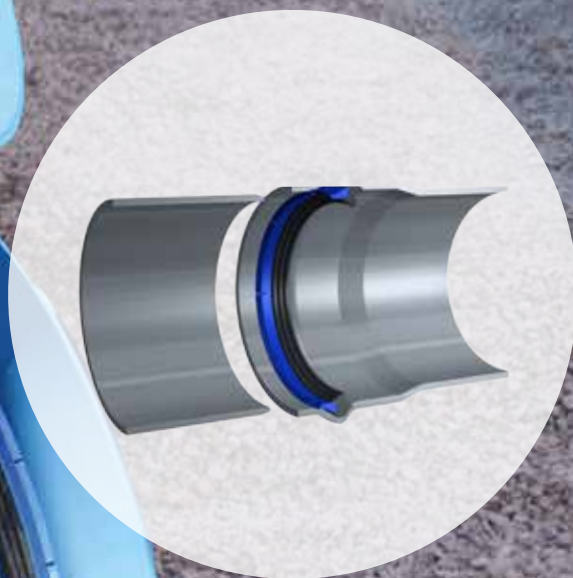


Zero leakage total performance

LOOKING AFTER WHAT'S IMPORTANT
FROM THE INSIDE OUT



Forsheda 576 Anger-lock™



Introducing Trelleborg Pipe Seals

Part of the wider Trelleborg Industrial Solutions Business Area of Trelleborg Group, Trelleborg Pipe Seals is a world leading supplier of new and rehabilitation sealing solutions for concrete and plastic pipes, manholes and connectors used for water, sewerage and drainage.

With a global reach and a track record spanning more than half a century, we deliver continuous innovation to customers across the globe, with a logistics and sales network spanning Asia Pacific, Europe, Middle East, Africa, North America and South America. Comprising the most advanced polymer technology, the high performance level of our seals ensures fulfilment of the highest possible reliability standards.

We will see you through from the beginning of your project right to the very end with the most advanced polymer technology and engineering expertise. Whether you need an entirely new system or improvements to your existing one, you can choose from a range of market-leading seals that offer:

High quality

Quick and easy installation

Improved productivity

Zero leakage

Trelleborg Pipe Seals offer the highest reliability and performance standards, providing watertight solutions that protect not only your pipe cycle, but your reputation too.

Leak-free, hassle-free sealing solutions

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Forsheda product range

The Trelleborg Pipe Seals Forsheda product range was established in 1946, offering expert concrete and plastic sealing solutions for water, sewerage and drainage.

With solutions for pressure and non-pressure applications, including our sewer-lock seals, we provide leak-free sealing solutions for pipeline systems and a hassle-free service.

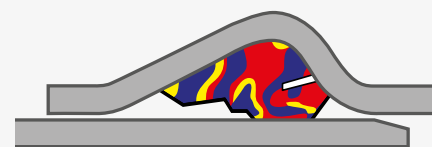
THE FORSHEDA 576 ANGER-LOCK™ AT A GLANCE



Introducing the F-576 Anger-Lock™

SEALS FOR PLASTIC PRESSURE PIPES, WASTE WATER CONDUIT AND CAST IRON FITTINGS

The Forsheda 576 Anger-Lock™ seal has been specifically designed for use with PVC pipes and fittings, and ductile iron fittings connecting to PVC pipes, for water supply and waste water applications. The system meets the requirements of EN 1452 'Plastic piping systems for the supply of water.



When two pipes are pushed together the rubber sealing element is designed to deform creating a sealing pressure acting on both spigot and socket.

ONE-PIECE SEAL

The F-576 has a unique design in which the rubber sealing element and the reinforcing plastic are bonded together to make a one-piece seal. The soft plastic reinforcement allows the seal to be fitted easily into the pipes socket either by manually bending the seal into the groove or by using automatic insertion equipment.

LOW ASSEMBLY FORCE

The Forsheda 576 Anger-Lock™ seal makes life easier for the man in the trench. It is impossible to lose or use the wrong seal. There is no risk of making a mistake during assembly.

