



APPROVED MATERIALS

AM-3 WATER SUPPLY



QUEENSTOWN
LAKES DISTRICT
COUNCIL

Table 3: Water Supply

Materials that are not on the following table MUST be approved by Council – refer to – Chief Engineer

Updated 21.01.20

Note: All parts of the water supply system in contact with drinking water need to be designed using components and materials that comply with AS/NZS 4020

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-3.1	Water Pipe	Bulk water mains: larger than 200mm Ø. These to be specifically approved and specified by Council. Principal mains: 100mm, 150mm and 200mm Ø either uPVC or PE Rider mains: 50mm Ø (ID PVC), 63mm Ø (OD MDPE/PE 80) Services: 20mm, 25mm, 40mm and 50mm Ø				
AM-3.1.1	Spiral-Welded Steel Pipe	Generally (but not limited to) bulk mains unless otherwise approved	NZS 4442 or AS 1579	- Rubber ring joints and Polyken YG111 external wrapping or speed steel with polyethylene coatings - Internal linings include concrete, epoxy and galvanised	Steelpipe New Zealand	Mico Pipelines

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-3.1.2	Ductile Iron Class K9	Bulk mains unless otherwise approved	AS/NZS 2280 and amendments	- Light cement lined with Tyton joints. External protection with greensleeve - Generally suspended pipes and high structural loadings	Tubemakers of Australia	Mico Pipelines
AM-3.1.3	Ductile Iron Pipe, Light Cement Lined Tyton Excel PN20 and PN35	Bulk mains unless otherwise approved	AS/NZS 2280 and amendments	- With Tyton joint elastomeric seals and socket/spigot joints (with blue polyethylene sleeving) not for use in high water table areas - Asmuss Water Systems Licence #SMK0883	Asmuss Water Systems	Asmuss Water Systems
AM-3.1.4	PVC Pipes and Fittings for Pressure Applications	Bulk, principal and rider mains	AS/NZS 1477	- Coloured white - Joints should be spigot and socket rubber ring type (Z joint). Solvent cement joint should not be used - IPLEX Licence #SMK02570 - RX Plastics Licence Tel.Lic0001	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.1.5	uPVC	Bulk, principal and rider mains	AS/NZS 1477	- Joints should be spigot and socket rubber ring type (Z joint). Solvent cement joint should not be used - IPLEX Licence #SMK02570 - RX Plastics Licence Tel.Lic0001	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.1.6	mPVC RRJ	Bulk, principal and rider mains	AS/NZS 4765: Series 2	Joints should be spigot and socket rubber ring type (Z joint). Solvent cement should not be used	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited	Humes Pipeline Systems Hynds Pipe Systems Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
					RX Plastics Ltd	Mico Pipelines
AM-3.1.7	Polyethylene Pipe (MDPE) PE80, PN12.5, SDR11 Pipes >63mm OD should be PE100	Mains up to and including suggest 50mm (63mm OD)	AS/NZS 4130 and amendments	- Pipes should be butt or fusion welded in accordance with the manufacturer's recommendations, and the standard coloured blue or blue jacket - Unrestrained mechanical couplers can be used where appropriate and meets relevant NZ standard - IPLEX Licence #SMKP20400 - RX Plastics Licence #SMKP21662	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.1.8	Polyethylene Pipe (HDPE) PE100, PN12.5, SDR13.6	Mains 100mm Ø (125mm OD) and greater	AS/NZS 4130 and amendments	- Pipes should be butt or fusion welded in accordance with the manufacturer's recommendations, and the standard coloured blue or blue jacket - Unrestrained mechanical couplers can be used where appropriate and meets relevant NZ standard - IPLEX Licence #SMKP20400 - RX Plastics Licence #SMKP21662	Asmuss Water Systems IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Asmuss Water Systems Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.1.9	Copper Tube 20-50mm Half-Hard	BPD on service mains	NZS 3501	For use with RPZ backflow prevention devices only		Mico Metals
AM-3.2	Seal Rings		Comply with AS 1646.1	Elastomeric seals for waterworks purposes	NZ Channel Forms Ltd	
AM-3.3	Fittings					

