



Engineering

Technical Standard

TS 0503 - Authorised Products Water Systems

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Significant/Major Changes Incorporated in This Edition

This Revision updates the January 2020 edition of TS 0503 Authorised Products - Water Systems.

Clause numbers described below identify changes from revision 5.1.

Introduction

Expanded to include references to the Australian Drinking Water Guidelines (ADWG).

Clause 3.2

David Moss Group (DAMOS) added as a manufacturer and note added regarding storage of PVC pipes.

Clause 3.3

Advanced Piping Systems added as a manufacturers of products listed.

Clause 4.1.2.3.1 and 4.1.2.3.2

DAEMCO added as a manufacturers of products listed.

Clause 4.2.2 and 4.2.4

Advanced Piping Systems added as a manufacturers of products listed.

Clause 4.2.5

Image change

New Clause 4.3.1 Flanged Off – Takes (Ductile Iron)

Clause 5.3

Advanced Piping Systems added as a manufacturers of products listed.

Clause 6.1

DAEMCO added as a manufacturers of products listed.

Clause 7.1, 7.1.1 and 7.1.2

DAEMCO added as a manufacturers of products listed.

Clause 7.1.3

Derwent and DAEMCO added as a manufacturers of products listed.

Clause 7.3

Title amended and Image change

Clause 9.1.1 and 9.1.2

Advanced Piping Systems added


Various Clauses - Dimensions added to a number of products.

Document Controls

Revision History

Revision	Date	Author	Comments
1.0	08 April 2016	R Pearce	First TS Release – superseding authorised products list
2.0	20 March 2017	R Pearce	Numerous Clauses added/ altered/ updated – refer P 2
3.0	26 October 2017	R Pearce	Refer Pg 2 for identified changes in this revision
4.0	15 October 2019	K Claridge	Refer Pg 2 and 3 for identified changes in this revision
5.0	4 November 2019	T Galek	Refer Pg 2 and 3 for identified changes in this revision
5.1	30 January 2020	K Claridge	Refer Pg 2 and 3 for identified changes in this revision
5.2	18 September 2020	K Claridge	Refer Pg 2 and 3 for identified changes in this revision

Approvers

Role	Signature and Date
Responsible Discipline Lead Kevin Claridge	<div style="text-align: right;">18/09/2020</div>  <hr/> Signer's Name Signed by: CL001730

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1 Introduction

This Document lists conforming products approved for installation within SA Water's infrastructure networks.

The products listed have been approved after their evaluation based upon the SA Water product appraisal procedure. In line with the Australian Drinking Water Guidelines (ADWG),

"The products used in water systems should be subjected to an audited system of quality control. The effectiveness of preventive measures is highly dependent upon the design and implementation of associated process control programs. To consistently achieve a high-quality water supply, it is essential to have effective control over the processes and activities that govern drinking water quality (ADWG).

In addition, the ADWG outlines that:

"Contaminants may also be introduced when water comes into contact with materials such as filter media, protective coatings, linings and liners, joining and sealing products, pipes and fittings, valves, meters and other components".

Approved products shall only be obtained from the listed manufacturer or their authorised agent.

All products intended for contact with drinking water, shall be tested for compliance with AS/NZS 4020 (2018). Compliance with this standard must also be verified at any change of material composition, change of design, or every 5 years - whichever occurs first.

1.1 Purpose

Design Consultants and Construction Contractors should use the information presented within this document for confirmation of products SA Water has authorised for use.

Product Manufacturers, suppliers and other stakeholders may also use the information as reference material.

SA Water personnel should source items from the Store. If not stocked they should procure by means of:

- utilising the relevant SA Water Period Contract or Standing Offer Arrangement,
- where an item is not covered under a Contract or Standing Offer Arrangement, contacting a relevant Stores or Procurement Officer.

1.2 Glossary

The following glossary items are used in this document:

Term	Description
BSW	British Standard Whitworth
CICL	Cast Iron Cement Lined Pipe
DICL	Ductile Iron Cement Linrd pipe
DW	Drinking Water
FBE	Fusion Bonded Epoxy
NDW	Non Drinking Water
PE	Polyethylene
PVC - M	Polyvinyl Chloride Modified
PVC - O	Polyvinyl Chloride Oriented
RRJ	Rubber Ring Joint
SA Water	South Australian Water Corporation
SCL	Steel Cement Lined Pipe
TG	SA Water Technical Guideline
TS	SA Water Technical Standard

1.3 References

1.3.1 Australian and International

The following table identifies Australian and International standards and other similar documents referenced in this document:

Number	Title
AS 1281	Cement mortar lining of steel pipes and fittings
AS 1432	Copper tubes for plumbing, gas fitting and drainage applications
AS 1579	Arc-welded steel pipes and fittings for water and waste-water
AS 2033	Installation of polyethylene pipe systems
AS 2345	Dezincification resistance of copper alloys
AS 2419	Fire hydrant installations - Fire hydrant valves
AS 3680	Polyethylene sleeving for ductile iron pipelines
AS 3681	Guidelines for the application of polyethylene sleeving to ductile iron pipelines and fittings
AS 3688	Water supply - Metallic fittings and end connectors
AS 3952	Water supply - Spring hydrant valve for waterworks purposes
AS 3996	Access covers and grates
AS 4181	Stainless steel clamps for water works purposes
AS 4794	Non-return valves - swing check and tilting disc
AS 4795	Butterfly valves for water works purposes
AS 4822	External field joint coatings for steel pipelines
AS 4956	Air valves for water supply
AS 5081	Hydraulically operated automatic control valves for waterworks purposes
AS/NZS 2032	Installation of PVC pipe systems
AS/NZS 2280	Ductile iron pipes and fittings
AS/NZS 2638.1	Gate valves for water works purposes – metal seated
AS/NZS 2638.2	Gate valves for water works purposes – resilient seated
AS/NZS 2648.1	Underground marking tape - non-detectable tape
AS/NZS 1477	PVC pipes and fittings for pressure applications
AS/NZS 4020 (2018)	Testing of products for use in contact with drinking water
AS/NZS 4087	Metallic flanges for Waterworks purposes
AS/NZS 4129	Fittings for polyethylene (PE) pipes for pressure applications
AS/NZS 4130	Polyethylene (PE) pipes for pressure applications
AS/NZS 4131	Polyethylene (PE) compounds for pressure pipes and fittings
AS/NZS 4158	Thermal - bonded Polymeric coatings on valves and fittings for water industry purposes
AS/NZS 4441	Oriented PVC (PVC-O) pipes for pressure applications

AS/NZS 4765	Modified PVC (PVC-M) pipes for pressure applications
AS/NZS 4793	Mechanical tapping bands for waterworks purposes
AS/NZS 4998	Bolted Unrestrained Mechanical Couplings
WSA 03:2011	Water Supply Code of Australia
WSA PS 106	Air valves
WSA PS 200	Ductile iron pipes for for Pressure Applications
WSA PS 201	Ductile iron fittings for Pressure and Non-Pressure Applications
WSA PS 203	Steel pipe for Pressure and Non-Pressure Applications
WSA PS 207	Polyethylene (PE) pipe for Pressure and Non-Pressure Applications
WSA PS 208	Plastic Moulded Fittings for Pressure Applications with PE Pipe
WSA PS 209	Polyvinylchloride, Modified (PVC-M) Pressure Pipes for Pressure Applications
WSA PS 210	Polyvinylchloride, Oriented (PVC-O) Pressure Pipes for Pressure Applications
WSA PS 211	Polyvinylchloride, Unplasticised (PVC-U) Pressure Pipes for Pressure Applications
WSA PS 260	Gate Valves, Resilient Seated for Pressure Applications
WSA PS 262	Extension spindles for gate valves
WSA PS 263	Butterfly Valves for Pressure Applications
WSA PS 264	Non-Return (Reflux) Valves for Pressure Applications
WSA PS 265	Air Valves for Pressure Applications
WSA PS 267	Hydrants (spring) for Pressure Applications
WSA PS 270	Mechanical Couplings, Non-End Thrust Restraint for Pressure Applications
WSA PS 290	Ductile Iron Access Covers and Frames for Water Supply and Sewerage
WSA PS 313	Repair and Off-Take Clamps for Pressure Applications
WSA PS 318	Marking tape, detectable
WSA PS 319	Marking tape, non-detectable

1.3.2 SA Water Documents

The following table identifies the SA Water standards and other similar documents referenced in this document:

Number	Title

1.4 Definitions

The following definitions are applicable to this document:

