

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

PRODUCTS

ALL MINOR ITEMS NOT COVERED IN DETAIL IN THIS CATALOGUE TO BE IN ACCORDANCE WITH APPROPRIATE AUSTRALIAN STANDARD.

**Further information on products and materials is available on the WSAA web site
www.wsaa.asn.au**

PIPE MATERIALS USED ON PRESSURE SEWER MAINS ARE TO BE AS SPECIFIED ON THE ENDORSED DESIGN DRAWINGS.

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

Introduction

Construction of a new Pressure Sewer System will be based on the Design Drawings supplied by the consultant and authorised by SA Water which identify the detailed location of the system as well as the pipe materials and accessories to be used. In addition to this general direction, typical construction details can be obtained from the WSAA Pressure Sewerage Code of Australia (WSA 07-2007) and SA Water's supplementary documentation supplied with this document. Based on the information provided in these sets of drawings, contractors can select any of the products listed in this catalogue, provided they are appropriate for the use required, and purchase them directly from the manufacturer or their supplier.

The products listed in this catalogue have been given authorised status based on their conformance with the SA Water Corporation Standard Product Specification for the item and the quality system operating in the factory where the product was manufactured.

Document Update Information

| Date | Change Type | Page Number(s) | Details |
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AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

Collection Tank and Pump Unit

SA Water has only authorised and will only accept collection tank and pumps which are supplied as a complete unit. This ensures compatibility of support and connection systems.

SA Water will only allow one type/supplier of tank and pump units to be used in a development or local area, because of the difficulty in managing a maintenance and repair system for a number of different types of unit. The maintenance group responsible for the specified locality will maintain spare pumping units and spare parts for their particular type of unit.

SA Water MUST be consulted before a tank and pump system is specified and they will provide details of a unit which meets the operational requirements and can be maintained by the maintenance group responsible for the specified locality.

Authorised Manufacturers

- E-One
Aquatec - Barnes
Mono
ITT Flygt

Applicable Australian Standards

-

*For more details about these manufacturers refer to the **Manufacturers** section of this manual.*

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

Polyethylene Pipe

Polyethylene pipe will be the predominant piping system used because of its ease of laying and its suitability for directional boring.

Where specified in the PSCM, a detectable underground warning tape shall be laid on top of the embedment material and above the polyethylene pipe to allow the pipe to be located in the future.

Pipe Classification

Pipe to be in accordance with AS/NZS4130

When ordering specify - PE80 pipe - Type B - PN 16 or
- PE 100 pipe – PN 16

Colour

To be in accordance with WSA PS-207S

Cream (preferred) or Black with Cream Stripes (permitted if cream unavailable)

Allowable Pipe Sizes

| | |
|--------|--------|
| DN 40 | DN 125 |
| DN 50 | DN 180 |
| DN 63 | DN 250 |
| DN 90 | DN 315 |
| DN 110 | |

Alternate sizes are available and may be used in special applications with SA Water approval

Authorised Manufacturers

- Iplex Pipelines
- Vinidex
- PPI (up to DN100)
- Cromford Pipe (formally AFPM)
- Poly Pipe

Applicable Australian Standards

- AS/NZS4130 Polyethylene pipes for pressure applications
- AS/NZS4129 Fittings for polyethylene (PE) pipes for pressure applications
- AS2033 Installation of polyethylene pipe systems (For minimum cover refer Water Supply Construction manual)

*For more details about these manufacturers refer to the **Manufacturers** section of this manual.*

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

Polyethylene Fittings

Electrofusion Couplings is the preferred method of jointing. **NOTE** The section pipe to be inserted into the coupling **MUST** be shaved back to virgin material using a commercially available Mechanical Scraper, immediately prior to making the joint. The fittings must not be unwrapped until immediately prior to installation and welding.

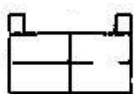
Butt Welding by specialist PE welders is also acceptable and Mechanical Couplings may be used where welding is not practical.

