



Products Catalogue for Water Meters and Ancillary Components

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DOCUMENT CONTROL INFORMATION

DOCUMENT DETAILS

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ABOUT THIS CATALOGUE

Any supplier may apply to City West Water (CWW) to have its product or material included in CWW's Products Catalogue. CWW will give due consideration to the application, and assess the merits of the product or material according to the following Product Approval Criteria:

- The service life of the product or material;
- The life cycle cost of the product or material to CWW;
- The reaction of the product or material on the materials being transported;
- The reaction of the material being transported on the product or material;
- The compatibility of the product or material with existing CWW asset systems;
- The impact of the product or material on CWW's operations and maintenance including the availability of compatible fittings;
- The impact of the product or material on CWW's occupational health and safety obligations;
- The impact of continued use of the product or material on CWW environmental obligations;
- The capacity of CWW and/or its contractors to install the product or material;
- The capacity of CWW and/or its contractors to operate and/or maintain the product or material;
- The availability of spare parts (where applicable) for the product or material;
- The quality of manufacture and delivery to site of the product or material;
- The availability of an Australian Standard, or other recognised standard, for the product or material;
- The in-service performance history of the product or material;
- The specific applications of the product or material.

This catalogue lists all the products currently accepted by CWW for use in its pressure pipeline systems for water supply (drinking / non-drinking) or sewer networks. The meters for private use including 'trade waste' are not included in this catalogue. CWW does not give preference to any particular make or type of product and will include equivalent products in the catalogue if satisfied that those products comply with the relevant standards or specifications and conform to the Product Approval Criteria. Manufacturers of suitable products not listed in this catalogue may apply directly to CWW to have their product listed.

Notwithstanding that a product or material satisfies the Product Approval Criteria, where CWW considers on reasonable grounds that the number of approved products/materials in a particular classification needs to be limited in order to control future maintenance and replacement costs, approval of that product or material may be rejected.

A product or material may have been tested and approved by a regulatory body, other water authority, industry association or the like. CWW may in its discretion elect to accept test results or other information related to this testing/approval. However, CWW's final decision will be based upon a consideration of all of the criteria referred to above and the prior testing/approval is not of itself sufficient to support approval by CWW.

Purchasers of products should obtain a declaration from the supplier that products purchased do in fact conform in every aspect to the product listed in this catalogue. In the event that a product is not available for a specific purpose or use from this catalogue, the Manager, Standards and Design shall obtain direction from CWW's Asset Management Committee regarding alternatives.

Products listed in this catalogue having a reference to a WSAA product specifications, as published in www.wsaa.asn.au shall conform to the relevant product specifications.

For information on the status of applications for inclusion of products in CWW Products Catalogue, contact the following:

Email	Phone
standards@citywestwater.com.au	9313 8435

CWW will assume no responsibility for any errors that may appear in this catalogue or any damages arising out of the use or inability to use this document.

INTENDED AUDIENCE

This catalogue is intended for CWW personnel, consultant engineers and contractors engaged in the design, construction and maintenance of CWW's pressure pipeline systems for drinking and non-drinking water supply and sewer networks.

RELATED REFERENCE MATERIAL

The information in this catalogue should be read in conjunction with:

- MRWA Edition of the Water Services Association of Australia (WSAA) Water Supply Code of Australia WSA 03 – 2002 Version 2.3
- MRWA Edition of the Dual Water Supply Systems Supplement to the Water Supply Code of Australia WSA 03 – 2002 Version 2.3
- Pressure Sewerage Code of Australia WSA 07–2007 Version 1.1
- Vacuum Sewerage Code of Australia WSA 06-2004 Version 1.1
- Polyethylene Pipeline Code of Australia WSA 01 – 2004 Version 3.1
- The Water Services Association of Australia (WSAA) Product Specifications for Products and Materials (refer to https://www.wsaa.asn.au/pdf/2008/ProductSpecs_01.pdf).
- The WSAA Product and Material Information and Guidance for Water Supply Code of Australia WSA 03 – 2002 (refer to <http://www.wsaa.asn.au> / National Codes / Codes of Practice / Products & Materials Guidance).
- Water Metering and Servicing Guidelines

Not all products and materials appraised by WSAA are approved for use in City West Water pipeline systems.

