

## WATER SUPPLY PRODUCTS

No.	Products	Standard Number	Standard Title
<b>Water Pipes Products</b>			
1	Polyethylene (PE) Pipes	MS 1058: Part 2:2005	Specification for Polyethylene (PE) piping systems for water supply. Part 2: Pipes (Forth Revision)
		ISO 4427-2:2007:AMD 1:2011	Plastics piping systems. Polyethylene (PE) pipes and fittings for water supply. Part 2: Pipes
		DIN 8075 (2011-12)	Polyethylene (PE) Pipes. PE 80, PE 100. General quality requirements, testing
2	Polyethylene Raised Temperature (PE-RT) Pipes	MS 2508-2:2012	Plastics piping systems for hot and cold water installations. Polyethylene of Raised Temperature Resistance (PE-RT) Part 2: Pipes (ISO 22391-2:2009, MOD)
		ISO 22391-2:2009	Plastics piping systems for hot and cold water installations. Polyethylene of Raised Temperature Resistance (PE- RT). Part 2: Pipes
3	Multilayer Pipe PE-RT/AL/PE- RT	BS EN ISO 21003- 2:2008+A1:2011	Multilayer piping systems for hot and cold water installations inside buildings. Pipes.
		BS EN ISO 21003- 1:2008	Multilayer piping systems for hot and cold water installations inside buildings. General.
4	Crosslinked Polyethylene (PE-X) Pipes	MS 1736:Part 2:2004	Plastics piping systems for hot and cold water installations. Cross-linked Polyethylene (PE-X). Part 2: Pipes
		ISO 15875-2:2003	Plastics piping systems for hot and cold water installations. Cross-linked Polyethylene (PE-X) - Part 2: Pipes.
		AS/NZS2492:2007	Cross-linked Polyethylene (PE- X) pipes for pressure applications.
5	Multilayer Pipe PE-X/AL/PE-X	AS 4176:1994	Polyethylene / Aluminium and Cross-linked Polyethylene /Aluminium Macro-composite pipe systems for pressure applications.
		AS 4176.2:2010	Multilayer pipes for pressure applications. Multilayer piping systems for hot and cold water plumbing applications. Pipes.
6	Multilayer Pipes Polyethylene-Aluminium- Polyethylene (PE-AL-PE)	ASTM F1282-03	Standard specification for Polyethylene/Aluminium/Polyethylene (PE-AL-PE) composite pressure pipe.
7	Unplasticized Poly(Vinyl Chloride) (PVC-U) Pipes	MS 628-2:2014	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) Part 2: Pipes (Second Revision) (ISO 1452-3:2009, Mod)
		MS 628: Part 1: 1999 AMD.1:2001 & AMD.2:2002	Specification for Unplasticized PVC (uPVC) pipes for water supply: Part 1: Pipes (1 <sup>st</sup> revision)
	Unplasticized Poly(Vinyl Chloride) (PVC-U) Pipes	BS EN ISO 1452-2: 2009	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U). Pipes.
8	Solvent cement for PVC-U piping system	MS 628-4:2015	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) Part 4: Solvent Cement.
		MS 628: Part 2: Section 2.2:1999	Specification for Unplasticized PVC (UPVC) pipes for water supply. Part 2: Joints and fittings for use with Unplasticized PVC Pipes. Section 2.2: Solvent Cement.
9	Chlorinated Poly(Vinyl Chloride) (PVC-C) Pipes	MS 2045:2007	Chlorinated Poly(Vinyl Chloride) (PVC-C) plastic hot and cold water distribution systems. Specification
		MS 1757: Part 1: 2008	Chlorinated Poly(Vinyl Chloride) (PVC-C) Plastic Piping System. Part 1: Specification for Schedules 40 & 80 Pipes

		ASTM D2846 / D2846M-09b	Standard specification for Chlorinated Poly(Vinyl Chloride) (cPVC) plastic hot and cold water distribution system.
10	Oriented Poly(Vinyl Chloride) (PVC-O) Pipes	ISO 16422:2014	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure. -Specifications
		ISO 16422:2006	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure - Specifications
11	Acrylonitrile- Butadiene- Styrene (ABS) Pipes	MS 1419: Part 1: 2007	Acrylonitrile-Butadiene Styrene (ABS) piping systems for pressure applications. Part 1: Specification for compounds, pipes and fittings (First Revision)
		AS/NZS 3518:2004	Acrylonitrile Butadiene Styrene (ABS) compounds, pipes and fittings for pressure applications.
12	Solvent cement for ABS piping system	MS 1419: Part 3:1997	Specification for Acrylonitrile Butadiene Styrene (ABS) pipes and fittings for pressure applications. Part 3: Solvent cement and priming (cleaning) fluids for use with ABS pipes and fittings.
13	Polypropylene (PP) Pipes	MS 2286-2:2012	Plastics piping systems for hot and cold water installations. Polypropylene (PP) - Part 2: Pipes (ISO 15874-2:2003, Amd.1:2007, MOD)
		ISO 15874-2:2013	Plastics piping systems for hot and cold water installations. Polypropylene (PP) - Part 2: Pipes.
		DIN 8078 (2008-09)	Polypropylene (PP) Pipes PP-H, PP-B, PP-R, PP-RCT. General quality requirements and testing.
