Wellington Water

Register of Approved Products for use in Water Services Infrastructure

March 2022 **Revision 2.2**

Our water, our future.

This document was developed for the benefit of Hutt, Porirua, Upper Hutt and Wellington city councils and Greater Wellington Regional Council.

Revision history

Rev No	Revision Description	Date
Rev 1.0		Aug 2019
Rev 2.0	Updated formatting and inclusions	Nov 2021
Rev 2.1	Updated product detail	Dec 2021
Rev 2.2	Added summary of changes table, amendments to product requirements	Mar 2022

Contents

1. Introduction

This document lists products that are approved for use in water supply and drainage infrastructure projects in Hutt, Porirua, Upper Hutt and Wellington cities, and the Greater Wellington region. This document does not apply to Wellington Water Bulk Water Network works. The list is generally restricted to commonly used fixtures and fittings. Specialised items, such as pumps, radio transmitters, electrical components etc., are not included in this list. Prior to design, the designer should confirm the specifications for these specialised items with Wellington Water.

Where a product is not listed, it should be assumed that the product has not been approved and confirmation should be sought from Wellington Water.

To apply to have a product included on the register, consideration should be made towards the Council's material specifications prior to any application. Any application should be lodged with Wellington Water for further consideration.

The Council material specifications can be found in the Regional Specification for Water Services.

1.1. Summary of changes

Version	Section	Description of revision
2.1	2.1 Concrete Lined Ductile Iron Pipe	Kurimoto SRDIP pipe: • Specified compliance with ISO 16134) • Specified seismically resilient joint system
	2.4 Steel Pipe	Corrected product name from Sintalock to Sintakote
2.2	1.1 Summary of changes	Added section
	2.8 Profiled Polyethylene and Polypropylene Pipes	Restored general requirements for rubber ring joints and SN16 minimum (erroneously removed from v2.0)

2. Pipes

All pipes shall be rated to the appropriate pressure class as defined in the Regional Standard for Water Services.

Where scenarios exist where the products listed below are not suitable, the Regional Standard for Water Services and Regional Specification for Water Services should be consulted for alternatives.

2.1. Concrete Lined Ductile Iron Pipe

Product	Notes	Application Ref	WS	WW	SW
Tyton Xcel Z+	• Must be used with Tyton-lok rings. • Polyethylene wrap to be used where ground conditions or specifications require. Alternative coating may be considered by Council upon application • Used for repairs on existing pipes only	APR2021-001	✓		
Tyton Xtreme Z+	• Must be used with Tyton-lok rings. • Polyethylene wrap to be used where ground conditions or specifications require. Alternative coating may be considered by Council upon application	APR2021-001		✓	
Saint Gobain PAM pipe (AS/NZS 2280)	• Must be used with Grip-Lok rings. • Zinalium coating required as a minimum • Polyethylene wrap to be used where ground conditions or specifications require. Alternative coating may be considered by Council upon application • Used for repairs on existing pipes only	2010-0003	✓		
Humes AS/NZS 2280 DICL pipe (Ø150 & Ø200 PN35 only)	• Must be used be used with Grip-lok restraining rings. • Polyethylene wrap to be used where ground conditions or specifications require. Alternative coating may be considered by Council upon application • Used for repairs on existing pipes only	2010-0001	✓		
Gillies Hydrotite AS/NZS 2280 DICL pipe	• Must be used be used with Grip-lok restraining rings. • Polyethylene wrap to be used where ground conditions or specifications require. Alternative coating may be considered by Council upon application • Used for repairs on existing pipes only	2014	✓		

Product	Notes	Application Ref	WS	WW	SW
Saint Gobain Concrete Lined Ductile Iron Pipe (ISO 2531)	• Proprietary rubber ring joints with restrained jointing rated to a minimum PN16. Concrete or epoxy lining plus epoxy over zinc coating.		✓		
Kurimoto SRDIP pipe (complies with ISO 16134)	• Polyethylene wrap to be used where ground conditions or specifications require. Alternative coating may be considered by Council upon application • To be used only on trunk mains and/or mains without service connections • DN 100, 150, 200, 300 and 400 only • Seismically resilient joint system		✓		