Term	Description
SA Water's Representative	The SA Water representative with delegated authority under a Contract or engagement, including (as applicable): <ul style="list-style-type: none"> • Superintendent's Representative (e.g. AS 4300 & AS 2124 etc.) • SA Water Project Manager • SA Water Construction Technical Officer • Reticulation Networks Wastewater/ Water Specialist • SA Water nominated contact person
Responsible Discipline Lead	The engineering discipline expert responsible for TS 0503 defined on page 3 (via SA Water's Representative)

1.5 Disclaimer

- SA Water reserves the right to alter, amend or withdraw this document, at any time, without prior notice. SA Water reserves the right, at its discretion, to suspend the use of or remove any product from this Technical Standard.
- SA Water does not give preference to any particular make or type of product listed herein. Manufacturers are presented in alphabetical order, not in any order of preference.
- All products listed may be subject to change by the manufacturer. In such circumstances manufacturers are required to notify SA Water of any changes in the design, materials or manufacturing process of any approved product. SA Water is reliant upon manufacturers providing such notification in a timely manner and takes no responsibility for any issue that may arise should a manufacturer fail to do so.
- It is the responsibility of the Designer/ Constructor to ensure selected products are appropriate for the intended application.
- It is the responsibility of the Designer/ Constructor to ensure the product complies with the infrastructure category and meets the relevant Australian standards.
- It is the responsibility of the Constructor to ensure components do not exceed any expiry date.
- Product sizing may vary between manufacturers. Size range provided herein is a guide only and the Designer/ Constructor shall refer to the manufacturer for the product size and availability.
- Pipe and fitting sizing has been limited to DN 375 throughout this document. Larger sizes are available from the manufacturer. However, consideration of any product not itemised herein is subject to SA Water approval.
- Information within this document is correct at time of publication E&OE. The date of publication of this document can be found on the front page, and, in the left hand corner of the footer on each subsequent page.

2 Scope

This document specifies products that are authorised for use within:

- Drinking water systems, and,
- Non-Drinking water systems

up to a maximum size of DN 375.

Should a Developer project contain any product of diameter larger than DN 375, specific approval from SA Water will be required for the works to be undertaken by means of the Developer Agreement.

The developer's Consultant or Contractor shall provide the SA Water Representative with data sheets/ manufacturer information for all products larger than DN 375.

SA Water will review the information provided and advise regarding the suitability of the product.

All products used within the Drinking Water system shall require compliance to AS/NZS 4020 (2018 - Testing of products for use in contact with drinking water).


Such products include pipes, fittings, valves, assorted components and materials used for coating, protection, lining, jointing, sealing and lubrication applications.

For the majority of products contained herein, AS/NZS 4020 (2018) compliance is a requirement of the Australian Standard for that product, e.g. AS/ NZS 2280, Ductile iron pipes and fittings.

Where an Australian Standard is not referenced for a particular product, AS/NZS 4020 (2018) compliance will require a separate confirmation of certification. If a product has AS/NZS 4020 (2005) certification, gap testing for leaching of organic material may be required.

3 Pipes

3.1 Ductile Iron Cement Lined Pipe (DACL)

All Fittings Shall Comply With Australian Standard	Drinking Water	AS/NZS 2280 AS/NZS 4020 (2018) AS 3680 AS 3681	 <p>DN 80 - 375</p>
	Non Drinking Water	AS/NZS 2280 AS 3680 AS 3681 WSA PS 200	
Specification	PN35 rated pipe only approved		
Notes	<p>Used in Drinking Water and Non Drinking Water Systems.</p> <ul style="list-style-type: none"> All products, including: pipes, fittings, coatings, linings, seals and gaskets that are intended for contact with drinking water, shall comply with AS/NZS 4020 (2018) Drinking Water System pipes and fittings shall be wrapped in polyethylene sleeving coloured BLUE or BLACK Non Drinking Water System pipes and fittings shall be wrapped in polyethylene sleeving coloured LILAC PN20 Pipe shall not be used without SA Water approval 		
Manufacturers	Iplex	Crevet Irontite	
	St Gobain PAM	TYTON Zinalium	
	Viadux	DIMAX - Tyton X Range	
	Vinidex	Linx GP	

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3.2 PVC Pressure Pipe

All Fittings Shall Comply With Australian Standard	Modified PVC (PVC M)	AS/NZS 2032 AS/NZS 4020 (2018) AS/NZS 4765	
	Oriented PVC (PVC O)	AS/NZS 2032 AS/NZS 4020 (2018) AS/NZS 4441	
Specification	Predominantly Series 2, PN16 Adelaide CBD and North Adelaide requires (minimum), PN20		
Notes	<p><u>All pipe connections shall be:</u> Rubber Ring Jointed (RRJ) DI fittings only. Refer 4.1 All products, including: pipes, fittings and seals, that are intended for contact with drinking water, shall comply with AS/NZS 4020 (2018). Lubricants used on elastomeric seals shall be AS/NZS 4020 compliant.</p> <p><u>Storage:</u> In compliance with AS/NZS 2032, if the total period of exposed storage outdoors is likely to exceed 12 months, pipes and fittings shall be covered and stored in a manner that allows ventilation and prevents heat entrapment.</p>		
	Drinking Water	Pipe colour – BLUE	
	Non Drinking Water	Pipe colour – LILAC or PURPLE	
Manufacturers	Pipemakers	PVC - M	Enviromain Series 2 - All sizes ≤ 375 mm
		PVC - O	All sizes ≤ 375 mm
	Iplex	PVC - M	BLUE/ PURPLE Rhino - All sizes ≤ 375 mm
		PVC - O	Apollo BLUE/ PURPLE - All sizes ≤ 375 mm
	Vinidex	PVC - M	Hydro - All sizes ≤ 375 mm
		PVC - O	Supermain - All sizes ≤ 375 mm
DAMOS	PVC - M	Series 2 - All sizes ≤ 375 mm	




3.3 Polyethylene Pipe

All Pipes and Fittings Shall Comply With Australian Standard	Drinking Water / Non Drinking Water	AS/NZS 4130 AS/NZS 4020 (2018)	
	Connections	AS 4130, AS 2033 AS/NZS 4020 (2018)	
Specification	Drinking Water	PE100 Pipe, PN16 OD63 – OD315	
	Non Drinking Water		
	Connections	PE100 Pipe – PN16 or PE80 Pipe –PN16 OD25 – 63	
Notes	Drinking Water	BLACK with BLUE Stripe or All BLUE	
	Non Drinking Water	Solid LILAC (preferred) or BLACK with wide LILAC stripe	
	Connections OD 25 – 63	Drinking Water	Solid BLACK or BLACK with BLUE stripe
	Diameters larger than OD 315 shall require specific SA Water approval	Non Drinking Water	LILAC or BLACK with wide LILAC stripe
Manufacturers	Australian Custom Pipes	DW, NDW, Connections	
	Cromford Pipe	DW, NDW, Connections	Identipipe
	David Moss Group	DW, NDW, Connections	
	DM Plastic	DW, NDW, Connections	Goldline
	Enviropipe	DW, NDW, Connections	ENVIROPRESSURE
	Iplex	DW, NDW, Connections	POLIplex
	Poly Pipe	DW, NDW, Connections	
	Vinidex	DW, NDW, Connections	
	Zekt	DW, NDW, Connections	
Advanced Piping Systems	DW, NDW, Connections	Maxiplast Polyethylene - PE100 - Acu-Pipe.	