INSTRUCTIONS FOR DOWNLOADING WSAA PRODUCT SPECIFICATIONS

Click at this link [WSAA Product Specification](#) to download or view a full set of Product Specifications. The file will open at the contents page of the Product Specifications. If you press the F5 key you can now navigate around the document using the bookmarks.

Alternatively you can access the WSAA Website <https://www.wsaa.asn.au> and download or view a full set of Product Specifications:

The screenshot shows the website for the Water Services Association of Australia. The header includes the WSA logo and the tagline 'The peak industry association for urban water utilities'. A navigation menu contains links for Home, About WSA, Media Centre, Publications, National Codes, Product Appraisals, and Links. The main content area is titled 'Product Specifications/ Purchase Specifications' and contains the following text:

Product Specifications were issued on 24th May 2008 to replace the previously issued Purchase Specifications, which are referred to in the Codes of Practice and which were last revised in April 2007.

Product Specifications have been developed to facilitate:

- appraisal of products
- referencing in contract technical documentation such as project Specifications and design drawings; and
- procurement of products and materials for use in construction of water and sewerage networks.

Product Specifications need some work by the specifier before they can be applied. Options have to be closed out and specific Agency requirements included. An example of a project specific Product Specification is included with the Overview to the Product Specifications.

Product Specifications will continue to be developed as more Industry Standards and Australian Standards are published.

It is a Designer's responsibility to nominate specification most appropriate to project-specific circumstances and to complete the "Options to be specified" table and nominate the "Agency approved options" for each product. For further information refer to the content in this Product Catalogue or the relevant WSA Codes and/or MRWA Supplement.

ORGANISATION OF THIS CATALOGUE

The information for each product in this catalogue is formatted as shown below.

Supplier	Suppliers may be a reseller and not necessarily the manufacturer.
Brand Name	The marketing name used by the manufacturer of the product.
Nominal Size, DN	An alphanumeric designation of size for components of a pipeline system, which is used for reference purposes. It comprises the letters DN followed by a dimensionless whole number, which is indirectly related to the physical size, in millimetres, of the bore or outside diameter of the end connections.
Pipe or Fittings Type	The pipe or fitting type complying in design and with the relevant Standard, and included in the Manufacturers Product Certification schedule, unless otherwise approved by the Water Agency.
PN Ratings	Pressure rating marked on a pipe, fitting or appurtenance indicating the maximum pressure at which it can operate throughout its design life at a specified reference temperature, generally 20°C. The rated pressure incorporates a safety factor.
Additional Fittings	Additional fittings, not covered by the Manufacturers Product Certification schedule that have been assessed and approved for use by CWW.
Special Conditions	Special conditions imposed by CWW on the use of the listed product.
Certification Schedule	The Certification Schedule describes and details the products produced by the manufacturers and which comply with the appropriate Standard.

Product Specifications, Australian Standards and International Standards relevant to products listed are shown at the beginning of each product category.

INFORMATION

For further information and to advise of possible errors, omissions and changes required for future revisions, please fill out a [Document Improvement Request Form](#) and submit to standards@citywestwater.com.au.