2.2. Polyvinylchloride Pipe

Product	Notes	Application Ref	WS	WW	SW
MPVC, RRJ Series 1 (AS/NZS 4765)	• Pressure classification as per Regional Specification for Water Services • EPDM rings • Series 2 can be used for repairs on existing Series 2 pipelines		✓		
UPVC, RRJ Series 1 (AS/NZS 1477)	• Pressure classification as per Regional Specification for Water Services • EPDM rings • Series 2 can be used for repairs on existing Series 2 pipelines		✓		
PVC-U AS/NZS 1260	• Permitted for public mains in Hutt City, Upper Hutt City and Porirua City • Permitted for laterals connecting to private drainage • Can be used for repairing existing PVC or Vitrified Clay drains • Rubber ring joints only, minimum SN16			✓	✓

2.3. Polyethylene (PE) Pipe AS/NZS 4130

Product	Notes	Application Ref	WS	WW	SW
Polyethylene PE100 (Series 1) Pressure Pipe	• To be used for general reticulation pipes in the public network, and wastewater and stormwater rising pressure mains. • Joints in accordance with the Regional Specification for Water Services • SDR 11 • PN 16 minimum		✓	✓	✓
Polyethylene PE100 (Series 1) Drainage pipes	• Joints in accordance with the Regional Specification for Water Services • SDR 17.6 maximum			✓	✓

2.4. Steel Pipe

Product	Notes	Application Ref	WS	WW	SW
Concrete lined mild steel (NZS 4442)	• Externally coated with an approved tape wrapping system • Choose min. wall thicknesses in-line with NZS 4442 Table 2 Column B or as specified in the specification		✓		
Sintakote concrete lined steel (AS 1579)	• For pipe 600mm nominal bore or smaller • Only lap welded or flanged jointing type system approved		✓		
Stainless Steel (ASTM A312)	• Schedule 40 • 316 or 316L for underground/wet-well applications • 304 or 304L for drywell/chamber or above ground applications		✓		

2.5. Acrylonitrile Butadiene Styrene (ABS) Pipe

Product	Notes	Application Ref	WS	WW	SW
ABS (AS/NZS 3518) Series 1 (Metric)	For pump station pipe work. Generally not used in underground applications.		✓	✓	

2.6. Concrete Pipe AS/NZS 4058

Product	Notes	Application Ref	WS	WW	SW
Humes Spun pipe	• Rubber-ring jointed and Class 2 minimum • Will not typically be permitted for drains 375 mm and smaller for use in the wastewater network • When used for wastewater, pipes must be factory lined with PE or manufactured with approved additives and a sacrificial layer to achieve durability requirements. • Shall not be installed in marine environments (as defined in AS/NZS 4058) without prior written approval • Shall only be installed on gravity pipelines.			✓	✓
RCP/VCT Pipe	• Rubber-ring jointed and Class 2 minimum • Will not typically be permitted for drains 375 mm and smaller for use in the wastewater network • When used for wastewater, pipes must be factory lined with PE or manufactured with approved additives and a sacrificial layer to achieve durability requirements. • Shall not be installed in marine environments (as defined in AS/NZS 4058) without prior written approval • Shall only be installed on gravity pipelines.			✓	✓
Hynds Hyspec Spun pipe	• Rubber-ring jointed and Class 2 minimum • Will not typically be permitted for drains 375 mm and smaller for use in the wastewater network • When used for wastewater, pipes must be factory lined with PE or manufactured with approved additives and a sacrificial layer to achieve durability requirements. • Shall not be installed in marine environments (as defined in AS/NZS 4058) without prior written approval • Shall only be installed on gravity pipelines.			✓	✓

Product	Notes	Application Ref	WS	WW	SW

Hynds Pinnacle pipe and pre-lubricated sliding rubber rings	• EDPM 40 rubber-ring jointed
	• Approval is valid for the following products:
	  ○ Belled socket joint, Class 2: DN 675 – 1350, DN 1650
	  ○ Belled socket joint, Class 4: DN 675 – 825, DN 1050 – 1350, DN 1650
	  ○ In-wall joint, Class 2 and 4: DN 1950, 2100, 2550
	  ○ Forsheda 146 pre-lubricated sliding rubber rings (EDPM 40 only)
	• When used for wastewater, pipes must be factory lined with PE or manufactured with approved additives and a sacrificial layer to achieve durability requirements
	• Shall not be installed in marine environments (as defined in AS/NZS 4058) without prior written approval
	• Shall only be installed on gravity pipelines.
				✓	✓