Electrofusion Fittings (to be in accordance with AS/NZS4129)

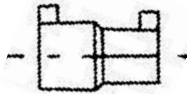
- George Fischer
- Fusion Plast Australia
- Philmac (Durafuse)
- Plasson
- Rollmaplast

Also Available

- Tees
- 45 and 90 Bends
- Stub Flanges (with SS backing flange)



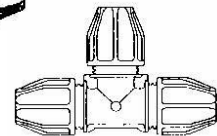
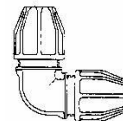
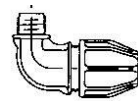
Standard



Reducing

Mechanical Jointing (to AS/NZS4129) - Sizes 25 mm to 110 mm

- George Fischer
- Magnum (Iplex)
- Philmac
- Plasson
- STP (Fusion Plast Australia)



- Tita Coupling (Brass)



Butt Welding - All Sizes

- Factory Butt welding only is permitted.

Fabrication of PE pipe Specials

- Fusion Plast Australia

*For more details about these manufacturers refer to the **Manufacturers** section of this manual.*

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

Pipes - Other Pipe Types

While in the smaller diameters (<DN 100), polyethylene pipe will normally be used, for larger schemes where larger diameter pipes (>DN100) other pressure pipe systems can also be used.

If other pipe systems are being considered, “plastic pipe” systems eg PVC-O, PVC-M and GRP or “plastic coated pipe” eg polyethylene lined steel pipe (Sintacoat) and polyurethane lined ductile iron pipe (Ecopur) are suitable alternatives. This is based on the protection the plastic material provides to internal attack by the sewage.

Because of the limited use of “plastic and plastic coated pipe” for pressure sewer applications, cream pressure pipe is not generally available and in these cases the pipe is to be sleeved in cream sleeving or netting marked “Pressure Sewer”.

Because Pressure Sewer Systems operate in a similar fashion to the water supply system, any of the “plastic pipe” or “plastic coated pipe” systems detailed in the “Authorised Items for Water Supply Systems” can be used, providing they meet the following requirements:

- Minimum Pressure rating PN16
- Socket/Spigot Rubber Ring jointed (RRJ) pipe
- Thrust and anchor blocks are installed
- Applicable external corrosion protection systems are used
- Other general requirements specified for the pipe are employed.

Final selection must be confirmed with SA Water before installation.

Fittings - Other Pipe Types

As there are no “plastic” fittings manufactured the only fittings that can be used are FBE coated Ductile Iron (internally and externally) or fabricated Steel pipe with a fully sealed “plastic lining”. Cement lined fittings are NOT to be used.

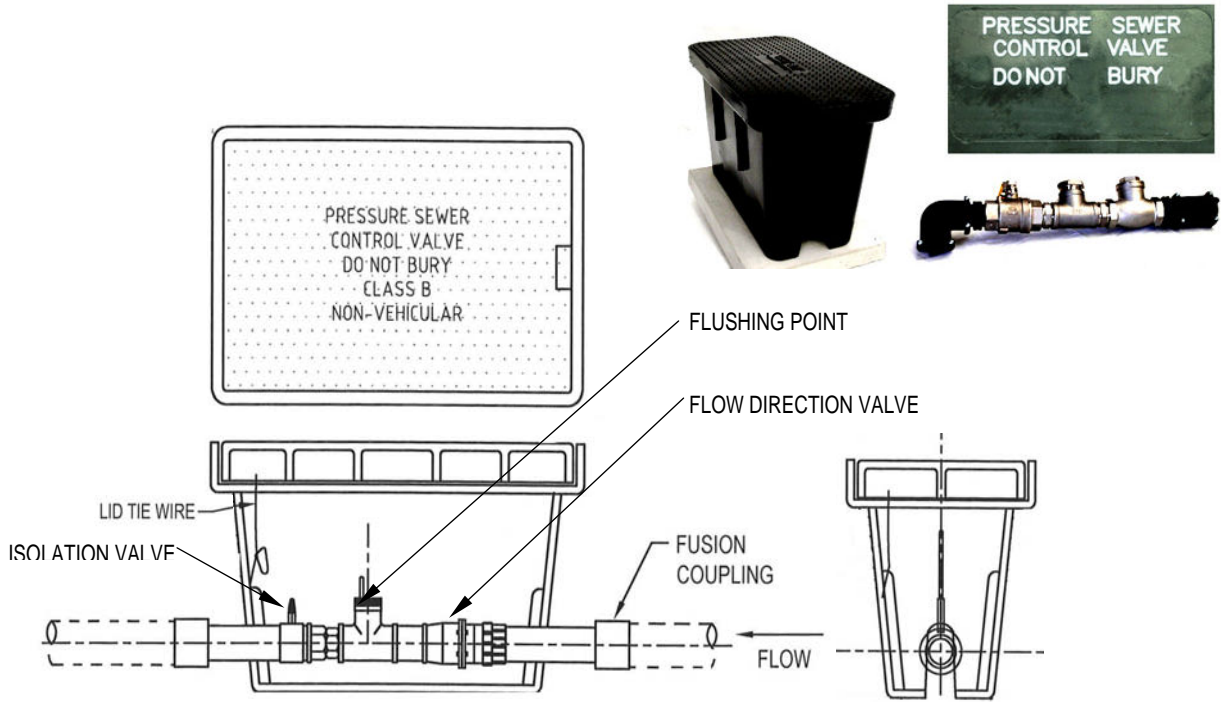
The current range of FBE coated Ductile Iron fittings, as shown in the “Authorised Items for Water Supply Systems”, are acceptable for use in a pressure Sewer System.