PRODUCT CONTENTS

This product catalogue consists of the list of appurtenances and fittings at the downstream of ball valve/slucice valve of property service connection of DN 20 – DN 300 including;

1. Water meter;
2. Strainer / dirt box; and
3. Remote reading products (hardware and software)


Refer to CWW's Pressure Pipeline Systems Products Catalogue for the following products associated with service connection:

1. Various pipelines used for water reticulation network
2. Valves (slucice valve, in-line ball valve, termination ball valve and right angle ball valve)
3. 'Mains Tapping' components; i.e. tees, pre-tapped connector, tapping band, stainless steel clamps with BSP threaded offtake, ferrules, electrofusion tapping saddles for polyethylene pipes, bends/elbows
4. Surface fittings for water supply; i.e. valve and meter box covers

WATER METERS

WATER METER MECHANICAL

Residential Water Meter

SPECIFICATION	There is no WSAA Product Specification for Residential Mechanical Meters	
Australian Standard	AS 3565.1:2004 Meters for Water Supply – Cold water meters	
International Standard	ISO 4064-1:2005: Measurement of water flow in fully charged closed conduits - Meters for cold potable water and hot water - Part 1: Specifications	
Operating Mechanism	Volumetric/Piston, Single Jet, Multi Jet, Helix/Turbine	
Special Conditions	<ul style="list-style-type: none"> ▪ Only CWW supplied and approved meters shall be used. Potable water 'blue' and recycled water 'purple' ▪ Meters shall be fixed horizontally or vertically as marked on the meter body to gain accuracy of relevant meterological class (i.e. type A, B, C or D) ▪ Volumetric/Piston meters can be installed in any orientation ▪ Measuring of cold water up to 50 deg C ▪ Typical residential meters can be installed in commercial and industrial properties 	<p>Standard Drawing</p>

Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use
Davies Shephard / Elster Pty Ltd (UK)	Elster	V100 PSM Bare	20, 25, 32, 40	16	
		V100 PSM DCV Bare	20, 25		
		V100 PSM DCV Bare Recycled	20, 25		
		V100 PSM DCV Bare Fire Service	20, 25, 32, 40		
		V100 PSM Bare Meter Grooved	40		
		PSM c/w Dirtbox & Flanges	32, 40		
		Class 3 PSM Piston	20		
		Helix 3000V Combination bypass Piston	20, 32, 40		
		KG2 Piston (Imperial & Metric)	20, 32, 40		
		KG2 Metric 50mm flange	40		
		KG3 Piston (Imperial & Metric)	20, 25, 32		
		M2 Piston	25		
		MT2 (metric) Piston	32		

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Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use	
Davies Shephard / Elster Pty Ltd (UK)	Elster	KG4 Piston	20, 25, 32, 40	16		
		KG8 Piston	20, 25			
		KVM Piston	20			
		M2F (IMP) Piston	20			
		PSM LT (dual Check) Piston	20, 25			
		PSM LT (Single Check) Piston	20			
		PSM T Piston	20, 25, 32			
Actaris Pty Ltd (France) Schlumberger (France)	Actaris	TD8 (Single Check Valve)	20, 25	16		
		TD8 (Dual Check Valve)	20, 25			
		TD8	32			
		Flostar M	40			
		SingleJet Combination Preciflo bypass	20			
		Recycled				
		TD8 (Single Check Valve)	20, 25			
		TD8 (Dual Check Valve)	20, 25			
		TD8	32			
		Flostar M	40			
		RMC (Australia)	RMC		Single Check Meter	20, 25
Dual Check Meter	20, 25, 32, 40					
Dual Check Recycled Meter	20, 25					
Dual Check Meter c/w Dirtbox & Flanges	32, 40					
MNK Wet Dial, MultiJet	20, 25					
MRP Protected Roller, MultiJet	20, 25, 40					
Inferntial, MultiJet	32					
MNK Wet Dial, MultiJet	32, 40					

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Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use
Email (Kent, UK)	Email	E20 Piston,	20, 25	16	
		MK1 Piston,	20, 25, 40		
		MK2 Piston,	20, 25, 32, 40		
		MK3 Piston,	20		
		IP20 SingleJet	20		