Elepipe RCRRJ Pipe	• DN225 – DN1600 only • Rubber-ring jointed and Class 2 minimum • Shall not be installed in marine environments (as defined in AS/NZS 4058) without prior written approval • Shall only be installed on gravity pipelines.	APR2020-019			✓

2.7. Vitrified Clay

Product	Notes	Application Ref	WS	WW	SW
Vitrified Clay AS 1741	Permitted only for invert tiles in manholes and chambers			✓	

2.8. Profiled Polyethylene and Polypropylene Pipes

Note: Profiled polyethylene and polypropylene pipes must be rubber-ring jointed and SN16 minimum.

Product	Notes	Application Ref	WS	WW	SW
CivilBoss Twin Wall Polypropylene Pipe	• Rubber ring joints only • Minimum SN16 • Pipes must not be used for pressure applications • Nominal diameters in the range DN 225 – 450 only • Must be installed by personnel trained to avoid shallow sockets resulting in joints "squeezing" out during installation • Post installation connections must be installed using Fernco QwikSeals • Pipelines must be designed and installed in accordance with AS/NZS 2566, the Regional Specification for Water Services, and the manufacturer's instructions	APR2020-018			✓
PKS Civil Pipe Spiral Wound PE100	• Minimum SN16 • Pipes must not be used for pressure applications • Nominal diameters in the range DN600 to DN1200 only • Must be installed by personnel trained to avoid shallow sockets resulting in joints "squeezing" out during installation • Post installation connections must be installed using Fernco QwikSeals • Pipelines must be designed and installed in accordance with AS/NZS 2566, the Regional Specification for Water Services, and the manufacturer's instructions	APR2020-012			✓

3. Fittings, Couplings & Connectors

3.1. Ductile Iron fittings

Product	Notes	Application Ref.
Ductile iron bends, tees, tapers, spools (AS/NZS 2280)	Fittings shall be protected from corrosion by a factory applied coating; eg Rilsan, Levasit etc.	-
Ductile iron bends, tees, tapers, spools (ISO 2531)	To be used with ISO 2531 DICL pipe only	-

3.2. Polyethylene Electrofusion Fittings

Product	Notes	Application Ref.
Frialen (AS/NZS 4129)		-
Plasson (AS/NZS 4129)		-
Georg Fischer (AS/NZS 4129)		-
Fusion Provida (AS/NZS 4129)	PE100 SDR11 fittings DN355 or smaller	28/11/2017

3.3. Polyethylene Compression Fittings – Repair Only

Compression fittings shall only be used for the repair of pipelines or to connect from a new pipeline to an old pipeline.

See also Mechanical Couplings for fittings for larger diameter PE.

Product	Notes	Application Ref.
Talbot Pushfit (AS/NZS 4129)	• For use on PE80b (MDPE) only • Up to 63mm OD only • To be used with inserts	-
Philmac Metric (AS/NZS 4129)	• For use on PE80b and PE100 • Up to 63mm OD only • To be used with inserts	-
Plassim (AS/NZS 4129)	• For use on PE80b (MDPE) only • Up to 63mm OD only • To be used with inserts	-
Plasson “Series One” (AS/NZS 4129)	• For use on PE80b and PE100 • Up to 63mm OD only • To be used with inserts	30/10/2012
Hansen “Easy Fit” (AS/NZS 4129)	• For use on PE80b and PE100 • Up to 63mm OD only • To be used with inserts	7/11/2014

3.4. Mechanical Couplings

All installed mechanical couplings shall be protected using the Denso paste and wrapping protection system.

Only to be used for transition joints from new to existing mains where non-mechanical joints are not practicable, and for repairs. Not to be used as a standard pipe jointing method on new pipelines.