Size of PE Pipe Equivalent


Standard Pipe Size	PE Pipe Equivalent	Standard Pipe Size	PE Pipe Equivalent
DN 20	OD 25	DN 100	OD 125
DN 40	OD 50	DN 150	OD 180
DN 50	OD 63	DN 200	OD 250
DN 80	OD 90	DN 250	OD 315

3.4 Steel Cement Lined Pipes (SCL)

All Fittings Shall Comply With Australian Standard	Drinking Water	AS 1579 AS/NZS 4020 (2018)	
	Non Drinking Water	AS 1579 AS 1281 WSA PS 203	
Specification	Drinking Water	Steelpipe coated with sintakote fusion bonded polyethylene and lined with cement mortar	
	Non Drinking Water	Non Drinking Water System pipes and fittings shall be wrapped in polyethylene sleeving coloured LILAC	
Notes	Jointing <ul style="list-style-type: none"> • Rubber Ring • Spherical Slip-in (Welded) • Ball & SOC (Welded) • Plain Ended Butt Joint (Welded) • Butt Joint With Collar (Welded) 		
	Flange (In accordance with AS/NZS4087)		
Manufacturer	Steel Mains Pty Ltd		

Refer [9.2](#) for SCL Fabricators

3.5 Copper Tube

All Fittings Shall Comply With Australian Standard	AS 1432 AS/NZS 4020 (2018)	
Specification	Type A, colour code green, annealed or bendable	
Notes	<ul style="list-style-type: none"> • Used for connections only • DN 20 – DN 50 Only • Availability shall be confirmed with the manufacturer 	
Manufacturer	Kembla	





4 Fittings

4.1 Ductile Iron (FBE Coated)

All Fittings Shall Comply With Australian Standard	AS/NZS 2280 AS/NZS 4020 (2018)
Specification	PN 16 unless otherwise specified (Series 2) Flanges:- <ul style="list-style-type: none"> AS/NZS 4087, PN16 AS/NZS 4087, PN35
Notes	BLACK or BLUE coloured fittings are acceptable for use in Non Drinking Water Systems





4.1.1 Principal Items (Regularly Used)

4.1.1.1 Tee "T" (Including Reducing Tee)

SOC/SOC Branch SOC		SOC/SOC Branch FLG		FLG/FLG Branch FLG		SPI/SPI Branch SPI	
							
DN 80 – 375		DN 80 – 375		DN 80 – 375		DN 100 - 300	
Manufacturers							
Derwent Industries		Derwent Industries		Derwent Industries		Derwent Industries	
Dobbie Dico		Dobbie Dico		Dobbie Dico			
Galvin Engineering	STD PN35	Galvin Engineering	Ezy-Lift PN16	Galvin Engineering			
	Ezy-Lift PN16						
Iplex	STD PN35	Iplex	STD PN35	Iplex			
	Crevet SL PN16		Crevet SL PN16				
Mallet Foundry		Mallet Foundry		Mallet Foundry			
Viadux	STD PN35	Viadux	STD PN35	Viadux			
	Auslite PN16		Auslite PN16				
Vinidex	STD PN35	Vinidex	STD PN35	Vinidex			
	SLII PN16		SLII PN16				

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4.1.1.2 Bends

SOC/SOC		FLG/FLG		FLG/SOC		FLG/SPI	
							
DN 80 – DN 375 (11 ¼° - 90°)		DN 80 – DN 375 (11 ¼° - 90°)		DN 80 – DN 375 (11 ¼° - 90°)		DN 80 – DN 375 (11 ¼° - 90°)	
Manufacturers							
Derwent Industries	PN 35	Derwent Industries	Derwent Industries	Derwent Industries	Derwent Industries	Derwent Industries	Derwent Industries
	PN 16						
Dobbie Dico		Dobbie Dico		Dobbie Dico			
Galvin Engineering	STD – PN35	Galvin Engineering (DN 100 & DN 150)	Galvin Engineering (DN 100 & DN 150)	Galvin Engineering (DN 100 & DN 150)	Galvin Engineering (DN 100 & DN 150)	Galvin Engineering (DN 100 & DN 150)	
	Ezy-Lift PN16						
Gillies Metaltech Ltd				Gillies Metaltech Ltd			
Iplex	STD – PN35	Iplex	Iplex	Iplex	Iplex	Iplex	Iplex
	Crevet SL - PN16						
Mallet Foundry		Mallet Foundry					
Viadux	STD – PN35	Viadux	Viadux	Viadux	Viadux	Viadux	Viadux
	Auslite PN16						
Vinidex		Vinidex		Vinidex			




Note:

- 6° SOC bends may be available from Viadux, (DN 100 – DN 200)


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4.1.1.3 Connectors

4.1.1.3.1 Socket / Socket, Flange / Socket & Flange / Spigot

SOC SOC		FLG/SOC		FLG/SPI	
					
DN 80 - 375		DN 80 - 375		DN 80 - 375	
Manufacturers					
Derwent Industries		Derwent Industries		Derwent Industries	
		Dobbie Dico		Dobbie Dico	
		Galvin Engineering		Galvin Engineering	
		Gillies Metaltech			
Iplex		Iplex		Iplex	
		Mallet Foundry		Mallet Foundry	
Viadux		Viadux		Viadux	
Vinidex		Vinidex		Vinidex	
		SL PN35 DN 100 - 375		SL PN35 DN 100 - 375	
DAEMCO		DAEMCO		DAEMCO	
		PN 16 and PN 35 DN 80 - 375		PN 16 and PN 35 DN 80 - 375	

4.1.1.3.2 Double Flanged Extension Pipe (Flanged Connector)

<p>All Fittings Shall Comply With Australian Standard AS/NZS 2280 AS/NZS 4020 (2018)</p>	 DN 80 - DN 375 Lengths 100 - 1120	
	<p>Notes</p> <ul style="list-style-type: none"> Hydrant Riser Including - Tapped 2" BSP Range of lengths offered. Confirm availability with manufacturer Special orders may be manufactured to any length up to 5 meters Long 	
<p>Manufacturer</p>	Derwent Industries	
	Dobbie Dico	
	Galvin Engineering	
	Iplex	FLG/FLG Tapped 2" BSP DN 80 x (230) (225nom)
	Viadux	
	Vinidex	

4.1.1.4 Reducer/Taper

4.1.1.4.1 Standard Reducer




SOC/SOC		FLG/FLG		FLG/SOC		SPI/SPI		FLG/SPI	
									
DN 100 - 375		DN 100 -375		DN 100 - 300		DN 100 -300		DN 100 - 300	
Manufacturers									
Derwent Industries		Derwent Industries		Derwent Industries		Derwent Industries		Derwent Industries	
		Dobbie Dico							
Galvin Engineering		Galvin Engineering							
Gillies Metaltech Ltd									
Iplex		Iplex		Iplex		Iplex		Iplex	
Mallet Foundry		Mallet Foundry							
Viadux		Viadux		Viadux		Viadux		Viadux	
Vinidex	SL PN35	Vinidex	SL PN35	Vinidex	SL PN35				
	SLII PN16				SLII PN16				

4.1.1.4.2 Eccentric Reducer Flange / Flange

		
Manufacturers	Derwent Industries	
	Iplex	
	Mallet Foundry	
	Viadux	
	Vinidex	SL PN35

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4.1.1.5 Hydrant Tee "T"

Riser Hydrant 80mm 		SPI/SPI Branch FLG 		SOC/SPI Branch FLG 	
DN 100 - 375		DN 80 – 375		DN 300 (80 & 100)	
Manufacturers					
Derwent Industries		Derwent Industries		Derwent Industries	
Galvin Engineering		Galvin Engineering			
Iplex		Iplex		Iplex	
		Mallet Foundry		Mallet Foundry	
Viadux		Viadux		Viadux	
Vinidex	SL PN35	Vinidex	SL PN35	Vinidex	SLII PN16

4.1.1.6 Extension Pipe with Puddle Flange

FLG/FLG With Puddle Flange 		FLG/SOC With Puddle Flange 	
DN 100 – 375 Length 600 - 915		DN 100 – 375 Length 450 – 915	
Manufacturers			
Derwent Industries		Derwent Industries	
Galvin Engineering		Galvin Engineering	
Iplex		Iplex	
		Viadux	
Vinidex		Vinidex	

Refer to [4.2.1](#) for Polyethylene Puddle Flange

Refer to [9.1.1](#) for factory fabricated polyethelene pipe

Refer to [9.2.1](#) for factory fabricated mild steel specials

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4.1.2 Less Frequently Utilised Items

4.1.2.1 Supported Bends

<p>Hydrant Bend</p> 	<p>FLG/SOC With Heel</p> 	<p>FLG/FLG With Heel</p> 	<p>FLG/FLG Duckfoot</p> 
<p>DN 80 - 150</p>	<p>DN 100 SOC - DN 80 FLG DN 150 SOC - DN 80 FLG</p>	<p>DN 80 - 375</p>	<p>DN 80 - 375</p>
Manufacturers			
<p>Derwent Industries</p>	<p>Derwent Industries</p>		<p>Derwent Industries</p>
<p>Dobbie Dico</p>	<p>Dobbie Dico</p>		<p>Dobbie Dico</p>
	<p>Galvin Engineering</p>		
<p>Iplex</p>	<p>Iplex</p>	<p>Iplex</p>	<p>Iplex</p>
<p>Viadux</p>	<p>Viadux</p>		<p>Viadux</p>