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-3.3.1	Cast-Iron Socket and Spigot Fittings Cast-Iron Flanges		Flanges to be to AS 4087-2011 with required pressure (PN) rating to be specified. Flange coatings to be to AS/NZS 4158	- Rated at PN16 or higher - Epoxy coated	Gillies Metaltech	HJ Asmuss & Company Limited
AM-3.3.2	Ductile-Iron Pipe Flanges, Socket and Spigot Fittings Flanges		Flanges to be to AS 4087-2011 with required pressure (PN) rating to be specified. Flange coatings to be to AS/NZS 4158		Crevet Pipelines Asmuss Water Systems	Humes Pipeline Systems Hygrade Products Ltd Mico Pipelines Asmuss Water Systems
AM-3.3.3	Stand-Alone Flanges		Flanges to be to AS 4087-2011 or AS 2129 (for mild steel) with required pressure (PN) rating to be specified. Flange coatings to be AS/NZS 4158	- PVC, ductile or cast-iron - Steel and tube – unflanged adaptor – ductile iron	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited Steel and Tube Holdings Limited Asmuss Water Systems	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.3.4	Bolts, Nuts and Washers to be Hot-Dipped Galvanised as an Alternative to		AS/NZS 1111 and 1112	ISO metric hexagon commercial bolts and screws and ISO metric hexagon nuts, including thin nuts, slotted nuts and castle nuts	Manufacturer who meets the required standard	Humes Pipeline Systems Hynds Pipe Systems Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
	316-Grade Stainless Steel			- Hot-dipped galvanised bolts, nuts and washers need to be wrapped in denso tape - This particularly applies for corrosive soil and marine conditions		Mico Pipelines Asmuss Water Systems
AM-3.3.5	Stainless Steel Bolts, Nuts and Washers are acceptable alternatives to Hot-Dipped Galvanised Fastenings, provided they are 316-Grade Stainless Steel with Factory Applied Molybond Coating		Complying with AS 1252 – high strength steel fastenings	- Stainless steel bolts, nuts and washers need to be wrapped in denso tape - This particularly applies for corrosive soil and marine conditions - Thread binding may occur and the bolts should be cut off if needed to be un-wound	Manufacturer who meets the required standard	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.3.6	Gibaults - Cast-Iron (coating as per standard) - M16 316 Stainless Steel (with clips fusion coating as per standard)		AS/NZS 4158 and amendments Coating to ASTM A276	- Use 316-grade stainless steel bolts as a preference - Use 316-grade stainless steel fasteners	Gillies Metaltech Viking Johnson – Maxifit (with Sheraplex coated bolts) Crevet Pipelines Milnes Pty Ltd Asmuss Water Systems	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.3.7	Unrestrained Mechanical Couplings	Up to 200mm DI barrels and backing rings or SS barrels with DI backing	AS/NZS 4998 AS/NZS 4158	- Use hot-dipped galvanised bolts as per 3.1.4 or 316-grade stainless steel bolts - Use 316-grade stainless steel fasteners	Gillies Metaltech Viking Johnson Crevet Pipelines	Humes Pipeline Systems Hynds Pipe Systems Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
	- Ductile-iron (nylon coating as per standard) - M16 316-Grade Stainless Steel Barrel (with clips fusion coating as per standard)	rings. Above 200mm note in item 1			Milnes Pty Ltd AVK Australia Pty Ltd Asmuss Water Systems (recommended for Gibaults >200mm (ID))	Mico Pipelines Asmuss Water Systems
AM-3.3.8	MDPE Fittings - Electro Fusion - Butt Fusion - Mechanical <50mm		AS/NZS 4129	▪ Agru butt welding and electro fusion fittings ▪ "Plassim" MDPE fitting to AS/NZS 4129 – Licence No: WMKA21062 ▪ "Magnum" MDPE fitting to AS/NZS 4129 – Licence No: SMK02432 ▪ Viking Johnson aqua fast, aqua grip and ultra-grip mechanical fittings for polyethylene pipe ▪ Hawle System 2000 mechanical fittings for polyethylene pipe ▪ Innogaz ▪ Marley Licence #1271 ▪ Plasson Licence #1494 and 1271 ▪ Asmuss Alprene A16 Easygrip Licence #1157 ▪ Plasson series one pushfit fitting ▪ Hawle HAKU Saddle No.5250 ▪ Hanson EasyFit MDPE Compression	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited Plasson Waters & Farr Friar Couplings George Fischer Hanson	Asmuss Plastic Systems Limited Hygrade Products Ltd RX Plastics Ltd Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines IPLEX Pipelines New Zealand Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-3.3.9	Brass Fittings Alloy 486		AS 1567 – 486 ASTM – B21 485000	Recommend New Zealand manufacturer due to variability of imported materials	Spartan Engineering Co. Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.3.10	Manifold			- Acuflo GM900STR Bronze Manifold Assembly - Acuflo CM2000 Compostible Manifold	Acuflo Industries Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.3.11	Ferrules: Gunmetal Polyethylene Fittings					
AM-3.3.12	Gaskets	Potable water supply fittings		Garlock 2500 Gasket	Garlock Sealing Industries	Blackwoods Paykels Asmuss Water Systems
AM-3.4	Valves					
AM-3.4.1	Sluice Valves ≥80mm Resilient Seated Anti-Clockwise	Bulk, principal and rider mains	AS/NZS 2638.2 NZS/BS 5163 Class 1	- Teflon gland packing or 2 or more O ring seals and dust cover - In-line valves should be the same diameter as the reticulation main	Gillies Metaltech Asmuss Water Systems	Pipe & Infrastructure Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
	Closing Rated at PN16 External and Internal Protective Coating Flanges to be Raised Face and Drilled as Per Standard		AS/NZS 4158 and amendments Flanges to be to AS 4087-2011 with required pressure (PN) rating to be specified Flange coatings to be to AS/NZS 4158	- Asmuss Water Systems Licence #PRD / R61 / 0412 / 2 - Hawle Licence #SMK20123 - AVFI non-rising stem resilient valve DN375	Crevet Pipelines Hawle AVK Australia Pty Ltd Hygrade Products Ltd	Asmuss Water Systems Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.4.2	Gate Valves 25mm and 40mm		BS 5154 or AS 1628	- Clockwise closing dezincification-resistant materials or LG2 gunmetal, PN16 or higher - KITZ Corporation Licence #WMKA02054 - Pegler Hattersley Licence #1850	KITZ Corporation (Licence #WMKA02054) Pegler Hattersley (Licence #1850)	Humes Pipeline Systems Hynds Pipe Systems Ltd Pipe & Infrastructure Ltd Mico Pipelines
AM-3.4.3	Gate Valve 50mm	Rider mains and connections	NZS/BS 5163	Clockwise closing, resilient seating	Hawle (Licence #WMKA20123) AVK Australia Pty Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Pipe & Infrastructure Ltd Mico Pipelines