Product	Notes	Application Ref.
Viking Johnson range	Includes flange adapters and straight couplers. PN16 minimum.	-
AVK Supacoupler range	Includes flange adapters and straight couplers. PN16 minimum.	-
Tyco Vari-Gib	Includes flange adapters and straight couplers. PN16 minimum.	-

3.5. Mechanical Couplings for Polyethylene Pipes

All installed mechanical couplings shall be protected using the Denso paste and wrapping protection system.

Only to be used for transition joints from new to existing mains where non-mechanical joints are not practicable, and for repairs. Not to be used as a standard pipe jointing method on new pipelines.

PE restraint fittings to be used with pipe inserts.

Product	Notes	Application Ref.
Georg Fischer Waga Multi/Joint 3000 Plus	PN16 minimum	-
AVK Supa Plus	PN16 minimum	-
Hawle System 2000	PN16 minimum	-
Hawle Synoflex	PN16 minimum	-
Viking Johnson UltraGrip	PN16 minimum	-
Nova Siria Multigrip	PN16 minimum	-

3.6. Dismantling Joints

Product	Notes	Application Ref.
Viking Johnson	PN16 minimum	-
AVK Dismantling Joint	PN16 minimum	-
Hawle Vario	PN16 minimum. Not to be used for seismic flexibility.	-

3.7. Flanged Flexible Joints

Product	Notes	Application Ref.
Flex-tend	These fittings require special design with consideration towards unbalanced thrust and initiating forces.	-
Saint Gobain PAM Geoflex		-

3.8. Tapping Bands for Water Connections

Product	Notes	Application Ref.
Plasson PN16 mechanical tapping saddle (PE80b)	For use 63OD pipe and smaller	-
RX Fittings (for PE pipe only)	For use 63OD pipe and smaller	-
Tapping bands for water mains	LG2 or Aluminium bronze, stainless steel, or fusion bonded epoxy coated DICL tapping band. Fully encircled, metal to metal seating and hydraulically activated lip seal	-

3.9. Other Connectors

Product	Notes	Application Ref.
Fernco QwikSeal	Only to be used in non-pressure applications for lateral connections to gravity pipes	-

4. Valves

4.1. Gate valves – Resilient Seated

4.1.1. General Use

Product	Notes	Application Ref.
AVK series 57 (AS/NZS 2638.2)	>= 80 mm nominal diameter, anti-clockwise closing	-
Hawle E2 (AS/NZS 2638.2)	>= 80 mm nominal diameter, anti-clockwise closing	-
Sureflow Figure 500 (AS/NZS 2638.2)	>= 80 mm nominal diameter, anti-clockwise closing	-
Sufa / Maxiflo (AS/NZS 2638.2)	>= 80 mm nominal diameter, anti-clockwise closing	-
Derwent (P&I) (AS/NZS 2638.2)	>= 80 mm nominal diameter, anti-clockwise closing	-
Hawle RS service valve	50 mm **Clockwise** closing with hand-wheel	-
AVK Series 57 service valve	50 mm **Clockwise** closing with hand-wheel	-

4.1.2. Repair Only

Product	Notes	Application Ref.
Daepoong S-Gate Valves	• Anti-clockwise closing • Nominal diameter sizes DN100, DN150, DN200, and DN250 • To be used on ductile iron, cast iron and asbestos cement (requires risk assessment) pipes only • For water supply and pressure sewer applications only • May only be used for repair work or temporary work, on an existing pipe in service, and where the cut-in of a traditional gate valve will result in an unacceptable service interruption as determined by Wellington Water's Network Controller • Installation by fully trained personnel approved by CNS Engineering only • Requires special consideration of socket pull-out of the pipe and valve due to differential thrust from the valve	APR2020-001

4.2. Check Valves

Product	Notes	Application Ref.
Check Valve – AVK Swing Check	For mains 80 mm and above (water supply only)	-
Check Valve – Valmatic Surgebuster	For pressure applications on wastewater, stormwater or water supply	-