4.1.2.2 Cap

		
Manufacturers	<p>Derwent Industries</p>	
	<p>Mallet Foundry</p>	
	<p>Vinidex</p>	<p>SL - PN35</p>
	<p>Vinidex</p>	

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4.1.2.3 Flanges



4.1.2.3.1 Blind / Blank

		
All Fittings Shall Comply With Australian Standard	Flanges <ul style="list-style-type: none"> • AS/NZS 4087, PN16 • AS/NZS 4087, PN35 • AS/NZS 4020 (2018) 	
Manufacturers	Derwent Industries	
	Dobbie Dico	
	Iplex	PN16
	Viadux	PN35
	DAEMCO	PN 16

4.1.2.3.2 Blank Flange Threaded BSP (With/Without) Location Lugs

		
Manufacturers	Iplex	Available on Request
	Viadux	BSP Thread, any DN up to fitting DN
	DAEMCO	Blank and Tapped

4.1.2.4 Flange Flared Fittings

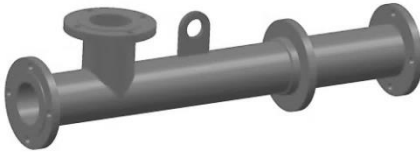
FLG/FLR Bend 	FLG/FLR 
DN 80 - 375	DN 80 - 375
Manufacturers	
Derwent Industries	Derwent Industries
Iplex	Iplex
Viadux	Viadux

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4.2 Polyethylene Fittings

<p>All Fittings Shall Comply With Australian Standard AS/NZS 4129 AS/NZS 4020 (2018)</p>	<p>Only PE products identified in this document are approved for use. In addition, the products shall be obtained from one of the listed Manufacturers, or their Agent.</p>
<p>Specification</p>	<p>Butt welded Items shall only be fabricated by welders who have attained the PMBWELD301B qualification. Electrofusion welding shall only be fabricated by welders who have attained the PMBWELD302B qualification.</p>
<p>Note</p>	<p>Upon completion, the Fabrication Company shall provide the SA Water Representative with a Form:</p> <ul style="list-style-type: none"> • Identifying every weld, with the date of the weld and name and id of the technician who undertook the weld • Itemising the materials used, ie item manufacturer & description. • Each weld shall be stamped with the welder id. • The Form shall be signed by an authorised officer of the Fabrication Company and shall be co-signed by the Construction Contractor installing the item.

4.2.1 Flange / Flange with Thrust Ring & 80 Flange Fire Plug Offtake

 <p>DN 100 - 375</p>	
<p>Manufacturer</p>	<p>Refer Section <u>9.1.1</u> Factory Fabrication of PE Specials</p>

Refer 9.1.2 for Mild Steel Cement Lined

Refer 4.1.1.6 for Ductile Iron Cement Lined

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4.2.2 Electrofusion Couplings

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS/NZS 4129 AS/NZS 4020</p>		
<p>Note</p>	<p>Diameters larger than OD 315 shall require specific SA Water approval</p>		
<p>Manufacturer</p>	<p>Fusion Group</p>	<p>Fusamatic</p>	
	<p>Georg Fischer</p>		
	<p>Nupigeco SpA</p>	<p>EloFIT</p>	
	<p>Plasson</p>	<p>Smartfuse</p>	
	<p>Rollmaplast</p>		
	<p>Vinidex</p>	<p>Frialen</p>	
	<p>Advanced Piping Systems</p>	<p>Plastitalia</p>	

4.2.3 Electrofusion Puddle Flange

Refer [4.1.1.6](#) Extension Pipe for Ductile Iron Puddle Flange fittings.

	 <p>OD160 - 315</p>	
<p>Notes</p>	<p>Only to be installed in accordance with Plasson’s installation instruction for this product and within the guidelines of PIPA document POP 001</p>	
<p>Manufacturer</p>	<p>Plasson</p>	<p>Flex Restraint</p>

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4.2.4 Butt Weld Fittings

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS/NZS 4129 AS/NZS 4020 (2018)</p>		
<p>Note</p>	<p>Diameters larger than OD 315 shall require specific SA Water approval</p>	<p>Approval is for <u>only the following specific SDR11 Spigot fittings</u>, Both Long & Short Spigot: Bend, 90° & 45° Tees, Equal & Reducing Reducer Flange Adaptor, Long & Stub Cap</p>	
<p>Manufacturer</p>		<p>Fusionweld</p>	<p>Spigot Fittings</p>
		<p>Georg Fischer</p>	<p>EF Spigot Fittings</p>
		<p>MAKO Poly</p>	<p>PE Butt Fusion Fittings</p>
		<p>Nupigeco SpA</p>	<p>EloFIT Spigot Fittings</p>
		<p>Simona AG</p>	<p>Spigot Fittings</p>
		<p>Advanced Piping Systems</p>	<p>Spigot and Butt</p>

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4.2.5 Mechanical Couplings




All Fittings Shall Comply With Australian Standard	AS/NZS 4129 AS/NZS 4020 (2018)	
Notes	PE fittings with male threaded end connectors shall not be screwed directly into pre tapped connectors or tapping saddles	
Manufacturers	Georg Fischer	
	Magnum (Iplex)	
	Milnes (ESSE)	
	Nupigeco SpA	EloPRESS Compression Fittings
	Philmac	3G Metric
	Plasson	Metric Compression Fittings
	FusionWeld (Fusion Plast)	
	Supreme (Viadux)	S16 Compression Fittings
	Advanced Piping Systems	Compression Fittings

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4.3 Flange Offtakes (Stainless Steel)

 <p>DN 100 - 375</p>	
All Fittings Shall Comply With Australian Standard/s	AS 4181 AS/NZS 4020 (2018)
Manufacturers	AVK
	Iplex (Crevet)
	Viadux (Wang)
	RMC
	Derwent
Notes For use on DICL, CICL, Steel, Copper, RC and AC. * Not to be used for joining of pipes or for the following materials: PVC, GRP, PE and other plastics	

4.3.1 Flanged Off – Takes (Ductile Iron)


 <p>(PN 16)</p> <p>DN 125 x 80 125 x 100 180 x 80 180 x 100</p>	
All Fittings Shall Comply With Australian Standard/s	AS/NZS 4129 AS/NZS 4020 (2018) AS 4181
Manufacturers	Derwent Industries (DI Uniclamp)
Notes	For use on PE 100 pipe, S2-PVC, AC, GRP, DI, CI.

4.4 Steel Cement Lined Fittings

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 1579 AS 1281 AS/NZS 4020 (2018) WSA PS 203</p>	
<p>Notes</p>	<p>MSCL Specials, e.g. tees, bends, extension piece with puddle flange etc shall be manufactured only by Approved Suppliers</p>	
<p>Manufacturers</p>	<p>Refer <u>9.2.1</u> for Factory Fabrication of SCL Specials Refer <u>3.4</u> for SCL Pipe Manufacturers</p>	

5 Mains Tapping Fittings

5.1 Ductile Iron (FBE Coated) Pre-Tapped Connectors

All Fittings Shall Comply With Australian Standard/s		AS/NZS 2280 AS/NZS 4020 (2018)	
Single Tapping Each Side		Twin Tapping Each Side	
			
DN 100 x (3/4" - 2" BSP) DN 150 x (3/4" - 2" BSP) DN 200 x (2" BSP)		DN 100 x (3/4" - 1" BSP) DN 150 x (3/4" - 1" BSP) DN 200 x (3/4" BSP)	
Manufacturer			
Derwent Industries		Derwent Industries	
Dobbie Dico		Dobbie Dico	
Galvin Engineering		Galvin Engineering	
Iplex		Iplex	
Viadux		Viadux	
Vinidex		Vinidex	
Stockbrands	Nylon	Stockbrands	Nylon

5.2 Tapping Saddles

5.2.1 For, DICL/CICL, PVC & AC Pipes Only


All Fittings Shall Comply With Australian Standard	AS/NZS 4793 AS/NZS 4020 (2018) WSA PS 313	316 Stainless Steel	Ductile Iron Or Gunmetal
			
		DN 80 - 375	DN 80 - 375

Material	20 & 25 mm Offtake		
	DICL & CICL	PVC	AC
Bronze	Milnes / 60B (Iplex)		
Ductile Iron	Viadux / Iso-tap	Viadux / Iso-tap	Viadux / Iso-tap NIBF (Iplex)
Ductile Iron FBE Coated	NIBF / Taptite(Iplex)	NIBF (Iplex)	
Gunmetal		Milnes / 60A (Iplex) RMC Sureseal	Milnes / 60B (Iplex) RMC Sureseal
Nylon		Stockbrands (incl. Self Tapping type)	Stockbrands (incl. Self Tapping type)
316 Stainless Steel		Talbot / Self Tapping	
	Wang KT (Viadux)	Wang KT (Viadux)	Wang KT (Viadux) Wang BPS (Viadux)