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
						Asmuss Water Systems
AM-3.4.4	Butterfly Valves			Specific design and approval		
AM-3.5	Fire Hydrants					
AM-3.5.1	Tall/Medium Pattern Screw-Down Standard Clockwise Closing, Rated to PN16 or Higher Coated as Per Standard		NZS/BS 750 AS/NZS 4158 and amendments	- O ring sealing system. Drain holes for frost protection are not permitted - The use of ball hydrants is not permitted	Crevet Pipelines Hydravalve Gillies Metaltech Asmuss Water Systems Hawle	Tudor Pipeline Supplies Co Ltd Humes Pipeline Systems Pipe & Infrastructure Ltd Mico Pipelines
AM-3.6	Tapping Bands and Saddles		Standards Australia MP52			
AM-3.6.1	40mm-200mm LG2 Gunmetal DR Type, Fully Enclosed Polyethylene type, fully enclosed with stainless steel bolts		AS/NZS 4793 MP52 – Spec025	- Tapping bands should be 25mm or greater for live tapping - Fully enclosed for mPVC blue brute, super blue, cast iron and spiral steel (AC sizing) - Swivel bolt type with a flexible band for existing AC water main - Milnes Pty Ltd Licence #W134 - Milnes Pty Ltd Series GM60A - Milnes Pty Ltd Series 61 - Maintenance - Milnes Pty Ltd insulated type for ductile, cast or steel mains Licence #W134 - Giltech Precision Castings	Milnes Pty Ltd	Mico Pipelines