14	Polybutylene (PB) Pipes	MS ISO 15876-2: 2004,AMD.1:2009	Plastics piping systems for hot and cold water installations. Polybutylene (PB) - Part 2: Pipes (ISO 15876-2:2003, MOD)
		AS/NZS 2642-2: 2008	Polybutylene (PB) plumbing pipe systems. Polybutylene (PB) pipe for hot and cold water applications
15	Glass Reinforced Plastic (GRP) Pipes	ISO 10639:2004/ Amd 1:2011	Plastics piping system for pressure and non-pressure water supply. Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin
		ISO 10639:2004	Plastics piping system for pressure and non-pressure water supply. Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin.
		BS EN 1796:2013	Plastics piping system for water supply with or without pressure. Glass Reinforced Thermosetting Plastics (GRP) based on Unsaturated Polyester resin. Jacking Pipe
		ISO 25780:2011	Plastics piping system for pressure and non-pressure water supply, irrigation, drainage or sewerage. Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin. Pipes with flexible joints intended to be installed using jacking techniques. *Listing for GRP Pipes using Jacking Method shall accompany with ISO 10639
16	Steel Pipes	SPAN TS 21827: 2013	Specification for Steel Pipes, Fittings and Joints for water and sewage. Part 1: Technical Delivery Requirements Part 2: Tube Requirements
		MS 1968:2007 (confirmed 2011)	Non-Alloy Steel Tubes and Fittings for the conveyance of aqueous liquids including water for human consumption. Technical delivery conditions
		BS EN 10224:2002	Non-Alloy Steel Tubes and Fittings for the conveyance of water and other. Technical delivery conditions
17	Stainless Steel (SS) Pipes Industrial	MS 1841:2010	Seamless, welded and heavily cold austenitic Stainless Steel Pipes. Specification (First Revision)
		ASTM A312 / A312M-2014B	Standard specification for seamless, welded, and heavily cold worked austenitic Stainless Steel Pipes.
18	Stainless Steel (SS) Light Gauge Tubes	MS 1988:2007 (Confirmed: 2011)	Welded Stainless Steel Tubes for the conveyance of water and other aqueous liquids. Technical delivery conditions and includes amendment A1

		BS EN 10312:2002	Welded Stainless Steel Tubes for the conveyance of aqueous liquids including water for human consumption. Technical delivery conditions.
		JIS G 3448:2012	Light Gauge Stainless Steel Tubes for ordinary piping.
19	Ductile Iron (DI) Pipes	MS 1919:2013	Ductile Iron pipes, fittings, accessories and their joints for water pipelines. Requirements and test methods (First Revision)
		BS EN 545:2010	Ductile Iron pipes, fittings, accessories and their joints for water pipelines. Requirements and test methods (First Revision)
		BSEN 545:2006	Ductile Iron pipes, fittings, accessories and their joints for water pipelines. Requirements and test methods (First Revision)
20	Copper Tubes	BS EN 1057:2006+A1:2010	Copper and copper alloys. Seamless, round copper tubes for water and gas in sanitary and heating applications.
21	Steel Pipe with Plastic Lining	CJ/T 136:2001	Steel Pipes of lining plastic for water supply.
22	Modified Poly(Vinyl Chloride) (PVC-M) Pipes	AS/NZS 4765:2007	Modified PVC (PVC-M) pipes for pressure applications.
<b>Water Fittings Products</b>			
1	Polyethylene (PE) Fittings	MS 1058: Part 3: 2006	Polyethylene (PE) piping systems for water supply. Part 3: Fittings
		AS/NZS 4129:2008	Fittings for Polyethylene (PE) pipes for pressure applications.
		BS EN 12201-3: 2011+A1:2012	Plastics piping systems for water supply, and for drainage and sewerage under pressure. Polyethylene (PE) - Fittings
2	High Density Polyethylene (HDPE) Joints Assemblies and Fittings	DIN 16963-5 (1999-10)	Pipe fittings and joints and assemblies for PE 80 and PE 100 Polyethylene pressure pipes. Part 5: General Quality Requirements and Testing Polyethylene (PE) Fabricated Fittings
		MS 1058: Part 2: 2005 AMD.1:2011	Polyethylene (PE) piping systems for water supply. Part 2: Pipes (Forth Revision)
		DIN 16963-1 (1980-08)	Pipe joints and elements for High Density Polyethylene (HDPE) Pressure Pipelines, Type 1 and 2; Pipe Bends of segmental construction for butt-welding. Dimensions.
		DIN 16963-2 (1983-02)	Pipe joint assemblies and fittings for type 1 and 2 High-Density Polyethylene (HDPE) pressure pipes; Tees and braches produced by segment inserts and necking for butt welding. Dimension.
		DIN 16963-5 (1999-10)	Pipe joint assemblies and fittings for high density polyethylene (PE-HD) pressure pipes; General quality requirements, testing. Polyethylene (PE) Injection Fittings
		DIN 16963-4 (1988-11)	Pipe joint assemblies and fittings for high-density polyethylene (PE-HD) pressure pipes; adaptors for fusion jointing, flanges and sealing elements; dimensions.
		DIN 16963-5 (1999-10)	Pipe joint assemblies and fittings for high density polyethylene (PE-HD) pressure pipes; general quality requirements, testing.
		DIN 16963-6 (1989-10)	Pipe joint assemblies and fittings for high-density polyethylene (PE-HD) pressure pipes; injection-moulded fittings for butt welding; dimensions.
3	Crosslinked Polyethylene (PE-X) Fittings	MS 1736: Part 3:2004	Plastics piping systems for hot and cold water installation. Crosslinked Polyethylene (PE-X). Part 3: Fittings
		AS 2537:1994	Mechanical jointing fittings for use with Cross-linked Polyethylene (PE-X) pipe for hot and cold water applications.
