

# Puriton® Barrier Pipe and Fittings System

A complete piping system for protecting potable water lines  
laid through contaminated land.



TECHNICAL GUIDE: **PF9.1**

## Applications

The barrier pipe system of choice for your new or replacement drinking water supply, Puriton® is a cutting edge solution for the safe distribution of drinking water through contaminated land.

## Product Attributes

Multi-layer pipe construction PE-Al-PE

Brown stripes denote a multi-layer pipe full barrier pipe system

## Approvals/Standards

WRAS approved material PE80 for pipe 25 to 63 mm

A 'Type A' pipe, as defined in WIS 4-32-19 and BS 8588

WRAS approved product for plastic mechanical fittings 25 to 63 mm

BS 8588:2017 and WIS 4-32-19 Puriton® jointing methods with Puriton® plastic mechanical fittings

BS 8588:2017 - 25, 32, 63mm Pipe

## Quality

ISO 9001:2015

## Puriton® Barrier pipe & fittings system

The barrier pipe system of choice for your new or replacement drinking water supply, Puriton® is a cutting edge solution for the safe distribution of drinking water through contaminated land.

Designed to provide a high level of protection against soil contaminants commonly found in brownfield sites, Puriton® is a multi-layer composite structure pipe, which combines the unique characteristics of polyethylene (PE) with the exceptional barrier properties of aluminium (Al).

Lightweight, flexible and corrosion resistant, the Puriton® system is easy to install, without the need to post-wrap the finished joints. The pipe can be joined using most industry standard installation techniques with a comprehensive range of mechanical fittings, which have been specifically developed to give you assurance of a safe and durable solution which provides protection to your drinking water through contaminated land.



### Benefits of the Puriton® system

- Multi-layer pipe construction PE-Al-PE
- Brown stripes denote a multi-layer pipe
- Full barrier pipe system
- Combines the flexibility of polyethylene with the barrier properties of aluminium
- Safeguards drinking water quality
- Easy to handle, flexible and lightweight
- End load resistant system
- Installation cost savings - no requirement for thrust blocks
- No requirement to post-wrap the joints
- Suitable for most common installation techniques
- Suitable for new and replacement drinking water supply systems



**TABLE 1** Puriton range at a glance

Description	Diameter	Maximum pressure	Material(s)
Service pipe	25 to 63 mm	12.5 bar - SDR11	PE80 Aluminium
Mechanical fittings	25 to 63 mm	12.5 bar	Polypropylene
Tapping saddles (For Puriton®PE Pipe)	63 mm x 25 mm* 63 mm x 32 mm*	12.5 bar 12.5 bar	Gunmetal body Polypropylene outlet

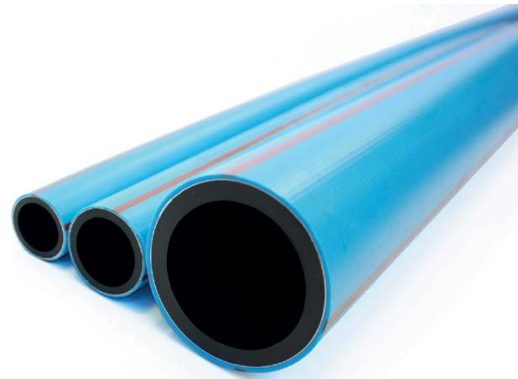
\*Tapping saddles to suit other PE pipe sizes available on request (90, 110, 125, 160, 180 mm)

## Puriton® service pipe

### WIS 4-32-19 'Type A' pipe

Available in diameters 25 to 63 mm, the Puriton® service pipe is manufactured from a black PE80 core, an aluminium barrier layer and a light blue PE80 outer layer with brown stripes.

Available in coils and in straight lengths for the 63 mm pipe, the Puriton® service pipe is quick and easy to join without surface preparation, using their range of cutting edge mechanical fittings.



**TABLE 2** Pipe dimensions

Nominal diameter mm	Materials	SDR	Pressure rating bar	Core pipe external diameter mm	Core pipe wall thickness mm	Internal diameter mm	Overall external diameter mm	Pipe weight kg/m	Pipe length m
25	PE80/Al	11	12.5	25.0 - 25.3	2.3 - 2.7	19.6 - 20.7	27.0 - 27.6	0.3	50
32	PE80/Al	11	12.5	32.0 - 32.3	3.0 - 3.3	25.4 - 26.3	34.0 - 34.6	0.5	50
63	PE80/Al	11	12.5	63.0 - 63.4	5.8 - 6.5	50.0 - 51.8	64.8 - 65.8	1.5	6
									25
									50
									100



**TABLE 3** Pipe coil dimensions

Nominal diameter mm	SDR	Pressure rating bar	Coil inner diameter mm	Coil outer diameter mm	Coil width mm	Coil length m	Coil weight kg
25	11	12.5	785	965	175	50	14.5
32	11	12.5	785	1015	175	50	22.0
63	11	12.5	1275	1510	230	25	36.3
			1275	1815	208	50	72.5
			1275	1815	310	100	145.0

Pipe weights are for lifting and handling purposes. They are calculated on a per metre length and are based on a maximum diameter and pipe wall thickness.