WATER METER MECHANICAL

Commercial / Industrial Water Meter




SPECIFICATION	There is no WSAA Product Specification for Commercial / Industrial Mechanical Meters	
Australian Standard	AS 3565.1:2004 Meters for Water Supply – Cold water meters	
International Standard	ISO 4064-1:2005: Measurement of water flow in fully charged closed conduits - Meters for cold potable water and hot water - Part 1: Specifications	
Operating Mechanism	Volumetric/Piston, Helix/Turbine, Single Jet, Hydrodynamic (ball with attached turbine blades)	
Special Conditions	<ul style="list-style-type: none"> Only CWW supplied and approved meters shall be used. Potable water 'blue' and recycled water 'purple' Minimum straight pipe lengths of 10D and 5D shall be installed at the upstream and downstream sides of the meter to ascertain laminar flow. D – Meter's nominal diameter. MeiStream requires no straight pipe lengths at upstream or downstream tested and approved under OIML R-49 Meters should be installed horizontally to achieve accuracy defined as Class B or C Measuring of cold water up to 50 deg C 	
		<p>MeiStream basic MeiStream Plus</p> <p>Standard Drawing</p>

Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use
Davies Shephard / Elster Pty Ltd (UK)	Elster	V300 KG2000 Bare Meter Grooved	50	16	
		V300 KG2000 Bare Meter	50		
		KG2000 c/w Dirt box & Flanges Grooved	50		
		S2000 CSJ Bare	50, 80, 100		
		H4000 Helix 4000 Bare	50, 80, 100, 150, 200, 250, 300		
		Helix 3000	50, 80, 100, 150		

Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use
Davies Shephard / Elster Pty Ltd (UK)	Elster	Helix 3000 V 80 x 20 Combination	80		
		Helix 3000 V 100 x 25 Combination	100		
		Helix 3000 V 150 x 32 Combination	150		
		Helix 4000	100, 150		
		Helix 2000	200		
		KG Trade Piston	50, 80, 100		
		KG2000	50		
		KG2	80		
		KG4	50		
		KG6 Piston	100		
CSJ Single Jet	50, 80, 100				
Actaris Pty Ltd (France) Schlumberger (France)	Actaris	Flostar M (C Class) Turbine	50, 80, 100	16	
		Woltex (B Class)	50, 80, 100, 150, 200, 300		
		TWV Helix	80		
Sensus Metering Pty Ltd / Bermad Water Technologies	MeiStream Basic	Class B - Hydrodynamic	50, 80, 100 & 150 (WS long length)	16	
	MeiStream Plus	Class C - Hydrodynamic			
Meinecke (Combined Instruments, Australia), Tyco Flow Control	Tyco	Single Jet Meter (Mei jet)	50, 80, 100	16	
		Turbine Meter (Turbine)	50, 80, 100, 150, 200, 250, 300		
		Cosmos WP, Helix Cosmos WPD, Helix COSMOS C & CD, Single Jet Cosmos WPV 80 x 20 Combination, Helix Cosmos WPV 100 x 25 Combination, Helix	50, 80, 100, 150, 300		

Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use
		Recycled			
Sensus Metering Pty Ltd / Bermad Water Technologies	MeiStream	Class B - Hydrodynamic	50, 80 & 100, 150	16	
	MeiStream Plus	Class C - Hydrodynamic			
Actaris Pty Ltd (France) Schlumberger (France)	Actaris	Flostar M (C Class)	50, 80, 100	16	
		Woltex (B Class)	50, 80, 100, 150, 200, 300		
Meinecke (Combined Instruments, Australia), Tyco Flow Control	Tyco	Single Jet Meter (Mei jet)	50, 80, 100	16	
		Turbine Meter (Turbine)	50, 80, 100, 150, 200, 250, 300		
		Cosmos WP, Helix Cosmos WPD, Helix COSMOS C & CD, Single Jet Cosmos WPV 80 x 20 Combination, Helix Cosmos WPV 100 x 25 Combination, Helix	50, 80, 100, 150, 300		
RMC (Australia)	RMC	Dual Check Meter c/w Dirt box & Flanges	50	16	
		Helix	50, 80, 100, 150, 200, 250, 300		
		Flanged Bare Meter	50		
		Flanged Bare Meter c/w Dirtbox & Flanges	50		
		Atlas, Helix	50		
Email (Kent, UK)		MK1 Piston	50	16	