Material	40 mm Offtake		
	DICL & CICL	PVC	AC
Bronze			Milnes / 60B (Iplex) RMC Sureseal
Ductile Iron	Viadux / Iso-tap		
Ductile Iron FBE Coated	NIBF / Taptite (Iplex)		
Gunmetal		Milnes / 60A (Iplex) RMC Sureseal	
Nylon		Stockbrands (incl. Self Tapping type)	Stockbrands (incl. Self Tapping type)
316 Stainless Steel	Wang BPS (Viadux)	Wang BPS (Viadux)	Wang BPS (Viadux)

Material	50 mm Offtake (used with OD63 PE)		
	DICL & CICL	PVC	AC
Ductile Iron FBE Coated	NIBF (Iplex)		
Gunmetal		Milnes / 60A (Iplex)	
Nylon		Stockbrands (incl. Self Tapping type)	Stockbrands (incl. Self Tapping type)
316 Stainless Steel	Wang BPS (Viadux)	Wang BPS (Viadux)	Wang BPS (Viadux)

5.3 Electro Fusion Tapping Tee and Branch Saddle (For Polyethylene Pipes Only)

All Fittings Shall Comply With Australian Standard	AS 4129 AS/NZS 4020 (2018)	 OD63 - 315	
Notes	Electrofusion tapping saddle shall always be used with Underpart as shown		
Manufacturers	Georg Fischer		
	Fusionweld	Multiseal	
	Plasson	Advanced Piping Systems	

5.4 Tapping Couplings (For 63 mm Pipes Only)

All Fittings Shall Comply With Australian Standard	AS 4129 AS/NZS 4020 (2018)		
			
Manufacturer			
Plasson	Talbot (Self Tapping)	Refer Clause <u>4.2.5</u>	

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5.5 Steel Boss – Tapped, Weld On (For MSCL Pipes Only)

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS/NZS 4020 (2018)</p>
<p>1/8" – 1 1/2" BSP</p>	
<p>Manufacturer</p>	<p>Ottoway Engineering</p>

6 Couplings/Adaptors


All Fittings Shall Comply With Australian Standard	AS/NZS 4158-1 AS/NZS 4020 (2018) AS/NZS 4998
Specification	WSA PS 270
Notes	<ul style="list-style-type: none"> Grade 316 stainless steel bolts having a life expectancy of over 50 years. Permitted for use in accordance with WSCM drawings 4005-30005-06 and 4005-30005-09. Not to be used on polyethylene pipes. Bitumen coated end clips shall not be used.

6.1 Straight, Stepped & Adaptor Flange Couplings


					
DN 80 - 375		DN 80 - 375		DN 80 - 375	
Manufacturers					
AVK	Model 601 Trim 4312, Supa Coupling	AVK	Model 602 Trim 4312, Supa Stepped Coupling	AVK	Model 603 Trim 4312, Supa Adaptor Flange
Georg Fischer	WAGA Multi-Joint 3000 Plus (DN 80 – 300)	Georg Fischer	WAGA Multi-Joint 3000 Plus (DN 80 – 300)		
Viadux (Wang)	Multigib coupling & Vari-Gib coupling long sleeve preferred & (Easigib Coupling)	Viadux (Wang)	DN 100 – 150 (133 - 172 mm) VGib RCF SAW	For use on RC/ PVC Pipe	
Viking Johnson Maxifit	Maxifit coupling long sleeve preferred				
DAEMCO					

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6.2 Gibaults

Notes	<ul style="list-style-type: none"> Permitted for use in accordance with WSCM drawings 4005-30005-06 and 4005-30005-09. Not to be used on polyethylene pipes. 	
 <p>DN 100 - 375</p>		
Manufacturer	DEKS	Flex-Gib


6.3 Camlock Couplings

All Fittings Shall Comply With Australian Standard	AS 3688 AS/NZS 4129 AS/NZS 4020 (2018)	 <p>DN 50 - 100</p>
Notes	<ul style="list-style-type: none"> Metal or Polyethylene Coupling (Type F) with BSP male thread Dust Cap (Type DC) 	
Manufacturers	<p>Austrahose</p> <p>Philmac</p> <p>Banjo</p>	


7 Valves

7.1 Gate Valves

7.1.1 Resilient Seat Gate Valve Double Flange


<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 2638-2 AS/NZS 4020 (2018) WSA PS 260</p>	 <p>DN 50 - 375</p>
<p>Notes</p>	<p>PN 16 unless otherwise specified</p>	
<p>Manufacturers</p>	<p>AAP Industries Pty Ltd (Maxiflo)</p>	
	<p>AVK (Iplex)</p>	<p>Series 57/40 PN 16 Series 57/80 PN 25</p>
	<p>Betta Valves</p>	
	<p>DAEMCO</p>	
	<p>Derwent Industries</p>	
	<p>Karon (Challenger)</p>	
	<p>Viadux</p>	
	<p>DAEMCO</p>	<p>DN 80 – 375 mm (PN 16)</p>

7.1.2 Resilient Seat Gate Valve Double Socket


<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 2638-2 AS/NZS 4020 (2018) WSA PS 260</p>	 <p>DN 80 - 300</p>
<p>Notes</p>	<p>Only to be used on DICL pipes and secured with Tytonlok retaining ring</p>	
<p>Manufacturers</p>	<p>AAP Industries Pty Ltd (Maxiflo)</p>	
	<p>AVK</p>	
	<p>Betta Valves</p>	
	<p>Derwent Industries</p>	
	<p>Viadux</p>	
	<p>DAEMCO</p>	

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7.1.3 Resilient Seat Gate Valve with PE Pipe Connection Ends

All Fittings Shall Comply With Australian Standard	AS 2638-2 AS/NZS 4020 (2018) WSA PS 260	
		
RSVG FL/ PE Ends DN 80 Flange - PE OD75 (fusion or butt weld applications)	Series 01/70 (tensile resistant PE ends – restrained joints) PE OD90 – 315	Series 36/80 (fusions or butt weld applications) PE OD75 - 315
	Series 16/50 (POM with tensile restrained joints for PE pipes) PE OD63	
Manufacturer		
AVK (Iplex)	AVK (Iplex)	AVK (Iplex)
	DAEMCO OD125 and OD 180	
	Derwent OD 125 – OD 315	

7.1.4 Metal Seat Gate Valve Double Flange

All Fittings Shall Comply With Australian Standard	AS 2638-1 AS/NZS 4020 (2018)	 DN 80 - 350
Notes	These valves are for PN 35 applications	
Manufacturers	AVK	
	Viadux	

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7.2 Ball Valve

7.2.1 Polyethylene Ball Valve



<p>All Fittings Shall Comply With Australian Standard</p> <p>AS/NZS 4129 AS/NZS 2638.1 AS/NZS 2638.2 AS/NZS 4020 (2018)</p>	<div style="text-align: center;">  <p>DN 40, DN 50</p> </div>	
<p>Manufacturers</p>	<p style="text-align: center;">Iplex</p> <hr/> <p style="text-align: center;">Philmac</p> <hr/> <p style="text-align: center;">Vinidex</p>	

7.2.2 Brass Ball Valve

7.2.2.1 DN 25 – DN 50

<p>All Fittings Shall Comply With Australian Standard</p> <p>AS 3688 AS/NZS 4020 (2018)</p>	<p>Brass body with Stainless Steel Ball and Stainless Steel handle.</p> <p>DN 25, 40, 50</p>	<div style="text-align: center;">  <p>Series 1297</p> </div>
<p>Manufacturers</p>	<p style="text-align: center;">Zetco</p>	


7.2.2.2 DN 20 x 90° Angle Valve

<p>All Fittings Shall Comply With Australian Standard</p> <p>AS 3688 AS/NZS 4020 (2018)</p>	<p>Brass body with Stainless Steel Ball</p> <p>DN20 only</p>	<div style="text-align: center;">  <p>with Brass handle</p> </div>	<div style="text-align: center;">  <p>with Stainless Steel handle</p> </div>
<p>Manufacturers</p>	<p style="text-align: center;">Zetco</p>	<p style="text-align: center;">Series 1254</p>	<p style="text-align: center;">Series 1247</p>