4.3. Globe Control Valves – Pressure reducing, sustaining and relief valves

Product	Notes	Application Ref.
Bermad		-
Cla-Val		-

4.4. Service valves (Tobies)

Product	Notes	Application Ref.
Acuflo DR Brass Manifold (20 mm NB)	GM900 with dual-check valve	-
Acuflo DR brass diaphram valve (20 mm NB)	Must be installed with downstream approved dual-check valve.	-
Gate valves (see **Section 4.1**)	Can also be used as service valves with larger services > 20 mm	-

4.5. Backflow Preventers

Product	Notes	Application Ref.
Wilkins-Zurn	• BFP type to be determined by Council in conjunction with activity hazard class. • To comply with AS/NZS 2845.1	-
Watts		-
Febco		-
Pentair-ValCheQ		-

4.6. Hydrants

All hydrants shall be clockwise closing and without frost plugs.

Product	Notes	Application Ref.
Gillies Metaltech Hydrant (NZS 4522)		-
AVK (NZS 4522)		-

4.7. Other Valves

Product	Notes	Application Ref.
Mainscock – Tita gunmetal in-line ball valve	Used mostly when tapping under pressure.	-

5. Water Meters

All meters should comply with the requirements of OIML R49.

Product	Notes	Application Ref.
Sensus (formerly Socam and Meinecke)	• 620B/C/MB/MC (min. R160) • Meitwin combination meters • Sensus Meistream Plus “Class C” min. R315 (DN50 to DN80 only)	-
Elster-Kent	• In-line and manifold type meters • Combination meters • H5000 Woltmann (extended version – R1250)	-
ABB Watermaster	• Magnetic flow meter. • Can be used for wastewater also if full bore flow is continuously maintained such as within pumping stations.	-
Itron (formerly Actaris and Neptune)	• In-line meters only	-
Sappel (Diehl)	• In-line and manifold meters	-

6. Manholes and Streetware

6.1. Manhole Covers

These covers are to be used on standard manhole installation for sewage and stormwater applications.

Product	Notes	Application Ref.
WCC Patterned “Maestro” Class E ductile iron AS 3996	Hinged. To be used in WELLINGTON CITY ONLY.	-
HCP ductile iron hinged frame and centre WCC Pattern (EN124)	Hinged. To be used in WELLINGTON CITY ONLY.	-
“Maestro” Class E ductile iron (standard pattern) AS 3996	Hinged. To be used only outside of Wellington city.	-
HCP ductile iron hinged frame and centre Standard Pattern (EN124 D400)	Hinged. To be used only outside of Wellington city.	-
Humes Ductile Iron Hinged Manhole Cover Set - 80082098	Hinged. To be used only outside of Wellington city.	APR2021-011

6.2. Manhole Safety Grilles

Product	Notes	Application Ref.
Impact Engineering – Maestro	Fits Maestro	-
Impact Engineering - Hygrade HD	Fits Hygrade HD 485mm (not for new lids, retrofit only)	-
Impact Engineering - Hygrade LD	Fits Hygrade LD 510mm (not for new lids, retrofit only)	-
T & T Bennett - MSG610S/S	Fits Maestro	-
T & T Bennet - 48503	Fit Humes lids 460mm opening (not for new lids, retrofit only)	-
Calibre - CSG600SSM	Fits Maestro lids	-

6.3. Prefabricated Manholes Systems

Product	Notes	Application Ref.
Hynds - Pinnacle Manhole	Approval includes PE encapsulated galvanised iron step system	APR2020-011
Hynds - PERFECT Manhole System	• Can only be used on storm water network. • Manholes shall not be installed on PE pipelines.	APR2020-011
Hynds - Hyspec Manhole System		
Elepipe Manhole System	DN1050 – DN1800 only.	APR2020-019
Humes - Concrete Manhole Systems		

6.4. Surface boxes

Product	Notes	Application Ref.
Channell HDPE bulk pits	• Can only be used on drinking water distribution network • Must not be installed in road carriageways • Box and lid must be rated to a minimum of AS 3996 Class C • Lid must meet the slip resistance requirements of the NZ Building Code Section D2.1.2 Slip Resistance • Lid must have blue “Water” coded insert to indicate NZ water compatibility	APR2020-009

7. Miscellaneous

Product	Notes	Application Ref.
		-