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

Boundary Kit Assembly

NOTE: Only CLOCKWISE CLOSING Isolation Valves to be used



Notes :

1. Boundary kits are normally supplied as a kit by Pump manufacturers.
2. Sizes and end connections vary between suppliers as applicable to their units.
3. Alternative boundary kits can be used, but each individual product and the finished assembly must be approved by SA Water's Standards Unit.

Alternative Description: **Property Boundary Assembly**

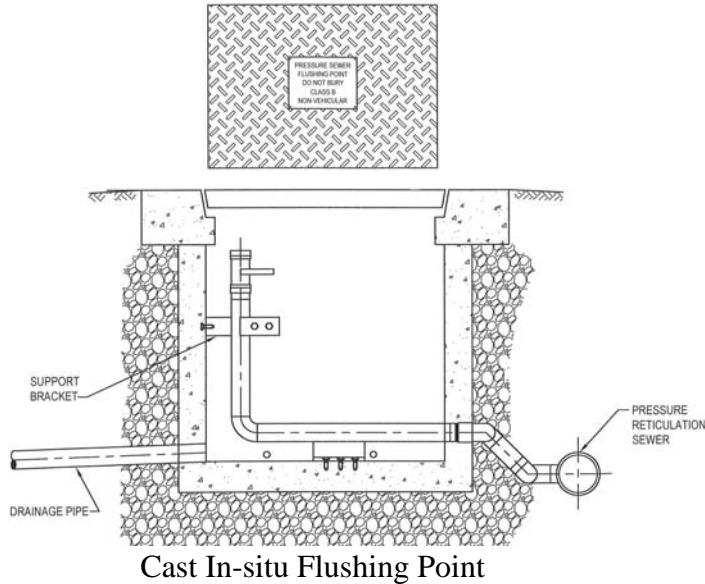
| SA Water Stock No. | E-One | Aquatec Barnes | Mono | ITT Flygt | Pressure Sewer Services |
|--------------------|-------|----------------|------|-----------|-------------------------|
| ----- | * | * | * | * | * |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

Flushing Valve Assembly

NOTE: Only CLOCKWISE CLOSING valves to be used



Package Flushing Point

Notes :

1. Flushing Point Packages are available as a kit from some pump manufacturers.
2. Alternatively Flushing Points can be manufactured on site, but each individual product and the finished assembly must be approved by SA Water's Standards Unit.
3. External valve connection point to include a 50 mm or 100 mm (as applicable) polyethylene Camlock coupling and sealing cap.
4. To be installed in accordance with Manufacturer's and SA Water's requirements.
5. Trafficable rated Covers and Boxes to be used when installed in roadways and driveways.