7.2.2.3 NDW Ball Valves

<p>All Fittings Shall Comply With Australian Standard</p> <p>AS 3688 AS/NZS 4020 (2018)</p>	<p>Brass body with Stainless Steel Ball</p>		
	<p>Lilac handle for NDW System identification</p>		
<p>Manufacturers</p>	<p>Zetco</p>	<p>Series 1246 DN20</p>	<p>Series 1298 DN 25, 40, 50</p>

7.3 Pressure Reducing/Flow Control


<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 5081 AS/NZS 4020 (2018)</p>	 <p>DN 50 - 300</p>
<p>Manufacturers</p>	<p>Bermad (Series 720 and 770 – U)</p>	
	<p>M.E. Mack (Model 13312A2)</p>	
	<p>Singer</p>	

7.4 Swing Check


<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 4794 AS/NZS 4020 (2018) WSA PS 264</p>	 <p>DN 80 - 300</p>
<p>Specification</p>	<p>Resilient Seated DN 80 – 250 Metal Seated DN 80 - 300</p>	
<p>Manufacturers</p>	<p>AVK (Iplex)</p>	
	<p>Viadux</p>	

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7.5 Air Release

All Fittings Shall Comply With Australian Standard	AS/NZS 4158 AS/NZS 4020 (2018) WSA 106 WSA PS 265		
	Manufacturers	Amiad	
AVK (Iplex)		Series 851	PN 16 PN 25
		Double Orifice	Glass Reinforced Ductile Iron
Bermad			PN 16 PN 25
PIHA Vent Master			PN 16
Ventomat			RBX Series


7.6 Non Return

All Fittings Shall Comply With Australian Standard	AS 4794 AS/NZS 4020 (2018) WSA PS 264	 <p>DN 80 - 300</p>	
	Manufacturer	Crane (Iplex) Pentair Valves and Controls	Keystone 86


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7.7 Butterfly Valves


7.7.1 Wafer type

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 4795 AS/NZS 4020 (2018) WSA PS 263</p>	<div style="text-align: center;">  <p>DN 50 - 350</p> </div>					
<p>Notes</p>	<p>Available with handle or gearbox (shown)</p>						
<p style="text-align: center;">Manufacturers</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">AVK (Iplex)</td> </tr> <tr> <td style="text-align: center;">Pentair Valves and Controls</td> </tr> <tr> <td style="text-align: center;">Ebro</td> </tr> <tr> <td style="text-align: center;">Turnflo</td> </tr> <tr> <td style="text-align: center;">Wouter Witzel EVS (AVK)</td> </tr> </table>			AVK (Iplex)	Pentair Valves and Controls	Ebro	Turnflo	Wouter Witzel EVS (AVK)
AVK (Iplex)							
Pentair Valves and Controls							
Ebro							
Turnflo							
Wouter Witzel EVS (AVK)							

7.7.2 Lugged Type


<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 4795 AS/NZS 4020 (2018) WSA PS 263</p>	<div style="text-align: center;">  <p>DN 50 - 300</p> </div>			
<p>Notes</p>	<p>Available with handle or gearbox</p>				
<p style="text-align: center;">Manufacturers</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">AVK (Iplex)</td> </tr> <tr> <td style="text-align: center;">Pentair Valves and Controls</td> </tr> <tr> <td style="text-align: center;">Ebro</td> </tr> </table>			AVK (Iplex)	Pentair Valves and Controls	Ebro
AVK (Iplex)					
Pentair Valves and Controls					
Ebro					

7.7.3 Double Flange Type


<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 4795 AS/NZS 4020 (2018) WSA PS 263</p>	<div style="text-align: center;">  <p>DN 50 - 350</p> </div>				
<p>Notes</p>	<p>Available with handle or gearbox (shown)</p>					
<p style="text-align: center;">Manufacturers</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">AVK (Iplex)</td> </tr> <tr> <td style="text-align: center;">Pentair Valves and Controls</td> </tr> <tr> <td style="text-align: center;">Ebro</td> </tr> <tr> <td style="text-align: center;">Wouter Witzel EVS (AVK)</td> </tr> </table>			AVK (Iplex)	Pentair Valves and Controls	Ebro	Wouter Witzel EVS (AVK)
AVK (Iplex)						
Pentair Valves and Controls						
Ebro						
Wouter Witzel EVS (AVK)						

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7.8 Combination Air

All Fittings Shall Comply With Australian Standard	AS 4956 AS/NZS 4020 (2018) WSA 106 WSA PS 265	 <p>DN 20 - 80</p>	
	Manufacturer	Bermad	Model C30

7.9 Valve Spindle Extension


All Fittings Shall Comply With Australian Standard	WSA PS 262	 <p>Length 150 - 1200</p>	
		Manufacturers	Iplex

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8 Hydrants

8.1 Below Ground

8.1.1 Fire Hydrants (Fire Plug)

 <p>DN 80</p>		
All Fittings Shall Comply With Australian Standard	AS 2419 AS/NZS 4087 AS/NZS 4020 (2018)	
Specification	Used for Drinking Water applications.	
Manufacturers	AVK	PN 16
	Challenger Valves and Actuators	PN 16
	Viadux	PN 16
		PN 35



8.1.2 Air Release Hydrant (Spring Hydrant)

All Fittings Shall Comply With Australian Standard	AS 3952 AS/NZS 4087 AS/NZS 4020 (2018) WSA PS 267	 <p>DN 80</p>
Specification	Used for Non Drinking Water applications only. Top plate including lockdown lugs to be coloured LILAC.	
Manufacturer	AVK	PN 16
	Derwent Industries	PN 16
	Viadux	PN 16

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8.2 Above Ground

8.2.1 Pillar Type Key Operated, Firehose Thread Outlet

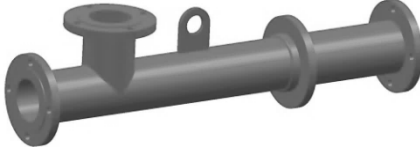
<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 2419 AS/NZS 4087 AS/NZS 4020 (2018)</p>	
<p style="text-align: center;">Light Weight Single Outlet</p> <div style="text-align: center;">  </div> <p style="text-align: center;">DN 63</p>	<p style="text-align: center;">Double Outlet</p> <div style="text-align: center;">  </div> <p style="text-align: center;">DN 63</p>	
<p>Manufacturer</p>		
<p>Viadux</p>	<p>Viadux</p>	

9 Authorised Fabricators / Contractors

9.1 Polyethylene Fabrication

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS/NZS 4129 AS/NZS 4130 AS/NZS 4020 (2018) Only PE products catalogued in this Standard are approved for use for fabrication of PE Specials. That is, products shall be supplied by one of the listed Manufacturers, or his Agent.</p>
<p>Specification</p>	<p>Items shall only be fabricated by welders who have attained the PMBWELD301B qualification.</p>
<p>Notes</p>	<p>Upon completion, the Fabrication Company shall provide the SA Water Representative with a Form:</p> <ul style="list-style-type: none"> • Identifying every weld, with the date of the weld and name and id of the technician who undertook the weld • Itemising the materials used, ie item manufacturer & description. • Each weld shall be stamped with the welder id. <p>The Form shall be signed by an authorised officer of the Fabrication Company and shall be co-signed by the Construction Contractor installing the item.</p>

9.1.1 Factory Fabrication of PE Pipe Specials

 <p>DN 100 - 375</p>	
<p>Manufacturer</p>	<p>Bianco Precast</p>
	<p>Dalkeith Plastics Pty Ltd</p>
	<p>Fusion Weld Pty Ltd</p>
	<p>Poly Pipe Fabrications Pty Ltd</p>
	<p>Statewide Poly Pty Ltd</p>
	<p>Advanced Piping Systems</p>

Refer [4.1.1.6](#) for puddle flange extension pipes

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9.1.2 Field Butt Welders for PE Pipework and Fittings


All Fittings Shall Comply With Australian Standard	AS/NZS 4129 AS/NZS 4020 (2018) Only PE products catalogued in this Standard are approved for use for fabrication of PE Specials. That is, products shall be supplied by one of the listed Manufacturers, or his Agent.
Specification	Items shall only be fabricated by welders who have attained the PMBWELD301B qualification.
Notes	Upon completion, the Fabrication Company shall provide the SA Water Representative with a Form : <ul style="list-style-type: none"> Identifying every weld, with the date of the weld and name and id of the technician who undertook the weld Itemising the materials used, ie item manufacturer & description. Each weld shall be stamped with the welder id. The Form shall be signed by an authorised officer of the Fabrication Company and shall be co-signed by the Construction Contractor installing the item.