To ensure that the barrier properties of the Puriton® system are maintained, Puriton® fittings must be used with Puriton® pipe. The use of non Puriton® fittings may compromise the barrier properties of the system.

## Puriton® fittings

### Mechanical fittings

Quick and easy to install, the range of Puriton® mechanical fittings for service pipes are manufactured from polypropylene and supplied with integral inserts, grip rings and O-ring seals for maximum contamination protection. The system is easy to construct with no requirement for pipe surface preparation and no need to post-wrap the joint after installation.

Fitting diameter	25 mm	32 mm	63 mm
Grip ring colour	Blue	Blue	Grey
Insert colour	Black	Black	White



### Service pipe off-take connections

The Puriton® range includes a dedicated range of gunmetal tapping tee service off-takes, which incorporate a unique stainless steel sleeve. As part of the tapping operation, the sleeve is swaged into the pipe wall, sealing the aluminium barrier layer from contact with the water supply. A 25 or 32 mm mechanical outlet is fitted to enable the service pipe connection.



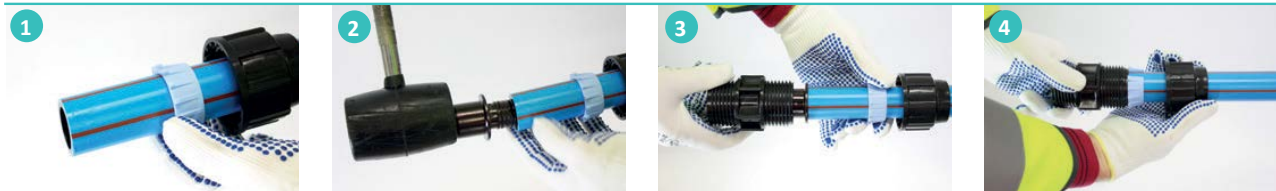
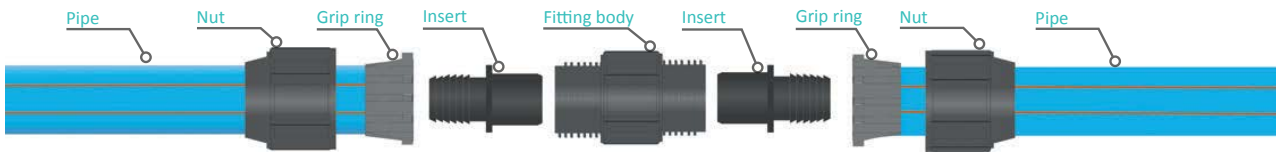
### Jointing guidance

The Puriton® pipe system has been developed for ease of jointing with a range of fittings specifically designed to suit the pipe type. Minimal pipe surface preparation is required when using our mechanical fittings.

To ensure that the barrier properties of the Puriton® system are maintained, only Puriton® fittings must be used with Puriton® pipe. The use of non Puriton® fittings may compromise the barrier properties of the system.

## Jointing overview

### Mechanical fitting - coupler jointing overview



1 Ensure the pipe is cut square and damage free. Re-round if necessary. Slide the nut and grip ring on the pipe

2 Using a rubber mallet, gently tap the insert fully into the pipe end

3 Push the pipe fully into the body of the fitting

4 Slide the grip ring so it is flush with the pipe end



5 Hand tighten the nut onto the body of the fitting

6 Repeat steps 1 to 4 for the second pipe to be joined

7 Using C ring wrenches fully tighten the nuts onto the body of the fitting

8 The joint is complete. Carry out a water industry approved joint pressure test to check for leak-tightness.

### Tapping tee jointing overview

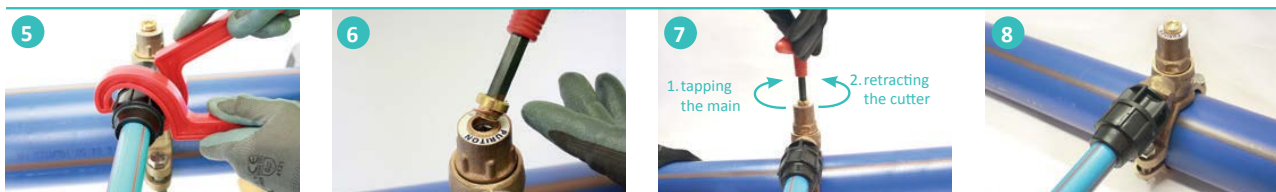


1 Place the O-ring into the recess of the tapping tee base and place the fitting onto the main

2 Equally tighten the nuts on both sides of the tapping tee

3 Ensure the distances between the 'lugs' are identical and parallel on both sides

4 Carry out the service pipe connection to the tapping tee outlet following the jointing overview



5 Using C ring wrenches fully tighten the nuts onto the tapping tee outlet.

6 Using a 3/8" T key, remove the tapping tee dust cap and seal

7 **1. Tapping the main**  
Use a hexagonal 3/8" T key and turn in a clockwise direction. The cutter must come to a definite stop.