4	Polyethylene Raised Temperature Resistance (PE-RT) Fittings	MS 2508-3:2012	Plastics piping systems for hot and cold water installations. Polyethylene of Raised Temperature Resistance (PE-RT) Part 3: Fittings (ISO 22391-3: 2009, MOD)
		ISO 22391-3:2007	Plastics piping systems for hot and cold water installations. Polyethylene of Raised Temperature Resistance (PE-RT) Part 3: Fittings

5	Multilayer Fittings PE- RT/AL/PE-RT	ISO 21003 3:2008	Multilayer piping systems for hot and cold water installations inside buildings. Part 3: Fittings
6	Poly( <i>p</i> -Phenylene Oxide) (PPO) and Macro-Composite Fittings	AS 4176:1994	Polyethylene/Aluminium and Cross-linked Polyethylene / Aluminium Macro-composite pipe systems for pressure applications.
		AS 4176.3:2010	Multilayer pipes for pressure applications. Multilayer piping systems for hot and cold water plumbing applications. Fittings
7	Mechanical Joints and Compression Fittings	ISO 17885:2015	Plastic piping systems. Mechanical fittings for pressure piping system. - Specification
8	Polypropylene (PP) Fittings	MS 2286-3:2012	Plastics piping systems for hot and cold water installations. Polypropylene (PP) Part 3: Fittings (ISO 15874-3:2003,FDAM 1:2009, MOD)
		ISO 15874-3:2013	Plastics piping systems for hot and cold water installations. Polypropylene (PP) Part 3: Fittings
		DIN 16962-5 (2000-04)	Pipe fittings and joint assemblies for Polypropylene (PP) pressure pipes - Part 5: General quality requirements and testing
9	Polybutylene (PB) Fittings	MS ISO 15876 3: 2004	Plastics piping systems for hot and cold water installations Polybutylene (PB) Part 3: Fittings
		AS/NZS 2642-3: 2008	Polybutylene pipe systems Mechanical jointing fittings for use with Polybutylene (PB) pipes for hot and cold water applications
10	Unplasticized Poly(Vinyl Chloride) (PVC-U) Joints/Fittings	MS 628-3:2014	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) - Part 2: Fittings (First Revision) (ISO 1452-3:2009, Mod)
		MS 628:Part 2:Section 2.1:1999	Specification for Unplasticized PVC (uPVC) pipes for water supply. Part 2: Joints and Fittings for use with uPVC Pipes. Section 2.1: uPVC Joints and Fittings
		BS EN ISO:1452-3: 2010	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) Fittings.
		BS 4346-1:1969	Joints and fittings for use with Unplasticized PVC pressure pipes. Injection moulded Unplasticized PVC fittings for solvent welding for use with pressure pipes, including potable water supply.
		BS 4346-2:1970	Joint and fittings for use with Unplasticized PVC pressure pipes. Mechanical joints and fittings, principally of Unplasticized PVC.
11	Chlorinated Poly(Vinyl Chloride) (PVC-C) Fittings	MS 2045:2007	Chlorinated Poly(Vinyl Chloride) (PVC-C) plastic hot and cold water distribution systems. Specification.
		MS 1757: Part 2: 2008	Chlorinated Poly(Vinyl Chloride) (PVC-C) Plastic Piping System. Part 2: Specification for Schedule 40 Socket-type pipe fittings.
		MS 1757: Part 3: 2008	Chlorinated Poly(Vinyl Chloride) (PVC-C) Plastic Piping System. Part 3: Specification for Schedule 80 Pipe Fittings.
		ASTM D2846 / D2846M-09b	Standard specification for Chlorinated Polyvinyl Chloride (cPVC) plastic hot and cold water distribution system.
12	Oriented Poly(Vinyl Chloride) (PVC-O) Fittings	ISO 16422:2014	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure Specifications
		ISO 16422:2006	Pipes and joints made of Oriented Unplasticized Poly(Vinyl Chloride) (PVC-O) for the conveyance of water under pressure Specifications
13	Acrylonitrile- Butadiene- Styrene (ABS) Fittings *refer Appendix C1 (SPAN Additional Requirement)	MS 1419: Part 1: 2007	Acrylonitrile-Butadiene Styrene (ABS) piping systems for pressure applications. Part 1: Specification for compounds, pipes and fittings (First Revision)

		AS/NZS 3518:2004	Acrylonitrile Butadiene Styrene (ABS) compounds, pipes and fittings for pressure application
14	Glass Reinforced Plastic (GRP) Fittings	ISO 10639:2004/ Amd 1:2011	Plastics piping system for pressure and non-pressure water supply Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin Amendment 1
		ISO 10639:2004	Plastics piping system for pressure and non-pressure water supply Glass Reinforced Thermosetting Plastics (GRP) Systems based on Unsaturated Polyester (UP) resin
		BS EN 1796:2013	Plastics piping system for water supply with or without pressure Glass Reinforced Thermosetting Plastics (GRP) based on Unsaturated Polyester resin
15	Steel Pipe Specials	SPAN TS 21827:2013	Specification for Steel Pipes, fittings and joints for water and sewerage Part 1: Technical delivery requirements Part 2: Tube requirements
		MS 1968:2007	Non-alloy steel tubes and fittings for the conveyance of aqueous liquids including water for human consumption Technical delivery conditions
16	Stainless Steel (SS) Threaded Fittings	MS 2495:2012	Pipework - Stainless steel fittings threaded in accordance with MS 1989: Part 1 (ISO 4144:2003, MOD)
		ISO 4144:2003	Pipework - Stainless Steel fittings threaded in accordance with ISO 7-1
17	Stainless Steel (SS) Welded Fittings	MS 1842:2010	Wrought Austenitic Stainless Steel piping fittings Specification (First Revision)
		ASTM 403/A403M-13a	Standard specification for Wrought Austenitic Stainless Steel piping fittings
18	Ductile Iron Fittings	MS 1919:2013	Ductile Iron pipes, fittings, accessories and their joints for water pipelines Requirement and test method (First Revision)
		MS 1919:2006	Ductile Iron pipes, fittings, accessories and their joints for water pipelines Requirement and test method. —
		EN 12842:2012	Ductile Iron Fittings for PVC-U or PE piping systems. Requirement and test method
19	Copper & Copper Alloys Fittings	BS EN 1254-1: 1998	Copper and Copper Alloys. plumbing fittings. fittings with short ends for capillary brazing to Copper Tubes.