Authorised Contractors	Dalkeith Plastics Pty Ltd
	Statewide Poly Pty Ltd
	Poly Pipe Fabrications
	Advanced Piping Systems

9.2 Steel Cement Lined (SCL) Fabrication

All Fittings Shall Comply With Australian Standard	AS/NZS 1281 AS/NZS 1579 AS/NZS 4321 AS/NZS 4020 (2018) SCL fabricated products shall be manufactured from material obtained from an approved SCL supplier. Refer 3.4 for SCL Product Manufacturer
Specification	Items shall only be fabricated by welders who have attained a qualification appropriate for the required standard of welding.
Notes	The Form shall be signed by an authorised officer of the Fabrication Company and shall be co-signed by the Construction Contractor installing the item.

9.2.1 Factory Fabrication of SCL Specials

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 1579 AS 1281 AS/NZS 4020 (2018) WSA PS 203</p>		 <p style="text-align: center;">DN 100 - 375</p>
<p>Specification</p>	<p>Drinking Water</p>	<p>Steelpipe coated with sintakote fusion bonded polyethylene and lined with cement mortar</p>	
	<p>Non Drinking Water</p>	<p>NDW System pipes and fittings shall be wrapped in polyethylene sleeving coloured LILAC</p>	
<p>Notes</p>	<p>Joining</p> <ul style="list-style-type: none"> • Rubber Ring • Spherical Slip-in (Welded) • Ball & SOC (Welded) • Plain Ended Butt Joint (Welded) • Butt Joint With Collar (Welded) <p>Flange (In accordance with AS4087)</p> <p>MSCL Specials, e.g. tees, bends etc are manufactured by approved suppliers to suit project requirements</p>		
<p>Manufacturer</p>	<p>Contract Engineering SA</p>		
	<p>Lincoln Engineering</p>		
	<p>Ottoway Engineering</p>		
	<p>Smart Fabrication</p>		
	<p>Steel Mains Pty Ltd</p>		
	<p>Tatiara Industrial Repairs</p>		
	<p>Water Engineering Technologies</p>		

Refer [4.4](#) for SCL Fittings

Refer [9.1.1](#) for Polyethylene

Refer [4.1.1.6](#) for puddle flange extension pipes

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9.2.2 Field Welding of SCL Specials

All Fittings Shall Comply With Australian Standard	AS/NZS 1281 AS/NZS 1579 AS/NZS 4321 AS/NZS 4020 (2018) SCL fabricated products shall be manufactured from material obtained from an approved SCL supplier. Refer 3.4
Specification	Items shall only be fabricated by welders who have attained a qualification appropriate for the required standard of welding.
Notes	Prior to commencement of any work, the Contractor shall provide the SA Water Representative with: <ul style="list-style-type: none"> • Weld Procedures for approval • A copy of the Welders Qualifications. • An Inspection & Test Plan for the required work. • NDT at a rate specified by SA Water • Weld TraceMaps and Details. Consistent with TS 0420

Authorised Contractors	Contract Engineering SA
	Lincoln Engineering
	N&A Mobile Welding Services
	Ottoway Engineering
	Smart Fabrication
	Tatiara Industrial Repairs
	Water Engineering Technologies


9.3 Under Pressure Tapping Services

All Fittings Shall Comply With Australian Standard	WSA 03 – 2011, Appendix C
Specification	
Notes	<ul style="list-style-type: none"> • Under pressure tapping is a system which allows an offtake to be provided from a 'live' reticulation or trunk main without the requirement to shut down the main • The service requires the provision of an authorised Stainless Steel flange offtake and an isolating valve • The installation shall be carried out in accordance with WSA 03 – 2011, Appendix C 'Under pressure cut-in connection of pressure pipelines \geq DN 80'.


Authorised Contractors	Complete Tapping Services
	Tapping Systems Australia Pty Ltd

10 Flange Accessories

10.1 Flange Jointing Kits

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS/NZS 4020 (2018) WSA 109 WSA PS 312</p>	<div style="text-align: center;">  <p>DN 50 - 375</p> </div>	
<p>Specification</p>	<p>Includes EPDM Gasket Plus Bolts, Nuts & Washers to suite Flanges</p> <ul style="list-style-type: none"> AS 4087, PN16 AS 4087, PN35 		
<p>Notes</p>	<p>Fasteners Range:</p> <ul style="list-style-type: none"> 316 stainless steel Galvanised High tensile steel 		
Manufacturers			
PN16 Flanges		PN35 Flanges	
Iplex		Iplex	
Viadux		Viadux	

10.2 Flange, Shut-off, With Lifting Handle

<p>All Fittings Shall Comply With Australian Standard</p> <p>AS/NZS 4020 (2018) WSA 109 WSA PS 312</p>	<div style="text-align: center;">  <p>DN 100 - 375</p> </div>	
	<p>Manufacturer</p>	<p>Ottoway Engineering</p>

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11 Access Cover Assemblies

All Fittings Shall Comply With Australian Standard	AS 3996 WSA PS 290
Specification	Trafficable – AS 3996, Class D Non Trafficable – AS 3996, Class B
Notes	As listed

11.1 Trafficable Covers

11.1.1 Street Box (Type A)

11.1.1.1 Chamber and Lid

Notes	<p>The two- piece lid shall be used in the Adelaide Metropolitan area.</p> <p>Where used for Non Drinking Water applications, the Cover shall be:</p> <ul style="list-style-type: none"> marked RECYCLED WATER or RECLAIMED WATER Coated or painted LILAC 	Full Height (Depth 420 mm)	Half Height
			
Manufacturer		Bianco (PCP)	Bianco (PCP)
		Cooke Pre-Cast Concrete	Cooke Pre-Cast Concrete
		Iplex	
		Viadux	
		Webforge	Webforge


11.1.1.2 Concrete Support Spacer

Notes	Rectangular slab L W D 1200 800 170 (DPTI or major roads)	 
	Circular ring W D 600 140	
Manufacturer		
Bianco Precast		
Cooke Pre-Cast Concrete		


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11.1.2 Isolating Valve Chamber / Heavy Duty (Type B)

11.1.2.1 Chamber and Lid


Notes	<p>Not to be used in the Adelaide Metropolitan area.</p> <p>For use in paved roads</p> <p>Use of this item is subject to SA Water Approval</p>	
Manufacturer	AVK	
	Bianco Precast	
	Cooke Pre-Cast Concrete	

11.1.2.2 Concrete Support Spacer


Notes	<p>Concrete slab</p> <p>L W D</p> <p>500 500 150</p>	
Manufacturer	Bianco Precast	
	Cooke Pre-Cast Concrete	

11.1.3 Topstone Assembly

11.1.3.1 Chamber and Lid

Notes	<p>For use in unpaved roads only</p> <p>Chamber</p> <p>420 (DN) x 265 (T)</p>	
Manufacturer	Bianco Precast	

11.1.3.2 Concrete Support Spacer

Notes	<p>Spacer</p> <p>420 (D) x</p> <p>50 – 150 (T)</p>	
Manufacturer	Bianco Precast	

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11.1.4 Water Meter (Cast Iron)

11.1.4.1 Meter Box, No 2

11.1.4.1.1 Frame and Lid

Notes	No. 2 (DN20 Meter)	
Manufacturer	Bianco Precast	

Note: There is an option for a lid marked 'Non Drinking Water'. This lid shall only be used to identify private NDW schemes. It shall not be used for SA Water NDW meter installations.