WATER METER ELECTROMAGNETIC

SPECIFICATION	There is no WSAA Product Specification for Electromagnetic flow meters	 <p>Siemens MAG800</p>  <p>ABB AquaMaster</p>  <p>Elster Q4000 (high flow)</p>
Australian Standard	AS 3565.1:2004 Meters for Water Supply – Cold water meters	
International Standard	ISO 4064-1:2005: Measurement of water flow in fully charged closed conduits - Meters for cold potable water and hot water - Part 1: Specifications OIML R 49-1 (International Organisation of Legal Metrology) now changed as NSC R-49 (NSC – National Standards Commission)	
Special Conditions	<ul style="list-style-type: none"> Only CWW supplied and approved meters shall be used. Potable water 'blue' and recycled water 'purple' Minimum straight pipe lengths of 5D and 3D shall be installed at the upstream and downstream sides of the meter to ascertain laminar flow. D – Meter's nominal diameter. IP (Ingress Protection) of flow sensor and transmitter shall be specified as IP68, IP67, IP65, IP54 depending on installation underground, aboveground or within a cubicle or underground chamber. Signal/Power cable connecting the flow sensor and transmitter shall be specified as 20/16mm plastic glands or 20mm armoured cable. Meter shall be specified as 'Integral / combined version' or 'remote / separate version' depending on the connection between flow sensor and transmitter. In accordance with power source meter shall be classified as 'battery powered', 'ac powered' or 'ac powered with battery backup'. 	
		Standard Drawing

Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use
ABB Pty Ltd	ABB	AC Powered AquaMaster	50, 80, 100, 150, 200, 250, 300	16	
		Battery Powered AquaMaster	50, 80, 100, 150, 200, 250, 300		
		AC Powered with battery backup AquaMaster	50, 80, 100, 150, 200, 250, 300		
Siemens Pty Ltd	Siemens	AC powered MAG5100W & MAG5000, MAG600	50, 80, 100, 150, 200, 250, 300	16	
		Battery Powered MAG5100W & MAG8000 (Sitrans F M MAG8000)	50, 80, 100, 150, 200, 250, 300		
		AC powered with battery backup MAG5100W & MAG5000, MAG600	50, 80, 100, 150, 200, 250, 300		

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Supplier	Brand Name	Type	Nominal Size	PN Ratings	Limits of Use
Siemens Pty Ltd	Siemens	AC powered (integral or remote) MAG 8000 & MAG 8000 CT (115 .. 230 V AC supply)	50, 80, 100, 150, 200, 250, 300	16	
		Battery powered (integral or remote) MAG 8000 & MAG 8000 CT (battery is mounted internally or externally)	50, 80, 100, 150, 200, 250, 300		
		AC powered with battery backup (integral or remote) MAG 8000 & MAG 8000 CT (12/24 V AC/DC power with battery back up)	50, 80, 100, 150, 200, 250, 300		
MHC (Tyco)	Combined Instruments	AC powered remote version	150	16	10 nos. were installed in July/Aug 2006
Elster Metering Pty Ltd	Q4000	Battery powered integral version (high flow)	50, 80, 100, 150 and 200	16	<ul style="list-style-type: none"> ▪ Undercover installation not exposed to direct sunlight ▪ Only SS316 bolting kits are allowed for aboveground applications. ▪ Mating flange should be AS 2129 Table D or AS 4087 Fig B5

Note:

(a) Electromagnetic flow meters are classified into the following categories:




1. Integral or combined version where flow sensor and transmitter are joined together without a signal/power cable.
2. Remote or separate version where flow sensor and transmitter are installed at two locations and joined together with a signal/power cable.