		BS EN 1254-2: 1998	Copper and Copper Alloys. plumbing fittings. Fittings with compression ends for use with Copper Tubes.
		BS EN 1254-3:1998	Copper and Copper Alloys. Plumbing fittings. Fittings with compression ends for use with plastic pipes.
		BS EN 1254-4:1998	Copper and Copper Alloys. Plumbing fittings. Fittings combining other end connections with capillary or compression ends.
		BS 8537:2010	Copper and Copper Alloys. Plumbing fittings. Specification for press ends of plumbing fittings for use with metallic tubes.
		AS 3688:2005	Water supply Metallic fittings and end connectors
20	Steel Fittings with Plastic Lining	CJ/T 137:2001	Malleable Iron Threaded Fittings of Lining Plastic for water supply.
21	Variable Adapter	Spesifikasi JKR 20200-0045-99	JKR Standard Specification for Detachable Joints and Variable Adaptors for uPVC, Ductile Iron and AC Pipes.
22	Flange Adapter	Spesifikasi JKR 20200-0048-99	JKR Standard Specification for Flexible Couplings and Flange Adaptors
23	Flexible Coupling	Spesifikasi JKR 20200-0048-99	JKR Standard Specification for Flexible Couplings and Flange Adaptors
24	Detachable Joint	Spesifikasi JKR 20200-0045-99	JKR Standard Specification for Detachable Joints and Variable Adaptors for uPVC, Ductile Iron and AC Pipes
25	Ferrous Saddle	Spesifikasi JKR 20200-0044-99	JKR Standard Specification for Ferrous Saddles
		JKR Spec. 20200-0184-04	JKR Standard Specification for Ferrous Saddles
26	Pillar Hydrant	MS 1395:2011	Pillar Fire Hydrants: Specification (First Revision)
		Spesifikasi JKR 20200-0042-99	JKR Standard Specification for Ductile Iron Pillar Hydrants
27	Ductile Iron (DI) Strainer	Spesifikasi JKR 20200-0100-01	JKR Standard Specification for Ductile Iron Y and T Strainers (DN 50 to DN 600)
28	Swivel Ferrules	Spesifikasi JKR 20200-0174-04	JKR Standard Specification for Ferrules
29	Under Pressure Vertical Ferrules	MS 1396:2006	Ferrules - Specification (First Revision)

30	Polypropylene (PP) Tapping Ferrules	Spesifikasi JKR 20200-0055-99	JKR Standard Specification for Polypropylene (PP) Tapping Ferrules to be used with Polyethylene (PE) and uPVC Pipes
31	Manhole Cover	BS EN 124-1:2015	Gully tops and manhole tops for vehicular and pedestrian areas. - Definitions, classification, general principles of design, performance requirements and test methods.
		BS EN 124-2:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of cast iron.
		BS EN 124-3:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of steel or aluminium alloys.
		BS EN 124-4:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of steel reinforced concrete.
		BS EN 124-5:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of composite materials.
		BS EN 124-6:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of Polypropylene (PP), Polyethylene (PE) or Unplasticized Poly(Vinyl Chloride) (PVC-U).
		BS EN 124:1994	Gully Tops and Manhole Tops for vehicular and pedestrian areas - Design requirements, type testing, marking, quality control
32	Polypropylene (PP) Clamp Saddle	Spesifikasi JKR No. 1-95 (BA)	JKR Standard Specification for Polypropylene (PP) Clamp Saddle to be used with Polyethylene (PE) Pipe
33	Vulcanized Rubber Pipe Joint Seals	BS EN 681-1:1996	Elastomeric Seals Material requirements for pipe joint seals used in water and drainage application. Part 1: Vulcanized Rubber
34	Steel Flange	BS EN 1092-1: 2007+A1:2013	Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN Designated - Part 1: Steel Flanges
		BS EN 1759-1: 2004	Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, class-designated. Steel flanges, NPS 1/2 to 24
<b>Service Reservoir Products</b>			
1	Cylindrical Double Fold System	BS 5950-1:2000	Structural Use of Steelwork in Building Part 1: Code of practice for design rolled and welded section
2	Glass Coated/ Glass Lined/ Glass Fused/ Epoxy Coated/ Epoxy Lining	ISO 28765:2016	Vitreous and Porcelain Enamels - Design of bolted steel tanks for the storage treatment of water or municipal or industrial effluents and sludges
		ISO 28765:2008	Vitreous and Porcelain Enamels - Design of bolted steel tanks for the storage treatment of water or municipal or industrial effluents and sludges
		AWWA D103-09	Factory-Coated Bolted Steel Tanks for Water Storage
		AWWA D103-97	Factory-Coated Bolted Steel Tanks for Water Storage
<b>Storage Cisterns Products</b>			
1	Cylindrical Double Fold System	BS 5950-1:2000	Structural use of steelwork in building. - Part 1: Code of practice for design rolled and welded section
2	Glass Coated/ Glass Lined/ Glass Fused/ Epoxy Coated/ Epoxy Lining	ISO 28765:2016 (any total adoption of the standard is accepted)	Vitreous and Porcelain Enamels. Design of bolted steel tanks for the storage treatment of water or municipal or industrial effluents and sludges
		ISO 28765:2008	Vitreous and Porcelain Enamels. - Design of bolted steel tanks for the storage treatment of water or municipal or industrial effluents and sludges
		AWWA D103-09	Factory-Coated Bolted Steel Tanks for water storage
		AWWA D103-97	Factory-Coated Bolted Steel Tanks for water storage
3	Storage Tank Polyethylene (PE) Tanks	MS 1225-1:2014	Polyethylene (PE) Tanks for cold water storage; Part 1: Capacity up to 600G (Third Revision)
		MS 1225: Part 1: 2007 AMD 1:2011	Polyethylene (PE) Tanks for cold water storage; Part 1: Capacity up to 600G (Second Revision)
		MS 1225: Part 2: 2006 AMD.1:2011	Polyethylene (PE) Tanks for cold water storage; Part 2: Capacity more than 600G (First Revision)
4	Glass-fibre Reinforced Polyester (GRP) Sectional Water Tank	MS 1390:2010	Glass-fibre Reinforced Polyester panels and panel water tanks. - Specification (First Revision)
5	Corrugated Steel Panel with Polyethylene Lined Water Storage Tank	SS 245:2014	Specification for glass reinforced polyester sectional water tank.