**2. Retracting the cutter**  
Turn the T key in an anti-clockwise direction. The cutter will come to a definite stop at the top of the system

8 Replace the dust cap and tighten. The connection is complete.

Carry out a water industry approved joint pressure test to check for leak-tightness.

## Product Codes

### Barrier Pipe

**TABLE 4** Service Pipe

Product Code	Description	Weight (kg/m)
XQ2568	Pipe 63 x 6 m PE-AL-PE BL/BR PE80 SDR11 PN12.5	1.5

**TABLE 5** Service Coil

Product Code	Description	Coil Width (mm)	Weight (kg)
XQ2528	Pipe Coil 25x50m PE-AL-PE BL/BR PE80 SDR11 PN12.5	175	14.5
XQ2535	Pipe Coil 32x50m PE-AL-PE BL/BR PE80 SDR11 PN12.5	175	22.0
XQ2570	Pipe Coil 63x25m PE-AL-PE BL/BR PE80 SDR11 PN12.5	230	36.3
XQ2571	Pipe Coil 63x50m PE-AL-PE BL/BR PE80 SDR11 PN12.5	208	72.5
XQ2572	Pipe Coil 63x100m PE-AL-PE BL/BR PE80 SDR11 PN12.5	310	145.0

Pipe weights are for lifting and handling purposes. They are calculated on a per metre length and are based on a maximum diameter and pipe wall thickness.

### Mechanical fittings

**TABLE 6** Couplers

Product Code	Description
XR5244	Coupler PP Ø25 16 Bar PE-AL-PE
XR5245	Coupler PP Ø32 16 Bar PE-AL-PE
XR5251	Coupler PP Ø63 16 Bar PE-AL-PE

**TABLE 7** 90° elbows

Product Code	Description
XR5249	Elbow 90 PP Ø25 12.5 Bar PE-AL-PE
XR5250	Elbow 90 PP Ø32 12.5 Bar PE-AL-PE
XR5252	Elbow 90 PP Ø63 12.5 Bar PE-AL-PE

**TABLE 8** Female adaptors

Product Code	Description
XR5240	Female Adaptor PP Ø25x3/4" 12.5 Bar PE-AL-PE
XR5241	Female Adaptor PP Ø32x3/4" 12.5 Bar PE-AL-PE
XR5242	Female Adaptor PP Ø32x1" 12.5 Bar PE-AL-PE
XR5260	Female Adaptor PP Ø63x2" 12.5 Bar PE-AL-PE



**TABLE 9** Equal tees

Product Code	Description
XR5247	Tee PP Ø25 12.5 Bar PE-AL-PE
XR5248	Tee PP Ø32 12.5 Bar PE-AL-PE
XR5253	Tee PP Ø63 12.5 Bar PE-AL-PE Puriton

**TABLE 10** Reducers

Product Code	Description
XR5246	Reducing Coupler PP Ø32-25 Reducing 12.5 Bar
XR5257	Reducing Coupler PP Ø63-25 Reducing 12.5 Bar
XR5254	Reducing Coupler PP Ø63-32 Reducing 12.5 Bar

**TABLE 11** Male Adaptors

Product Code	Description
XR5235	Male Adaptor PP Ø25x3/4" 12.5 Bar PE-AL-PE
XR5236	Male Adaptor PP Ø32x3/4" 12.5 Bar PE-AL-PE
XR5237	Male Adaptor PP Ø32x1" 12.5 Bar PE-AL-PE
XR5258	Male Adaptor PP Ø63x1 1/2" 12.5 Bar PE-AL-PE
XR5259	Male Adaptor PP Ø63x2" 12.5 Bar PE-AL-PE

**TABLE 12** C ring wrenches

Product Code	Description
XR4998	C-Ring Wrench 25-32mm PE-AL-PE Fittings
XR4999	C-Ring Wrench 63mm PE-AL-PE Fittings

**TABLE 13** Tapping tees

Product Code	Description
XR5111	Tapping Band Ø63x25mm PE-AL-PE Gunmetal
XR5117	Tapping Band Ø63x32mm PE-AL-PE Gunmetal

**TABLE 14** Ferrule adaptors

Product Code	Description
XR5055	Adapter Ferrule 25x3/4" PE-AL-PE Gunmetal

**TABLE 15** Tapping Tee T Key

Product Code	Description
XR02515	Tapping Tee T Key 3/8"



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