AS 4747.

³ A **certified** water meter means publication of information, regarding the meter being able to measure volumetric flow within the maximum permissible limit of error (plus or minus 5%), on the manufacturer's website or in the manufacturer's installation manual, or information from a reputable testing facility that the meter has demonstrated measurement performance in accordance with the requirements of either Clause 4.3 of Part 2 of AS 4747 (in the case of closed conduit meters) or Clause 7.3 of Part 3 of AS 4747 (in the case of open channel meters).

Requirements for Open Channel Meters

12. Water Meters should comply with Sections 2, 3, 4, 5 and 6 of Part 3 of AS 4747.
13. Water Meters shall be **certified**³ to measure volumetric flow within the maximum permissible limit of error of plus or minus 5%.
14. The water meter shall be installed such that it operates within the maximum permissible limit of error of plus or minus 5%. Meter installation shall be in accordance with either a **manufacturer's or reputable testing authority's meter installation design**⁴, or in accordance with:
 - a) Clause 2.5 of Part 6 of AS 4747; and
 - b) Section 3 of Part 6 of AS 4747 (except where this Section refers to pattern-approved meters); and
 - c) Section 4 of Part 6 of AS 4747.
15. Water Meter commissioning shall be in accordance with Clause 5.3 and 5.4 of Part 6 of AS 4747.

⁴ A **manufacturer's or reputable testing authority's meter installation design** means a comprehensive installation design, published on the manufacturer's website, or in the manufacturer's installation manual, or provided by a reputable testing authority, that sets out the installation requirements for the particular water meter within the specific operating environment and pipeline arrangement, such that the meter operates within the maximum permissible limit of error of (plus or minus 5%) under in situ conditions. The meter installation design shall consider and counteract the hydraulic disturbances caused by any pipe fittings such as bends, tees and pumps located near the meter.