Alternative Description

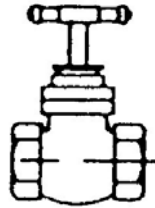
| Nom. Size DN mm | SA Water Stock No. | Package Unit | | Isolation (Flushing) Valves | | |
|--------------------|-----------------------|-------------------------------|-------------------|---|-------------------|------|
| | | Pressure Sewer Services | Aquatec Barnes | Iplex AVK (see Isolating valves section) | George Fischer | Tyco |
| 50 | ----- | As Available | ★ | ★ | ★ | ★ |
| 63 | ----- | | ★ | ★ | ★ | ★ |
| 75 | ----- | | ★ | ★ | ★ | ★ |
| 90 | ----- | | ★ | ★ | ★ | ★ |
| 110 | ----- | | ★ | ★ | ★ | ★ |
| 125 | ----- | On Request | ★ | ★ | ★ | ★ |
| 140 | ----- | | ★ | ★ | ★ | ★ |
| 160 | ----- | | ★ | ★ | ★ | ★ |
| 180 | ----- | | ★ | ★ | ★ | ★ |
| 200 | ----- | | ★ | ★ | ★ | ★ |
| Larger sizes | | | ★ | ★ | ★ | ★ |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

Valves - Isolating DN20 – DN50

NOTE: Only CLOCKWISE CLOSING valves to be used



Brass with Screwed
BSP End Connections



03/0



03/4



03/30



16/50

DI & POM Valves with
PE End Connections

Alternative Description

| Valve Size End Connection BSP / PE | BSP End Connections | | | Combination | PE End Connections | |
|--|---------------------|---------------------|--------------------------------|-------------------------------------|------------------------------|------------------------------|
| | Wadhams | Galvin To AS3496 | Iplex AVK Series 03/0X | Iplex AVK Series 03/4 or 03/6 | Iplex AVK Series 03/30 | Iplex AVK Series 16/50 |
| | | | <i>Ductile Iron FBE Coated</i> | | | |
| 20 / 25 | | | ★ | ★ | ★ | ★ |
| 25 / 32 | ★ | ★ | ★ | ★ | ★ | ★ |
| 32 / 40 | ★ | ★ | ★ | ★ | ★ | ★ |
| 40 / 50 | ★ | ★ | ★ | ★ | ★ | ★ |
| 50 / 63 | ★ | ★ | ★ | ★ | ★ | ★ |

Note: Handwheel, extension spindle and/ or stem cap to be used as applicable. Buried valves to have extension spindle and/ or stem cap.

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

***Valves - Resilient Seat Gate Valve
with PE Pipe Connection Ends
(Pressure Rating 1.6 MPa
Square drive and clockwise closing)***



Series 36/80



Series 01/70

Suitable for Buried Applications

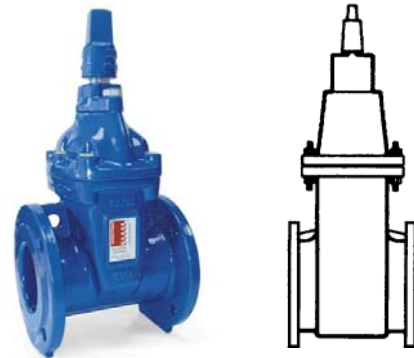
Alternative Description

| Nom. PE Pipe Size (Equivalent Valve size) | SA Water Stock No. | AVK (Iplex) |
|--|-----------------------|----------------|
| SERIES 36/80 (Fusion or Butt welded applications) | | |
| 75 | | * |
| 90 | | * |
| 110 | | * |
| 125 (DN100 equiv) | | * |
| 180 (DN150 equiv) | | * |
| 250 (DN200 equiv) | | * |
| 315 (DN250 equiv) | | * |
| SERIES 01/70 (Tensile Resistant PE ends – Restrained Joint) | | |
| 90 | | * |
| 110 | | * |
| 125 (DN100 equiv) | | * |
| 180 (DN150 equiv) | | * |
| 250 (DN200 equiv) | | * |
| 315 (DN250 equiv) | | * |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

***Valves - Resilient Seat Gate Valve
Double Flanged
(Manually Operated Valve to AS2638 Part 2
Square drive and clockwise closing)***