(b) Electromagnetic flow meters are further sub-divided into the following categories based on their source of power:

1. Battery powered
2. AC powered
3. AC powered with battery backup

(c) For Elster Q4000 electromagnetic meter, only CWW approved 'mating flanges' should be installed with the flow meter by the licensed plumber.









DIRT BOXES

SPECIFICATION	There is no WSAA Product Specification for dirt boxes	 <p>Straight Strainer screwed ends</p>  <p>Straight Strainer Flanged ends</p>  <p>Y-type Strainer</p>
International Standard		
Special Conditions	<ol style="list-style-type: none"> Supplied by CWW for new service connections of size ≥ 32 mm Customer owns the strainer and dirt box for all sizes 	
		Standard Drawing

Supplier	Brand Name	Type / Model	Nominal Size	PN Ratings	Limits of Use
Meinecke (Combined Instruments, Australia)	Meinecke	CIS/DB50, CIS/DB80, CIS/DB100	50, 80, 100	16	
		WPD-F40, WPD-F50, WPD-F80, WPD-F100, WPD-F150, WPD-F200	40, 50, 65, 80, 100, 150, 200		
RMC (Australia)	RMC		32, 40, 50, 80, 100, 150, 200, 250, 300	16	
Elster Pty Ltd, UK	Elster	Helix Bare Dirt Box	50, 80, 100, 150, 200, 250, 300	16	
		PSM Bare Dirt Box	32, 40		
		KG2000 Dirt Box	50		

REMOTE READING PRODUCTS

AMR (Automatic Meter Reading) and Handhelds

Supplier	Brand Name	Type	Operating Frequency	Limits of Use	Diagram
Actaris Pty Ltd (France)	Everblu	Cyble (10 year battery)	433 MHz	1 per meter	
		Collector (10 year battery)	433/868 MHz	35-50 meter/cybles per collector within suitable range	
		Access Point (AC powered)	868 MHz with collectors. GPRS tri-band communication	1200 meters/cybles per Access point	
		Host Software	Microsoft Windows XP Pentium® 4 processor 512 MB of RAM 10 MB of available hard disk	5000 meters/cyble	
Inovonics / Elster Pty Ltd (UK)	Tapwatch	Wireless transmitter (battery powered)	918 -928 MHz	1 per meter	
		Repeater (AC powered)	918-928 MHz	35-50 meter/cybles per collector within suitable range	
		Data Concentrator & Communicator (AC powered / PSTN connected)	Designated land telephone line	2000 meters	
		Host Software - Tapwatch 2 & 3	Microsoft Windows XP Pentium® 4 processor 512 MB of RAM 10 MB of available hard disk		
Itron		Field Collector 200 (battery powered)	400 MHz		
		Field Collector 300 (battery powered)	900 MHz bi-directional		