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
				Plasson Licence #1494		
AM-3.7	Water meters					
AM-3.7.1	20mm Manifold Meters		OMIL R49-1	- Meters must be rated Q3 = 2.5m³/hour and must have a minimum R value (Q3/Q1) of 160 - Meters must be capable of transmitting a pulse output (for the purposes of data logging or remote reading) - Construction should be dezincification-resistant (DR) brass to NZ/AS 3688 or; - Construction of composite materials subject to approval of material specification	Elster / Kent Ltd Sensus Actaris Pty Ltd Sapel Aquadis	A.D Riley and Co. Ltd DEECO Services Ltd Chatswood Trading Asmuss Water Systems Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.7.2	25mm Inline Meters		OMIL R49-1	- Meters will be rated Q3 = 6.3m³/hour and must have a minimum R value (Q3/Q1) of 160 - Meters must be capable of transmitting a pulse output (for the purposes of data logging or remote reading) - Construction should be dezincification-resistant (DR) brass to NZS/AS 3688	Elster / Kent Ltd Sensus Actaris Pty Ltd Sapel Aquadis	A.D Riley and Co. Ltd DEECO Services Ltd Chatswood Trading Asmuss Water Systems Humes Pipeline Systems Hynds Pipe Systems Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
						Mico Pipelines
AM-3.7.3	40mm Inline Meters		OMIL R49-1	- Meters will be rated Q3 = 6.3m³/hour and must have a minimum R value (Q3/Q1) of 160 - Meters must be capable of transmitting a pulse output (for the purposes of data logging or remote reading) - Construction should be dezincification-resistant (DR) brass to NZS/AS 3688	Elster / Kent Ltd Sensus Actaris Pty Ltd Sapel Aquadis	A.D Riley and Co. Ltd DEECO Services Ltd Chatswood Trading Asmuss Water Systems Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.7.4	Inline Meters ≥50mm		OMIL R49-1	- Specific design and approval - Design information should be provided for approval and should include the design flow rates (minimum, average, maximum), proposed meter make/model and manufacturers specifications		ABB A.D Riley and Co. Ltd DEECO Services Ltd Chatswood Trading Asmuss Water Systems Humes Pipeline Systems Hynds Pipe Systems Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
						Mico Pipelines
AM-3.8	Tracer Wire					
AM-3.8.1	Tracer Wire	Trenchless installation rising mains		A continuous 4.0mm² multi-strand (minimum of 4) polythene sleeved cable		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.8.2	Warning Tape / Detection Tape	Open cut installation		- Width – 100mm (min.) - Thickness – 80µm - Printing – TBC - Printing Height – 80mm - Tape Colour – TBC	Polymark Packaging	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.9	Boxes (Valve, Fire Hydrant, Meter), Packers and Valve Marker Plate Cast-Iron / Ductile-Iron		NZS/BS 750	- Hydrant cast box to NZS/BS 750 - Valve cast box – to Council Standard Drawings - Valve Marker Plate		Humes Pipeline Systems Hygrade Products Ltd Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.10	Concrete Products					

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-3.10.1	Concrete Valve / Hydrant Marker Post		To Council standard drawings		Williamson Creative Products Newstead Concrete Products	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-3.10.2	Fire Hydrant Concrete Surrounds		To Council standard drawings			Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.10.3	Valve Concrete Surrounds		To Council standard drawings			Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.11	Wooden Products					
AM-3.11.1	Wooden Valve Post N/A		To Council standard drawings			

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-3.12	Toby Boxes Cast-Iron Polyethylene		To Council standard drawings		Surecast Metals Chevron Industries 2001 Ltd Acuflow Industries Ltd Draper Enterprises Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.13	Backflow Prevention Devices		AS/NZ 2845.1	- Types and classification of devices to meet Council requirements as assessed - For dedicated fire systems, use Verifire standard	Reliance Worldwide Ltd Asmuss Water Systems Acuflow Industries Ltd	Hydroflow Distributors Ltd DEECO Services Ltd Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-3.14	Pipe Wrapping	All dress sets and flanged connections	To Council standard drawings		Polyken Petrotech Denso 40	Asmuss Water Systems
AM-3.15	Threaded Joint Sealing	PTFE to all threaded joints			Ceelon	