		SS 245:1995 (Cl. 10.2.1 & Cl. 10.2.2)	Specification for glass reinforced polyester sectional water tank.
		BS 1449-1.1:1991	Steel Plate, Sheet & Strip. Carbon and carbon-manganese plate, sheet and strip general specification.

6	Glass-fibre Reinforced Polyester (GRP) One-Piece Water Tank	MS 1241:2011	One Piece Glass-fibre Reinforced Polyester (GRP) water tanks nominal capacity of 100 000 litres and below. -Specification (First Revision)
7	Pressed Steel Sectional Rectangular Tank Panel	BS 1564:1975	Specification for Pressed Steel Sectional Rectangular Tanks.
8	Stainless Steel Storage Tank	JKR 20200-0041-99	Stainless Steel water tanks (with effective capacity up to 15,000L)
9	Stainless Steel Storage Tank (Rectangular / Panel Tank)	CNS 9443:2000	Stainless Steel Storage Tanks.
<b>Valves</b>			
1	Butterfly Valve	Directive 2014/68/EU BS EN 593:2009+ A1:2011	Pressure Equipment Directive Industrial Valves. Metallic Butterfly Valves
2	Air Valve	Directive 2014/68/EU BS EN 1074-4:2000 JKR 20200-0097-01 JKR 20200-0043-99 AWWA C512-07	Pressure Equipment Directive Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Air Valves Ductile Iron Air Valves (Revised Edition 2001) Ductile Iron Air Valves (Revised Edition 1999) Air Release, Air/Vacuum, and combination Air Valve for waterworks service
3	Gate Valve	MS 1049:1986 Directive 2014/68/EU EN 1074-2:2004 BS EN 1074-2:2000 BS EN 12288:2010 BS EN 1171:2002 BS 5163-1:2004 BS 5163-2:2004 JKR 20200-0077-00	Specification for double Flanged Cast Iron Wedge Gate (Sluice) valves for waterworks purposes Pressure Equipment Directive Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Part 2: Isolating valves Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Isolating valves. Industrial Valves. Copper Alloy Gate Valves Industrial Valves. Cast Iron Gate Valves Valves for waterworks purposes. Predominantly key-operated cast iron gate valves. Code of practice Valves for waterworks purposes. Stem Caps for use on isolating valves and associated water control apparatus. Specification Ductile Iron Type B Large Sluice Valves (DN700 - DN1800)
4	Check Valve	Directive 2014/68/EU BS EN 12334:2001 BS EN 14341:2006 BS EN 1074-3:2000 AWWA C508-09	Pressure Equipment Directive Industrial Valves. Cast Iron Check Valves Industrial Valves. Steel Check Valves Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Check valves Swing-Check Valves for waterworks service, 2-In. (50 mm) through 24-In. (600 mm) NPS
5	Control Valve	BS EN 1074-5:2001 AWWA C530-12 AWWA C530-07	Valves for Water Supply Fitness Purpose Requirements and Appropriate Verification Tests. Part 5: Control Valve Pilot-operated control valve Pilot-operated control valve
6	Stop Valve	BS EN 1213:2000 BS 6675:1986 JKR 20200-0172- 04	Building Valves. Copper alloy stopvalves for potable water supply in buildings. Test & Requirements Specification for servicing valves (copper alloy) for water services JKR Standard Specification for Stop Valves (Revised Edition 2004)
7	Ball Valves (Float Operated Valve)	BS EN 13828:2003 BS 1212: Part 1:1990 BS 1212: Part 2:1990	Building valves. Manually operated copper alloy and stainless steel ball valves for potable water supply in buildings. Tests and requirements. Float Operated Valves. Specification for piston type float operated valves (Copper Alloy Body) Float Operated Valves. Specification for diaphragm type float operated valves (Copper Alloy) (Excluding Float)
8	Landing Valve	MS 1210: Part 1:1991 (Confirmed:2011) MS 1210: Part 2:1991 (Confirmed:2011)	Specification for Fire Hydrant systems equipment Part 1: Landing Valves for wet risers Specification for Fire Hydrant systems equipment Part 2: Landing Valves for dry risers

		BS 5041: Pt 1:1987	Fire Hydrant systems equipment. Specification for landing valves for wet risers
		BS 5041: Pt 3:1975	Fire Hydrant system equipment. Specification for inlet breeching for dry riser inlets
9	Mixing Valve (Manually Operated)	BS EN 1286:1999	Sanitary Tapware. Low Pressure Mechanical Mixing Valves. General technical specification
10	Float Operated Valve	MS 1882:2005 (Confirmed 2013)	Piston Type Float Operated Valves Specification
		MS 1882:2005	Piston Type Float Operated Valves Specification
		JKR 20200-0178-04	JKR Standard Specification for Piston Type Float Operated Valves. (Revised Edition 2004)
11	Pressure Reducing Valves	BS EN 1567:2000	Building Valves. Water pressure valves and combination water reducing valves. Requirements and test.