APPENDIX A

Models and Flow Rates for different meter types

City West Water Limited

The following details apply to Potable & Recycled meters

Meter Size	Meter Prefix	Manufacture / Supplier	Meter Model	Meter Flow Rates (Q3) & (Q3) & (Q4)			Ltrs per Pulse Output	Meter Dimensions		
				(Q3) Nominal / Permanent Flow Rate ltr/sec	(Q1) Minimum Flow Rate ltr/sec	(Q4) Max / Overload Flow Rate ltr/sec		Overall Meter length in mm	Height from Meter Base to Lid Closed in mm	Height with Cyble RF
20mm	MAF	Elster Pty Ltd	V100 (PSM - T)	1.1111	0.0055	1.3888	5 ltrs	153	87	N/A
25mm	MBF			1.1111	0.0088	1.9444		177	101	
32mm	MCF			1.7500	0.0140	2.7777		189	121	
40mm	MDF		2.7770	0.0222	4.1666	231	160			
50mm	MEF - P		V300	4.1666	0.0416	8.3333	300	245		
50mm	MEF - T			4.1666	0.0250	8.3333	300	210		
80mm	MFF - T		S2000 (CSJ)	8.3333	0.0500	16.6666	10 ltrs	350	240	
100mm	MGF - T			13.8888	0.0833	27.7777		350	265	
40mm	MDF - H		H4000 (Helix) Helical	4.1666	0.2777	13.8888	1000 ltrs	311	220	
50mm	MEF - H			4.1666	0.2777	13.8888		311	220	
80mm	MFF - H			11.1111	0.5555	33.3333		413	247	
100mm	MGF - H			16.6666	0.5555	50.0000		483	259	
150mm	MHF - H			41.6666	0.8333	125.0000		500	335	
200mm	MIF - H			69.4444	1.6666	194.4444		520	387	
250mm	MJF - H			111.1111	3.0555	277.7777		450	438	
300mm	MKF - H			166.6666	4.1666	416.6666		500	465	
20 mm	MASR	Actaris Pty Ltd	TD8	1.1111	0.0044	1.3889	1ltr	154	143	203
25 mm	MBSR			1.7500	0.0069	2.1875		178	156	216
32 mm	MCSR			2.7777	0.0111	3.4722		178	156	216
40 mm	MDSR		Flostar M (C Class)	4.4444	0.0125	5.5556	10 ltrs	232	178	238
50 mm	MESR			6.6666	0.0167	8.3333		311	178	238
80 mm	MFSR			8.8888	0.0278	11.1111		413	235	295
100 mm	MGSR		13.3333	0.0333	16.6667	483	258	318		
50 mm	MESR - W		Woltex (B Class)	11.1111	0.0833	13.8889	100 ltrs	311	242.5	302.5
80 mm	MFSR - W			26.6666	0.2083	33.3333		413	260	320
100 mm	MGSR - W			44.4444	0.3333	55.5556		483	279	339
150 mm	MHSR - W			111.1111	0.4167	138.8889		500	336.5	396.5
50mm	MEC - T			5.5555	0.0194	11.1111		300	205	
80mm	MFC - T	Tgeo Pty Ltd	Meijet Single Jet Meter	9.7222	0.0277	25.0000	100 ltrs	350	235	N/A
100mm	MGC - T			16.6666	0.0555	33.3333		350	257	