For Buried Applications

Alternative Description

***Sluice Valve - Flanged
Stop Valve - Flanged***

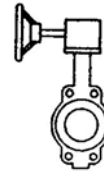
| Nom. Size DN (Pressure) | SA Water Stock No. (1.6 MPa) | AVK (Iplex) Series 57/40 (1.6 MPa) | Tyco (1.6 MPa) |
|----------------------------|------------------------------------|---|-------------------|
| 50 (1.6 MPa) | | * | |
| 65 (1.6 MPa) | | * | |
| 80 (1.6 MPa) | 4820-2001 | * | * |
| 100 (1.6 MPa) | 4820-2002 | * | Auslite |
| 150 (1.6 MPa) | 4820-2003 | * | Auslite |
| 200 (1.6 MPa) | 4820-2004 | * | * |

Highlighted items are included in SA Water's Valve Contract PC1111

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

Valves – Butterfly - Lugged Type
Pressure Rating 1.6 MPa



Note : **Not for buried applications**

| Size DN Pipe | Without Gearbox SA Water Stock No. | AVK (Iplex) | Keystone Tyco |
|-----------------|---|----------------|------------------|
| 80 | 4820-3071 | * | * |
| 100 | 4820-3073 | * | * |
| 125 | 4820-3075 | * | * |
| 150 | 4820-3077 | * | * |
| 200 | 4820-3079 | * | * |

Highlighted items are included in SA Water's Valve Contract PC1111

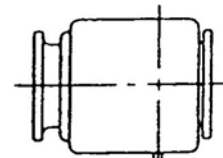
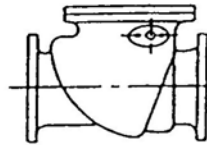
Notes:

1. Primarily used as isolating valves for removal and repair of Gas/Air Release valves.
ONLY lugged (or double flanged) butterfly valves are to be used for this application.
2. Gearbox not required for this application.
3. Due to the potential for fibrous material to get caught around the disc these valves are not suitable for use as in-line isolation valves.

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

Valves - Swing Check
(Ductile Iron, FBE Coated - Flange/Flange to AS4794
Pressure Rating 1.6 MPa and with enclosed spindle)



Note : **Not for buried applications**

| Size DN Pipe | SA Water Stock No. | AVK (Iplex) # | Tyco Water |
|--------------------------------|-----------------------|------------------|------------|
| <i>Resilient Seated</i> | | | |
| 80 | | * | |
| 100 | 4820-2035 | * | * |
| 150 | 4820-2036 | * | * |
| 200 | 4820-2037 | * | |

Highlighted items are included in SA Water's Valve Contract PC1111

SA Water Product Description

Valves - Gas/Air Release

Note :

- To meet the requirements of WSA PS-275
- To be mounted in above or below ground Chamber



ARI



Vent-o-mat

Alternative Description - **Combination Air Valve for Sewage**

| Nom. Size DN mm | SA Water Stock No. | Assemblies | | Individual Units | |
|--------------------|-----------------------|-------------------------------|-------------------|----------------------------|--------------------------|
| | | Pressure Sewer Services | Aquatec Barnes | Amiad ARI Mod. D-020 | Vent-O-Mat Series RGX |
| 50 | ----- | | | * | * |
| 80 | ----- | | | * | * |
| 100 | ----- | As Available | As Available | * | * |
| 150 | ----- | | | * | * |
| 200 | ----- | | | * | * |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description
Material - Polyethylene

Camlock Couplings



Alternative Description

| Nom. Size DN mm | SA Water Stock No. | Austrahose | Philmac | Banjo |
|--|-----------------------|------------|---------|-------|
| Coupling (with BSP Male Thread) | | | | |
| 50 | ----- | ★ | Type F | ★ |
| 100 | ----- | ★ | Type F | |
| Dust Cap | | | | |
| 50 | ----- | ★ | Type DC | ★ |
| 100 | ----- | ★ | Type DC | |