The unique lip design reduces the assembly force required, aiding alignment and jointing of the pipes. Even larger diameter pipes can be jointed without the need for special assembly tools or equipment. Pipes and fittings can be jointed easily and quickly, reducing time and cost.

NEW STANDARDS OF JOINT SECURITY

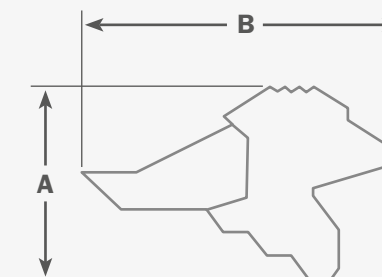
The seal provides a combined lip and compression seal which is firmly locked into the pipe socket.

Making the seal an integral part of the pipe eliminates many disadvantages of separate sealing rings. The seal is positioned in the socket by the pipe manufacturer and the unique design eliminates potential ring displacement during transportation and pipe assembly.

Pressure in pipelines may vary considerably. Under such circumstances the seal will inevitably move slightly. Many traditional seals then allow solid particles to enter the joint. However, this design has eliminated this problem.

RANGE OF DIMENSIONS

DIMENSIONS (mm)		
PIPE SIZE (mm)	A	B
50	7.2	12.3
63	10.4	17.8
75	11.6	19.9
90	12.7	21.7
100*	13.8	21.6
110	13.8	22.0
125	13.8	23.6
140	14.8	25.3
150*	17.2	23.5
160	15.9	27.2
180	17.5	28.8
200	16.9	29.0
200*	20.2	32.0
225	18.0	30.8
225*	21.8	33.8
250	21.1	34.2
250*	23.6	37.0
280	22.5	36.1
300*	23.7	40.4
315	23.6	37.6
355	25.8	40.9
400	28.0	44.9
450	29.5	47.0
500	31.6	51.4
630	38.2	61.3



*Seal for Australian Standard AS-4441

Advantages of EPDM-rubber

Performance demands for pipe seals have been increasing steadily in recent years.

Trelleborg has developed a specially formulated EPDM (Ethylene Propylene Diene Monomer) compound for the F-576 seal. Trelleborg's EPDM rubber compounds are the ideal material for such applications, offering increased reliability and exceeding the requirements of the relevant standards.

The chemical composition of our EPDM provides exceptionally high resistance to the effects of UV light, weathering, oxidisation and ozone. EPDM is also resistant to attack from a large number of acidic and alkaline solutions.

The material's excellent restoring force characteristics mean that it can be expected to offer superb performance for in excess of 100 years.

PULSATION TEST PROVES ZERO-LEAKAGE

When pressure within a pipeline changes from positive to negative and sand or other dirt is present, there is a risk of leakage. To ascertain the resistance of its sealing systems to the penetration of sand as a result of these pressure changes, Trelleborg Pipe Seals has developed a special "pulsation test".

A bladder of rubber containing water and sand is located over the joint. Air is connected to the bladder for mix the sand and water. The start pressure of the water is 20 kPa. The axial play in the joint is 10 mm.

Testing is over 2000 cycles with a pressure varying between -50 kPa and 1.3 Mpa.

Cycle time is one minute. On completion, joint tightness is tested according to the following procedure:

PRESSURE	TIME
-80 kPa	30 min
2.5 MPa before pulsation	30 min
2.5 MPa after pulsation	30 min
2.5 MPa after pulsation and deflection to plastic contact	30 min

The F-576 Anger-Lock™ seal has been fully approved using this test method.

STANDARDS AND APPROVALS

The Forsheda 576 Anger-Lock™ seal is approved in accordance with:

EN 681-1 WC,WA

AS 1646

BS 6920 (WRAS)

Elastomerleitlinie

W270

BRL K17504 (KIWA-ATA)

AFNOR XP P 41-250 (ACS)

Hydrocheck (Belgaqua)

AS/NZS 4020

Product installation instructions

1



Locate the bending zone

2



Bend the seal into a heart shape

3

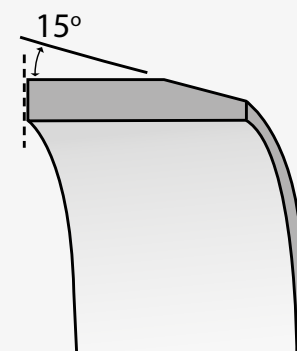


Insert the seal into the socket of the pipe and press the seal out into the groove. Ensure the seal is located correctly

The Forsheda 576 Anger-Lock™ seal can also be fitted automatically using commercially available ring insertion machines.

