



Pattern Approved 'non-urban' Water Meters

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The Murray–Darling Basin Authority pays respect to the Traditional Owners and their Nations of the Murray–Darling Basin. We acknowledge their deep cultural, social, environmental, spiritual and economic connection to their lands and waters.

The guidance and support received from the Murray Lower Darling Rivers Indigenous Nations, the Northern Basin Aboriginal Nations and our many Traditional Owner friends and colleagues is very much valued and appreciated.

Aboriginal people should be aware that this publication may contain images, names or quotations of deceased persons.

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Purpose

In June 2018 the Australian Government and the Murray–Darling Basin states agreed to the Compliance Compact which describes actions that will strengthen water use compliance by the Basin community. The availability and use of non-urban water meters in the Basin is of particular interest to the water users, the public and governments.

Part three of the Compliance Compact describes actions related to Metering and Measurement. This report is published to meet the requirement of 3.8 of the Compliance Compact:

3.8 The Australian Government and Basin States will work with each other, jurisdictions, testing laboratories, meter manufacturers and industry to set a timetable for delivering a comprehensive range of pattern approved meters.

For Australia there are a number of pattern approved meters currently available. More pattern approved meters are expected on the market in the near future. The Murray–Darling Basin Authority has worked with meter manufacturers to compile a list of meters being considered for pattern approval. The National Measurement Institute has provided a list of current pattern approved meters. Together these lists document the most comprehensive compilation of current and potential pattern approved meters.

In January 2019, the Murray–Darling Basin Authority expects to publish a compilation of the pattern approved metering requirements for the Basin. This information will be provided by the states and territories.

What is a pattern approved meter?

The National Measurement Institute of Australia checks non-urban water meters for compliance with the Australian Pattern Approval Standards for Non-Urban water meters. Pattern approved compliance status is provided for meters which meet specific requirements for closed conduit meters (NMI-M10); or which meet specific requirements for open channel meters (NMI-M11); or equivalent overseas standards.

A pattern approved meter complies with these requirements within the operating range specified by the meter manufacturer.

Which pattern approved non-urban water meters are available?

Table 1. Closed Conduit Meters

Certificate of Approval Number	Meter Model	Approved sizes (DN = internal pipe diameter in millimetres)	Approved maximum continuous flowrates (Q3)
PATTERN APPROVED			
14/3/21	Krohne Waterflux 3070	DN25 – DN600	10 m ³ /h – 6,300 m ³ /h
14/3/24	Siemens MAG8000	DN50 – DN1200	63 m ³ /h – 12,500 m ³ /h
14/3/29	Arad Octave DN50	DN50 – DN200	40 m ³ /h – 400 m ³ /h
14/3/30	ABB AquaMaster3 FEV2	DN40 – DN200	40 m ³ /h – 1,000 m ³ /h
14/3/32	Aquamonix / Pentair I500	DN50 – DN600 Provisional approval: DN700 – DN1000	10 L/s – 1414 L/s
14/3/34	Sensus WP-Dynamic	DN40 – DN400	25 m ³ /h – 2,000 m ³ /h
14/3/36	Euromag MUT 2200 EL	DN40 – DN600	25 m ³ /h – 3,600 m ³ /h
P14/3/42	Rubicon Sonaray Pipe Meter	Provisional approval: DN600	1 ML/d – 31.5 ML/d
METERS BEING CONSIDERED FOR PATTERN APPROVAL			
	MACE AgriFlo XCi	not provided	not provided
	Flexim F501IP with K Transducers	DN100 – DN2400	Transit time clamp-on ultrasonics have a very large turndown, and are not limited by flow rate
	Krohne Optiflux 2300	DN25 - DN1800	16 m ³ /h – 25,000 m ³ /h
	ABB AquaMaster4	DN40 – DN600	not provided
	Siemens MAG5100W (Mains powered)	DN50 – DN2000	63 m ³ /h – 40,000 m ³ /h
	Bermad / Euromag MUT 2200 EL	DN600 - DN1000	not provided
	Arad Octave	DN250 - DN300	1,000 m ³ /h – 1,000 m ³ /h
	Arad WSTsb	DN50 – DN300	63 m ³ /h – 1,000 m ³ /h

Table 2. Open Channel Meters

Certificate of Approval Number	Meter Model	Approved sizes (Channel dimensions)	Approved maximum continuous flowrates (Q3)
PATTERN APPROVED			
There are currently no pattern approved open channel meters			
METERS BEING CONSIDERED FOR PATTERN APPROVAL			
	Accusonic 8510+ Multiple Path Transit-Time Flowmeter	N/A	N/A
	Rubicon SlipMeter	600mm wide gate	1 ML/d – 31.5 ML/d

Correct as at 19/12/2018

Note: The list of pattern approved meters can also be found at the National Measurement Institute's website (noting that the NMI list includes urban and non-urban meters)

www.measurement.gov.au/Publications/CertificateOfApproval/OtherInstruments/Water_utility_Meters

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