SA Water Product Description

Valve - Spindle Extension



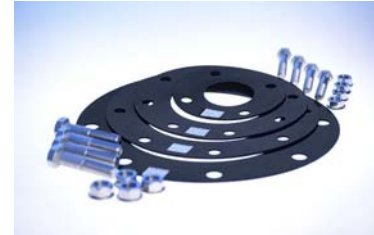
Alternative Description
Spindle Extension Valve

| Extension Nominal Length (mm) | SA Water Stock No. | Iplex | Hadaway | Tyco |
|----------------------------------|-----------------------|-------|---------|------|
| 150 | 4820-0016 | ★ | ★ | ★ |
| 300 | 4820-0017 | ★ | ★ | ★ |
| 450 | 4820-0019 | ★ | ★ | ★ |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

***Jointing Kits with
Stainless Steel or Galvanised Bolts***



Alternative Description
Gasket Set

Includes EPDM Gasket plus Bolts, Nuts and Washers to suit

| Size DN Pipe | 316 Stainless Steel Bolts | Galvanised Bolts | High Tensile Bolts | Iplex | Keystone Tyco |
|---|------------------------------|-----------------------|-----------------------|-------|------------------|
| | SA Water Stock No. | SA Water Stock No. | SA Water Stock No | | |
| <i>To suit PN16 (1.6MPa) Flanges</i> | | | | | |
| 50 | 5330-2024 | 5330-2001 | | * | |
| 65 | 5330-2025 | 5330-2002 | | * | |
| 80 | 5330-2026 | 5330-2003 | | * | * |
| 100 | 5330-2027 | 5330-2004 | | * | * |
| 125 | 5330-2028 | 5330-2005 | | * | |
| 150 | 5330-2029 | 5330-2006 | | * | * |
| 200 | 5330-2030 | 5330-2007 | | * | * |

Highlighted items are included in SA Water's Valve Contract PC1111

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

**Valve Cover Systems
Small Non-Trafficable**

Note: –



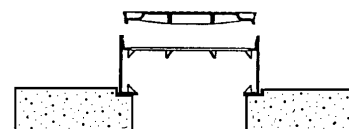
| Item | Iplex Crevet | Tyco Water |
|-----------------------------|-------------------------|-------------------|
| Lid (DI - Marked SV) | ★ | ★ |
| Surround (Recycled Plastic) | ★ | ★ |
| Shroud | ★ | ★ |
| Base Plate (DI) | ★ | ★ |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description **Valve Cover System – Large Trafficable**

Note: –

1. Lid to be marked “SEWER”
2. Purchased as a unit from Concrete Manufacturer



CLASS D –TRAFFICABLE USE (to AS 3996)

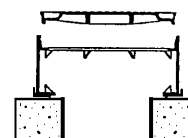
| Item | SA Water Stock Number | Cooke Pre Cast (WASA) | Bianco Precast (BIA) | Webforge |
|--|-----------------------|-----------------------|----------------------|----------|
| Concrete Support Slab (1200 x 800 x 170 mm high) | 5680-0050 | ★ | 400044 | |
| Cover | 5680-0407 | ★ | 400601 | ★ |
| Street Box - DI (Full Height) | 5680-0061 | ★ | ★ | ★ |
| Street Box - DI (1/2 Height) | 5680-0230 | ★ | 400586 | ★ |

SA Water Product Description

**Valve Cover System –
Large Non-trafficable**

Note :-

1. Lid to be marked “SEWER”
2. Purchased as a unit from Concrete Manufacturer



CLASS B – NON-TRAFFICABLE USE (to AS 3996)

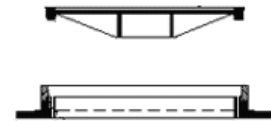
| Item | SA Water Stock Number | Cooke Pre Cast (WASA) | Bianco Precast (BIA) | Webforge |
|---|-----------------------|-----------------------|----------------------|----------|
| Concrete Support Ring 600ø x 140 mm thick | 5680-0049 | ★ | 400223 | |
| Cover | 5680-0407 | ★ | 400601 | ★ |
| Street Box - DI (Full Height) | 5680-0061 | ★ | ★ | ★ |
| Street Box - DI (1/2 Height) | 5680-0230 | ★ | 400586 | ★ |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