11.1.4.1.2 Concrete Support Spacer

Notes	No. 2 L W D 900 250 50 700 250 50	
Manufacturer	Bianco Precast	

11.2 Non Trafficable Covers



11.2.1.1 Meter Box, No 3

11.2.1.1.1 Frame and Lid

Notes	No. 3 (DN25, DN40 & DN50 Meters)	
Manufacturer	Bianco Precast	


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11.2.1.1.2 Concrete Support & Spacer

Specification	No. 3		
		Support Ring Spacer	Chamber Holder
Manufacturer	Bianco Precast		Bianco Precast
	Cooke Pre-Cast Concrete		Cooke Pre-Cast Concrete

11.2.2 Cable Access Cover

11.2.2.1 Chamber and Lid

Notes	Covers for: ELECTRICAL CABLE & CATHODIC PROTECTION	
Manufacturer	Bianco Precast	

11.2.2.2 Concrete Support Spacer

Refer 11.1.4.1.2

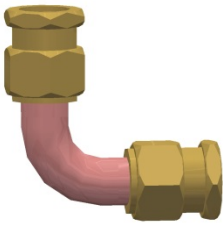
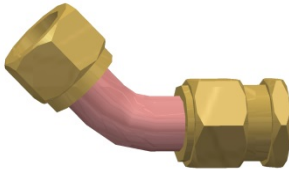
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12 Copper /Brass Fittings

12.1 Drinking Water Copper Parts



All Fittings Shall Comply With Australian Standard	AS 1432, AS 2345, AS 3688 & AS/NZS 4020 (2018)
Specification	
Notes	

12.1.1 Elbows

<p>Elbow 90° With Nuts</p> 	<p>Elbow 45° With Nuts</p> 
DN 25 - 50	DN 25 - 50
Manufacturers	
Autotherm	Autotherm

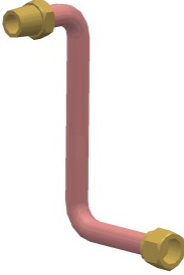
12.1.2 Assemblies

12.1.2.1 Riser Inlet Assembly

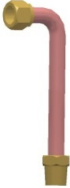

<p>With Right Angle Ball Valve (For PE Water Connections)</p> 	<p>Riser Inlet Length (300 & 530)</p> 
DN 20 x (300 & 530)	DN 25, 40 & 50
Manufacturers	
Autotherm	Wadham Brothers
Autotherm	

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12.1.2.2 Riser Inlet (Without Valve)

Riser Inlet Length (300 & 530)	
	
DN 25, 40 & 50	
Manufacturers	
Autotherm	Wadham Brothers

12.1.2.3 Riser Outlet

(Female Male)	(Male Male)
	
DN 20 x (150 & 267) DN 25 x (267), DN 32, 40 x (267)	DN 50 x 267
Manufacturers	
Autotherm	Wadham Brothers
Autotherm	Wadham Brothers
Autotherm	
Autotherm	

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12.1.2.4 20 mm Meter Manifold



<p>Notes</p>	<p>Maximum of offtakes which may be connected to the water service (by coupling manifolds together): DN 20: max. 4 from DN 25 manifold DN 20: max. 12 from DN 40 manifold DN 25: max. 5 from DN 50 manifold</p>	
<p>Connector, offtake</p>	<p>DN 25 Stem</p>	<p>Options for 2, 3 or 4 offtakes</p>
	<p>DN 40 Stem</p>	<p>Options for 3, 4, 5 or 6 offtakes</p>
	<p>DN 50 Stem</p>	<p>5 offtakes</p>
<p>Manufacturer</p>	<p>Autotherm</p>	

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12.2 Non Drinking Water Copper Parts

All Fittings Shall Comply With Australian Standard	AS 1432, AS 2345, AS 3688 & AS/NZS 4020 (2018)
Specification	
Notes	

12.2.1 Assemblies

12.2.1.1 Riser Inlet Assembly (with Ball Valve)



DN 20 x (300 & 530)	DN 25, 40 & 50 x (300 & 530)
Manufacturers	
Autotherm	Autotherm

12.2.1.2 Riser Inlet (without Ball Valve)

DN 25, 40 & 50 (300 & 530)
Manufacturers
Autotherm

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12.2.1.3 Riser Outlet

<p>(Female Male)</p> 	<p>(Male Male)</p> 
<p>DN 20 x (150 & 300) DN 25 x 267 DN 32, 40 x 267</p>	<p>DN 50 x 267 (Refer 12.3.4 for Flange Screwed)</p>
<p>Manufacturers</p>	
<p>Autotherm</p>	<p>Autotherm</p>



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12.3 Brass

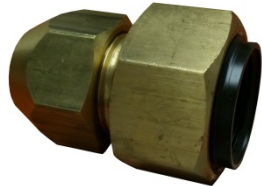
12.3.1 Main Cock

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 3688 AS/NZS 4020 (2018)</p>
<p>Tube DN 20 – 40</p>	<p style="text-align: center;">Main Cock</p> 
<p>Manufacturer</p>	
<p>Autotherm</p>	

12.3.2 Adaptor – End Connector (For Polyethylene Water Connections)

<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS 3688 AS/NZS 4020 (2018)</p>
	
<p>3/4" BSP F – 25 mm Poly Tube 3/4" BSP M – 25 mm Poly Tube (20 nom Main Cock – 25 Poly Tube)</p>	<p>Brass 3/4" BSP M – 25 Poly Tube</p>
<p>Manufacturer</p>	
<p>Autotherm</p>	<p>Tita</p>

12.3.3 Adaptor – Insulated (For Copper Water Connections)

All Fittings Shall Comply With Australian Standard	AS 3688 AS/NZS 4020 (2018)	
Specification		3/4" BSP F – 20 mm Copper
Notes		3/4" BSP F – 25 mm Copper 2" BSP F – 2" BSP M
Manufacturer	Autotherm	
	RMC	

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12.3.4 Loose Ring Joint & Flange Screwed (For DN 50 Water Meter)

All Fittings Shall Comply With Australian Standard	AS/NZS 4087 AS/NZS 4020 (2018)	
	Loose Ring Joint 	Flange Screwed 
	DN 50	DN 50
Specification	FBE Coated (BLUE) & Includes Bolt & Gasket Kit	
Manufacturers		
	Autotherm	Autotherm

12.3.5 Nut Union

All Fittings Shall Comply With Australian Standard	AS/NZS 4087 AS/NZS 4020 (2018)	
		
Manufacturer	Autotherm	DN 32 – 57
	Wadham	DN 32 - 57



12.3.6 Tailpiece Union

All Fittings Shall Comply With Australian Standard		AS/NZS 4087 AS/NZS 4020 (2018)
Male BSP 	Meter Inlet & Outlet 	
DN 25	DN 32 & 40	
Manufacturer		
Autotherm	Autotherm	

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13 Signs & Markers

13.1 Metal Markers

		
Markings	<ul style="list-style-type: none"> • Fireplug • Scour • Stop Valve • Recycled Water Stop Valve 	<ul style="list-style-type: none"> • Fireplug • SV
Manufacturer		Delnorth
	Ottoway Engineering	
	Peninsular Castings	
		Viadux

13.2 Pavement Markers


13.2.1 Retroreflective Raised Pavement Markers (RRPM)

	
Manufacturer	Viadux



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14 Tape

14.1 Underground Warning Tape


<p>All Fittings Shall Comply With Australian Standard</p>	<p>AS/NZS 2648.1 WSA PS 318 WSA PS 319</p>	
<p>Specification</p>	<ul style="list-style-type: none"> • Non Drinking Water tapes are to be LILAC • 'WARNING: RESTRAINED PIPELINE TYTON LOK FITTINGS' – Non Detectable • 'CAUTION BURIED WATER MAIN BELOW' - Detectable • 'CAUTION RECYCLED WATER MAIN WATER MAIN BELOW' – Detectable 	
<p>Notes</p>		
<p>Manufacturer</p>	<p style="text-align: center;">Viadux</p>	
	<p style="text-align: center;">Tapex</p>	

14.2 Corrosion Protection System

<p>All Fittings Shall Comply With Australian Standard AS 4822</p>		
<p>4 – Step Protection Specification:</p> <ul style="list-style-type: none"> • Primer • Mastic • Petrolatum Tape • PE Tape 		
<p>Notes: Individuals intending to use one of the petrolatum 4 – step systems, must have undertaken formal training in the specific system they intend to use (i.e. Denso or UCC)</p>	<p style="text-align: center;">Denso</p> <p style="text-align: center;">Universal Corrosion Coatings</p>	

15 Paint

15.1 Acrylic Spray Paint for NDW Components

All Fittings Shall Comply With Australian Standard	AS 2700	
Specification	<ul style="list-style-type: none"> 526-Line Dulon AAA Acrylic Lacquer LILAC Colour (P23) for Non Drinking Water meter installations 	
Notes	<p>To be used where the Lilac Painted components have been diminished or scratched during installation.</p> <p>The contractor shall use the spray paint to touch up components to the satisfaction of the SA Water Representative.</p> <p>Touch up repair should normally require a single coat.</p> <p>Severe damage may require an additional coat.</p> <p>Painting is recommended when the ambient temperature is between 10 - 35°C.</p>	
Manufacturer	PPG Industries Australia Pty Ltd	

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