12	Plug Valve	BS 5158:1989	Specification for cast iron plug valves.
		AWWA C517-09	Resilient-Seated Cast-Iron Eccentric Plug Valves.
13	Penstock	BS 7775:2005	Penstocks for use in water and other liquid flow applications. Specification.
		JKR 20200-0108-01	JKR Standard Specification for Penstocks. (Revised Edition 2001)
14	Globe Valve	BS EN 13789:2010	Industrial Valves: Cast Iron Globe Valve.
		BS EN 13789:2002	Industrial Valves: Cast Iron Globe Valve.
15	Knife Gate Valve	MSS SP-81-2013	Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends.
		MSS SP-81-2000	Stainless Steel, Bonnetless, Flanged Knife Gate Valve.
<b>Back Flow Preventer</b>			
1	Dual Check Backflow Preventer	AS/NZS 3500.1:2015	Plumbing and drainage. - Water Services
		AS/NZS 3500.1: 2003/Amdt 2:2010	Plumbing and drainage. - Water Services
		BS EN 14454:2005	Devices to prevent pollution by backflow of potable water. Hose Union backflow preventer DN15 to DN32 inclusive. Family H, Type A.
2	Reduced Pressure Zone Assembly	AS/NZS 3500.1:2015	Plumbing and drainage. - Water Services
		AS/NZS 3500.1:2003/Amdt 2:2010	Plumbing and drainage. - Water Services
		BS EN 12729:2002	Devices to prevent pollution by backflow of potable water. Controllable backflow preventer with reduced pressure zone. Family B, Type A
3	Cast Iron Check Valves	BS EN 12334:2001	Industrial Valves. Cast Iron Check Valves.
4	Steel Check Valves	BS EN 14341:2006	Industrial Valves. Steel Check Valves.
5	Copper Alloy Globe, Globe Stop, Check and Gate Valves	BS EN 12288:2010	Industrial Valve. Copper Alloy Gate Valve.
<b>Meter</b>			
1	Mechanical Water Meter	MS ISO 4064-1:2006	Measurement of Water Flow in fully charged closed conduits. Meters for Cold Potable Water and Hot Water. Part 1: Specification. (First revision) (ISO 4064-1:2005, IDT)
<b>Sanitary Fittings - Taps and Mixer</b>			
1	Bib Tap Pillar Tap Faucet	AS/NZS 3718:2005	Water Supply Tap ware
		BS EN 200:2008	Sanitary Tapware. Single taps and combination taps for water supply systems of Type 1 and Type 2. General technical specification
2	Mixer	BS EN 817:2008	Sanitary tapware. Mechanical mixing valves (PN 10). General technical specification
		BS EN 1286:1999	Sanitary Tapware. Low Pressure Mechanical Mixing Valves. General technical specification.
<b>Sanitary Wares</b>			
1	Water Closet	MS 1522:2015	Vitreous China Water Closet Pans. Specification. (Fourth Revision)
<b>Water Closet Flushing Cistern &amp; Flush Pipes</b>			
1	Water Closet Flushing Cistern & Flush Pipes	MS 795-1:2011	WC Flushing Cisterns. Part 1: Specification. (Second Revision)
<b>Water Closet Flushing Cistern &amp; Flush Pipes</b>			



1	Flush Valve	MS 2545:2014 BS EN 12541:2002	Flush Valve: Specification. Sanitary Tapware. Pressure Flushing Valves & Automatic Closing Urinal Valves PN 10.
<b>Sanitary Appliances - Urinals</b>			
1	Urinal bowls Pedestal Bidets WC Pan	MS 147:2001	Specification for quality of Vitreous China Sanitary Appliances. (First Revision)
<b>Chemicals for Water Treatment</b>			
1	Activated Carbon (Granular)	MS 1815:2005	Granular Activated Carbon for use in potable water supply. Specification.
2	Activated Carbon (Powdered)	MS 873:2005	Powdered Activated Carbon for use in potable water supply. Specification. (First Revision)
3	Aluminium Sulphate	MS 699:2008	Aluminium Sulphate for Use in Potable Water Supply. Specification. (Second Revision)
4	Calcium Hydroxide/ Hydrated Lime	MS 1836:2005	Hydrated Lime and Slurry Lime for use in potable water supply. Specification.