***Air Valve Cover & Frame
Trafficable***

CLASS D – TRAFFICABLE USE (to AS 3996)



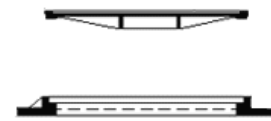
Note : These items have a clear internal opening of 600mm.

| Item | SA Water Stock Number | Cooke Pre Cast (WASA & Havestock) | Bianco Precast (BIA) | Webforge |
|----------------------|--------------------------|---|-------------------------|----------|
| Cover | | ★ | | |
| Frame | | ★ | | |
| Cover and Frame Assy | | ★ | 400040 | ★ |

SA Water Product Description

***Air Valve Cover & Frame
Non-Trafficable***

CLASS B – NON-TRAFFICABLE USE (to AS 3996)



Note : These items have a clear internal opening of 600mm.

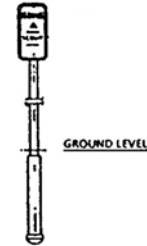
| Item | SA Water Stock Number | Cooke Pre Cast (WASA & Havestock) | Bianco Precast (BIA) | Webforge |
|----------------------|--------------------------|---|-------------------------|----------|
| Cover | | ★ | | |
| Frame | | ★ | | |
| Cover and Frame Assy | | ★ | 400042 | ★ |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

Signs and Markers

Alternative Description



METAL MARKERS

| Item Description | SA Water Stock No. | Peninsular Castings# | Ottoway Engineering |
|---|-------------------------------|---------------------------------|--------------------------------|
| PRESSURE SEWER STOP VALVE Sign with 32mm Galv. Post | ----- | ★ | ★ |
| PRESSURE SEWER FLUSHING POINT Sign with 32mm Galv. Post | ----- | ★ | ★ |
| PRESSURE SEWER AIR VALVE Sign with 32mm Galv. Post | ----- | ★ | ★ |
| PRESSURE SEWER STOP VALVE Sign only | ----- | ★ | |
| PRESSURE SEWER FLUSHING POINT Sign only | ----- | ★ | |
| PRESSURE SEWER AIR VALVE Valve only | ----- | ★ | |

Can manufacture signs with alternate wording as required

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

SA Water Product Description

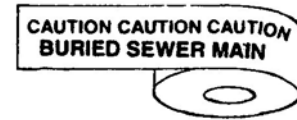
Tape - Underground Warning

NOTE : Tape to be Cream in colour.

Non-detectable tape to be placed on overlay sand above pipe.

Detectable tape to be placed 100 - 150mm below finished ground level above pipe.

Tape or mesh can be used but it must be a minimum of 100mm wide



Alternative Description

| Item Description | Heatech | Romac Trading | Tapex | Boddingtons |
|---|---------|---------------|-------|-------------|
| Non Detectable 'DANGER BURIED SEWER MAIN BELOW' | ★ | ★ | ★ | ★ |
| Detectable 'DANGER BURIED SEWER MAIN BELOW' | ★ | ★ | ★ | ★ |

AUTHORISED ITEMS for PRESSURE SEWER SYSTEMS

INDEX

Assembly

Boundary Kit..... 7

Flushing Valve..... 8

Camlock Couplings 14

Collection Tank and Pump Unit..... 3

Cover Systems

Gas/Air Release

Non-Trafficable..... 18

Trafficable..... 18

Valves

Large - Non-trafficable..... 17

Large Trafficable..... 17

Small Non-Trafficable..... 16

Document Update Information 2

Fittings

Other Pipe Types..... 6

Polyethylene..... 5

Introduction 2

Jointing Kit 15

Pipes

Other Pipe Types..... 6

Polyethylene..... 4

Signs and Markers 19

Tape - Underground Warning..... 20

Valves

Butterfly – Lugged Type..... 12

Gas/Air Release 13

Isolating DN 20 –DN50..... 9

Resilient Seat Gate - Double Flanged 11

Resilient Seat Gate – with PE Pipe Connection Ends..... 10

Spindle Extension 14

Swing Check with extended spindle 13