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The following details apply to Potable & Recycled meters				Meter Flow Rates Q1, Q3 & Q4			Ltrs per Pulse Output	Meter Dimensions		
Meter Size	Meter Prefix	Manufacture / Supplier	Meter Model	(Q3) Nominal / Permanent Flow Rate ltr/sec	(Q1) Minimum Flow Rate ltr/sec	(Q4) Max / Overload Flow Rate ltr/sec		Overall Meter length in mm	Height from Meter Base to Lid Closed in mm	Height with Cycle RF
MAG 50mm	F050 - MA	ABB Pty Ltd	AC Powered Meters AquaMaster	11.1111	0.0111	13.8888	Data Logger Option	200	276	n/a
MAG 80mm	F080 - MA			27.7777	0.0277	34.7222		200	319	
MAG 100mm	F100 - MA			44.4444	0.0444	55.5555		250	330	
MAG 150mm	F150 - MA			111.1111	0.1111	138.8888		300	381	
MAG 200mm	F200 - MA			175.0000	0.1750	218.8888		350	502	
MAG 250mm	F250 - MA			277.7777	0.2777	347.2222		450	540	
MAG 300mm	F300 - MA			444.4444	0.4444	555.5555		500	580	
MAG 50mm	F050 - MB	ABB Pty/Ltd	Battery Powered Meters AquaMaster	11.1111	0.0277	13.8888	Data Logger Option	200	276	n/a
MAG 80mm	F080 - MB			27.7777	0.0412	34.7222		200	319	
MAG 100mm	F100 - MB			44.4444	0.1111	55.5555		250	330	
MAG 150mm	F150 - MB			111.1111	0.2777	138.8888		300	381	
MAG 200mm	F200 - MB			175.0000	0.4444	218.8888		350	502	
MAG 250mm	F250 - MB			277.7777	0.6944	347.2222		450	540	
MAG 300mm	F300 - MB			444.4444	1.1111	555.5555		500	580	
MAG 50mm	F-BM	Siemens Pty Ltd	Mag 8000 Battery Operated (Compact version)	5.6000	0.4500	17.5000	Min. 0.4 ltrs/pulse	200	307.5	n/a
MAG 80mm				13.8900	1.1000	44.4500	Min. 0.9 ltrs/pulse	200	337	
MAG 100mm				33.3000	1.7500	69.0000	Min. 1.4 ltrs/pulse	250	354	
MAG 150mm				69.4500	4.3600	175.0000	Min. 3.5 ltrs/pulse	300	411.5	
MAG 200mm				111.1100	6.9200	276.9000	Min. 5.6 ltrs/pulse	350	464	
MAG 250mm				194.4000	11.1100	444.4400	Min. 8.9 ltrs/pulse	450	523.5	
MAG 300mm				277.7800	17.3600	694.4000	Min. 13.9 ltrs/pulse	500	577	
MAG 50mm	F-PM	Siemens Pty Ltd	MAG5100 & MAG5000 (compact version)	5.6000	0.4500	17.5000	Min. 0.002 ltrs/pulse	200	416	n/a
MAG 80mm				13.8900	1.1000	44.4500	Min. 0.005 ltrs/pulse	200	445.5	
MAG 100mm				33.3000	1.7500	69.0000	Min. 0.007 ltrs/pulse	250	467.5	
MAG 150mm				69.4500	4.3600	175.0000	Min. 0.02 ltrs/pulse	300	525	
MAG 200mm				111.1100	6.9200	276.9000	Min. 0.03 ltrs/pulse	350	577.5	
MAG 250mm				194.4000	11.1100	444.4400	Min. 0.041 ltrs/pulse	450	639.5	
MAG 300mm				277.7800	17.3600	694.4000	Min. 0.06 ltrs/pulse	500	690.5	

Note: The above figures are indicative only; please refer the appropriate water meter supplier for updated figures.

MANUFACTURERS AND SUPPLIERS

Supplier	Address	Phone	Fax
Tyco Water Pty Ltd http://www.tycowater.com.au	60A Maffra St Coolaroo Vic 3048	(03) 9309 9133	(03) 9309 6237
Siemens Pty Ltd http://www.siemens.com.au	885 Mountain Highway Bayswater, Vic 3153	(03) 97212818	(03) 97217650
ABB Australia www.abb.com	850 Lorimer St Port Melbourne 3207	(03)8645 0500	(03)9681 9521
Reliance Worldwide http://www.relianceworldwide.com.au	40 -42 Ross St Newstead QLD 4006	(07) 3252 3646	1800 062 669
Bermad Water Technologies Pty Ltd http://www.bermad.com.au	7 Inglewood Drive, Thomastown VIC 3074	(03) 9464 2374	(03) 9464 2382
Elster Metering Pty Ltd http://www.elstermetering.com	55 Northcorp Blvd, Broadmeadows, VIC 3047	(03) 9355 2000	(03) 9355 2011
Actaris Pty Ltd http://www.actaris.com	8 Rosberg RdWingfield SA5013	(08) 8169 2500	(08) 8168 2552
Itron http://www.itron.com	Level 20, 19 Martin Place, Sydney, NSW 2000	(02) 8235 5700	(02) 8235 5799
Greenspan (Tyco Flow Control Environmental Systems) http://www.greenspan.com.au	15-17 Lakewood Blvd, Braeside, Vic 3195	(08) 94771188	(08) 94796727

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