5	Calcium Hypochlorite	MS 1584:2003	Specification for Calcium Hypochlorite use for potable water supply 2003.
6	Chlorine	MS 171:2013	Liquid Chlorine used for potable water supply. Specification (Second Revision)
7	Copper Sulphate	MS 1571:2003	Specification for Copper Sulphate used for potable water.
8	Ferric Chloride	MS 1450:1999	Specification for liquid Ferric Chloride for potable water treatment
9	Ferric Sulphate	MS 1452:1999	Specification for liquid Ferric Sulphate for potable water treatment
10	Polyaluminium Chloride and ACH	MS 1454:2007	Liquid Polyaluminium Chloride for use in potable water supply Specification (first revision) 2007
11	Polymer based on Poly acrylamides	MS 1928:2007	Polyacrylamides for use in potable water supply - Specification
12	Polymer based on Polyamines	MS 1929:2007	Polyamines for use in potable water supply - Specification
13	Polymer based on PolyDADMAC	MS 1930:2007	Poly(Polydiallyldimethyl Ammonium Chloride) or PolyDADMAC for use in potable water supply - Specification
14	Potassium Permanganate	MS 1576:2003	Specification for Potassium Permanganate used for potable water supply
15	Soda Ash (Sodium Carbonate)	MS 1551:2002	Specification for Soda Ash (Sodium Carbonate) used for potable water supply
16	Sodium Aluminate	MS 1572:2003	Specification for Sodium Aluminate used for potable water supply
17	Sodium Fluoride	MS 1573:2003	Specification for Sodium Fluoride used for potable water supply
18	Sodium Hydroxide / Caustic Soda	MS 700:1981	(Specification) for Sodium Hydroxide (technical grades)
19	Sodium Hypochlorite	MS 1718:2003	Sodium Hypochlorite for use in potable water supply - Specification
20	Sodium Silicofluoride	MS 1724:2004	Sodium Silicofluoride for use in potable water supply - Specification
<b>Flow Control</b>			
1	Air Valve	BS EN 1074-4:2000	Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Air Valves
		AWWA C512-15	Air Release, Air/Vacuum, and Combination Air Valve for Water and Wastewater Service
		AWWA C512-07	Air Release, Air/Vacuum and Combination Air Valve for Waterworks Service
		JKR 20200-0097-01	Ductile Iron Air Valves (Revised Edition 2001)
		JKR 20200-0043-99	Ductile Iron Air Valves (Revised Edition 1999)
2	Butterfly Valve	BS EN 593:2009+A1:2011	Industrial valves. Metallic butterfly valves
3	Check Valve	BS EN 1074-3:2000	Valves for water supply. Fitness for purpose requirements and appropriate verification tests. - Check valves
		EN 12334:2001	Industrial valves. Cast Iron Check Valves
		AWWA C508-09	Swing Check Valve for waterworks service
4	Gate Valve	EN 1074-2:2000	Valves for water supply. Fitness for purpose requirements and appropriate verification tests - Part 2: Isolating valves
		BS EN 1171:2002	Industrial valves. Cast iron gate valves
		BS 5163-1:2004	Valves for waterworks purposes. Predominantly key-operated cast iron gate valves. Code of practice
		BS 5163-2:2004	Valves for waterworks purposes. Stem Caps for use on isolating valves and associated water control apparatus. Specification

5	Knife Gate Valve	MSS SP-81-2013	Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends
6	Plug Valve	AWWA C517-09	Resilient Seated Cast Iron Eccentric Plug Valves
7	Penstock Channel Weir Gate Wall Mounted	BS 7775:2005	Penstocks for use in water and other liquid flow applications. Specification
		JKR 20200-0061- 2000	JKR Standard Specification for Penstocks
<b>Sewage Conveyance</b>			
1	Manhole	MS 881: Part 1:1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 1: Specification for pipe and fittings with flexible joints and manholes
2	Manhole Cover	BS EN 124-1:2015 & BS EN 124-2:2015	Gully tops and manholes tops for vehicular and pedestrian areas. Part 1: Definitions, classification, general principles of design, performance requirements and test methods Part 2: Gully tops and manhole tops made of cast iron
		BS EN 124:1994 AMD 8587/1995	Gully tops & manhole tops for vehicular & pedestrian areas design req., type testing, marking, quality control
3	Acrylonitrile Butadiene Styrene (ABS) Pipes & Fittings	MS 1419: Part 1:2007 & MS 1419: Part 3:1997	Acrylonitrile Butadiene Styrene (ABS) pipes and fittings for pressure application <u>Part 1:</u> Specification for Compounds, Pipes and Fittings (First Revision) Part 3: Solvent cement and priming (cleaning) fluids for use with ABS pipes and fittings
		AS/NZS 3518:2004	Acrylonitrile butadiene styrene (ABS) compounds, pipes and fittings for pressure applications
4	Cast Iron Pipes & Fittings	ISO 6594:2006	Cast Iron Pipes & Fittings - Spigot Series
5	Ductile Iron (DI) Pipes & Fittings	BS EN 598:2007 +A1:2009	Ductile Iron pipes, fittings, accessories and their joints for sewerage applications. Requirements and test methods
6	Glass Reinforced Thermosetting Plastic (GRP) Pipes	ISO 10467:2004/ Amd. 1:2012 (E)	Plastic piping systems for pressure and non-pressure drainage and sewerage - Glass Reinforced Thermosetting Plastic (GRP) systems based on Unsaturated Polyester (UP) resin (Amendment 1)
		ISO 10467:2004	Plastic piping system for pressure and non-pressure drainage and sewerage - Glass Reinforced Thermosetting Plastic (GRP) systems based on Unsaturated Polyester (UP) resin
		BS EN 14364:2013	Plastics piping systems for drainage and sewerage with or without pressure. - Glass Reinforced Thermosetting Plastic (GRP) based on unsaturated polyester resin (UP). Specifications for pipes, fittings and joints
		<u>Jacking pipe</u> ISO 25780:2011	<u>Jacking pipe</u> Plastic Piping systems for pressure and non-pressure water supply, irrigation, drainage or sewerage Glass Reinforced Thermosetting Plastic (GRP) systems based on Unsaturated Polyester (UP) resin Pipes with flexible joints intended to be installed using jacking techniques.