JOINTING INFORMATION

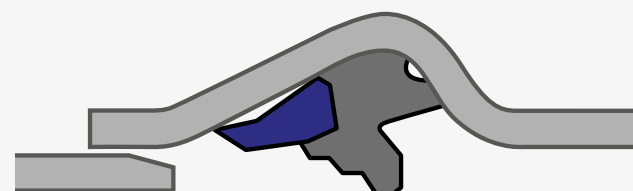
The spigot and socket of the pipe should be checked for damage prior to jointing.



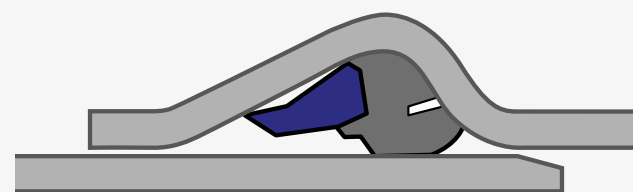
The pipe spigot should be chamfered with an angle of 15°, taking care to remove all burrs.

Both spigot and socket including the sealing ring should be free from dirt and other foreign matter.

Lubricant should be applied evenly to the spigot end of the pipe.



Immediately after lubrication, the spigot should be brought into contact with the socket.



Both spigot and socket should be correctly aligned and then slide the spigot into the socket, thus compressing the seal until the joint is fully made.

SEALING SOLUTIONS FOR THE PLASTIC PIPE INDUSTRY

Trelleborg Pipe Seals are also proud to offer the following products for the PVC applications.

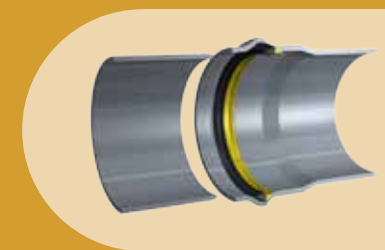
Forsheda 575

Non-integrated sealing system for plastic pressure pipes and wastewater conduit in ground
Low jointing force – minimal risk of seal displacement
High performance – low cost solution



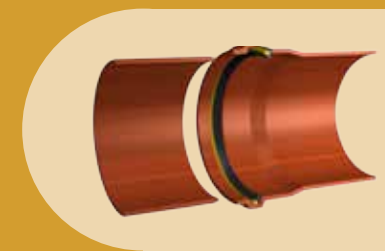
Power-Lock™

Top solution for pressure pipes. The pipe is belled over the seal during production
Savings in production and increased efficiency
Always fits, won't break or deform. Increased sealing performance



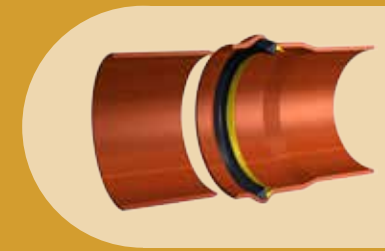
Dinlock™

Extreme sealing performance with a unique triple-lip design for DIN groove pipes and fittings
Locked in, very tight fit that doesn't come out during transport
Ideal for fittings, increased performance, and professional appearance



Sewer-Lock™

Top solution for low pressure pipe. The pipe is belled over the seal during production
Savings in production and increased efficiency
Always fits, won't break or deform. Increased sealing performance





Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Our innovative engineered solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has local presence in over 40 countries around the world.

Trelleborg Pipe Seals is a world leading supplier of new and rehabilitation sealing solutions for concrete and plastic pipes and manholes used for water, sewerage and drainage. We deliver continuous innovation to customers across the globe, with a logistics and sales network. Comprising the most advanced polymer technology, our high performance seals ensure fulfillment of the highest possible reliability standards.

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