7	Polyethylene (PE) Pipes & Fittings	BS EN12201-2: 2011+A1:2013	<u>Solid Wall</u> Plastics piping systems for water supply and for drainage and sewerage under pressure. Polyethylene (PE). - Pipes.
		BS EN12201-3: 2011+A1:2012	Plastics piping systems for water supply and for drainage and sewerage under pressure. Polyethylene (PE). - Fittings.
		DIN 16961-1 (2011-01) & DIN 16961-2 (2010-03)	<u>Profile Wall</u> (double wall corrugated) Thermoplastics pipes and fittings with profiled wall and smooth pipe inside. Part 1: Dimensions Part 2: Technical delivery Specifications
		DIN 16961-1 (2000-03) & DIN 16961-2 (2000-03)	<u>Profile Wall</u> (double wall corrugated) Thermoplastics pipes and fittings with profiled wall and smooth pipe inside

8	Polypropylene (PP) Pipes & Fittings	<u>Profile Wall</u> DIN 16961-1 (2000-03)	<u>Profile Wall</u> Thermoplastics pipes and fittings with profiled wall and smooth pipe inside Part 1: Dimension
9	Poly(Vinyl Chloride) (PVC) Pipes & Fittings PVC-C PVC-M PVC-U PVC-O	AS/NZS 4765:2007	Modified PVC (PVC-M) pipes for pressure applications
		BS EN 1401-1:2009	Plastic piping systems for non-pressure underground drainage and sewerage. Unplasticized Poly(Vinyl Chloride) (PVC-U) Specifications for pipes, fittings and the system
		MS 979: Part 1: 1985	Specification for unplasticized sewerage pipe and fitting Part 1: Pipes of diameter 100mm and 155mm
		MS 979: Part 2: 1985	Specification for unplasticized sewerage pipe and fitting Part 2: Pipes of diameter 200mm and above
		ISO 16422:2006	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure.
		ISO 16422:2014	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure. - Specification
10	Reinforced Concrete (RC) Pipes & Fittings	MS 881: Part 1: 1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 1: Specification for pipe and fittings with flexible joints and manholes
		MS 881: Part 2: 1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 2: Specification for inspection chambers and street gullies
		MS 881: Part 3: 1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 3: Specification for pipes and fittings with ogee joints
		AS 4058:1992	Precast concrete pipes (pressure and non-pressure)
		<u>Jacking pipe</u> MS EN 1916:2011	<u>Jacking pipe</u> Concrete pipes and fittings, unreinforced, steel fibre and reinforced (first revision)
		BS 5911-1:2002 +A2:2010	Concrete pipes and ancillary concrete products. Specification for unreinforced and reinforced concrete pipes (including jacking pipes) and fittings with flexible joints
11	Stainless Steel (SS) Pipes & Fittings	ASTM A312/A312M- 2014B	Standard specification for seamless, welded, and heavily cold worked austenitic Stainless Steel pipes
		ASTM A403-13	Standard specification for Wrought Austenitic Stainless Steel piping fittings
12	Steel Pipes & Fittings	SPAN TS 21827: 2013	Specification for Steel Pipes, fittings and joint for water and sewerage Part 1: Technical delivery requirements
13	Vitrified Clay (VC) Pipes & Fittings	MS 1061: Part 1: 1999	Vitrified clay pipes and fittings and pipes joints for drains and sewers. Part 1: Requirement (First Revision)
		BS EN 295-1:2013	Vitrified clay pipes systems for drains and sewer. Requirements for pipes, fittings and joins.
		BS EN 295-1:1991	Vitrified clay pipes systems for drains and sewer. Requirements
		<u>Jacking pipe</u> BS EN 295-7:2013	<u>Jacking pipe</u> Vitrified clay pipes systems for drains and sewers. Requirements for pipes and joints for pipe jacking
		BS EN 295-7:1996	Vitrified clay pipes systems for drains and sewers. Requirements for pipes and joints for pipe jacking
14	Polymer Concrete Pipes & Fittings	BS EN 14636-1:2009	Plastics Piping Systems for Non-Pressure Drainage and Sewerage. Polyester Resin Concrete (PRC). Pipes and Fittings with Flexible Joints
15	Steel Reinforced Polyethylene (PE) Pipe & Fittings	KS M 3509:2017	Steel Reinforced Polyethylene (PE) Composite Pipe for Sewerage and Drainage
		SPS KWWA M209:2011	Fittings for Spiral Polyethylene (PE) Pipe Reinforced with Steel Sheets
<b>Treatment System</b>			
1	Package Plant Glass-fiber Reinforced Plastic (GRP) High Density Polyethylene (HDPE)	SPAN TS 1401: 2010 (A1:2013) Part 1	Sewage Treatment System Part 1: Prefabricated Tanks Packaged Plants
		SPAN TS 1402: 2010 (A1:2013) Part 2	Sewage Treatment System Part 2: Construction and Installation Packaged Plants

2	Small Sewage Treatment System (SSTS) Glass-fiber Reinforced Plastic (GRP) High Density Polyethylene (HDPE)	MS 2441-2:2014	On Site Sewage Treatment Units Part 2: Packaged Prefabricated Small Sewage Treatment System Specifications
3	Septic Tank	MS 2441-1:2012	On-site sewage treatment units Part 1: Prefabricated septic tanks specifications

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