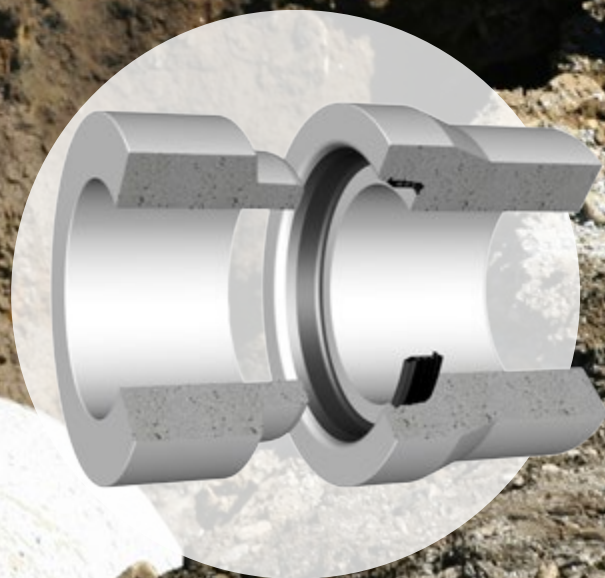


Zero leakage total performance

LOOKING AFTER WHAT'S IMPORTANT FROM THE INSIDE OUT



Forsheda 165



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 offers 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

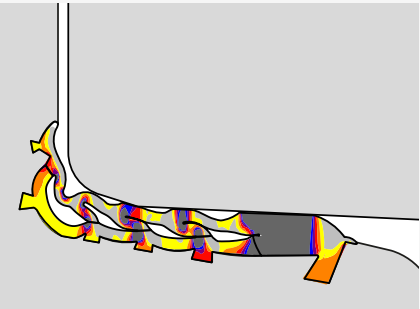
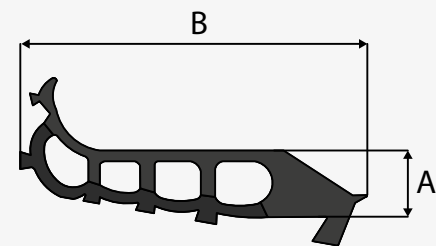
The Trelleborg Pipe Seals Forsheda product range was established in 1946, offering expert concrete and plastic sealing solutions for water, sewerage and drainage.

With solutions for pressure and non-pressure applications, including our F-171 seals, we provide leak-free sealing solutions for pipeline systems.



Introducing the F-165

The F-165 is a one-piece integrated seal for low-pressure concrete pipes and manholes. It is cast into the pipe socket during pipe manufacture. The seal can also be used for concrete pipe connections to manholes.



When producing concrete pipes with integrated sealing systems, the stability of the seal on the pallet during mold filling and vibration is crucial to the accuracy of the final joint and the overall quality of the finished pipe. The F-165 has been carefully designed to achieve the optimum stability, whilst ensuring the seal is still easy to mount on the pallet. Furthermore, the optimized slurry lip design eliminates concrete ingress between seal and pallet and reduces the need for pallet cleaning between cycles. As a consequence, the overall quality of the pipe is improved, reducing labor in the factory and improving installation on site.

PROFILE	TYPICAL PIPE DN	EFFECTIVE THICKNESS (mm)	A (mm)	B (mm)	PALLET U4 (mm)
12	225 to 300	12.0	12.4	64.5	43.5
14	300 to 600	14.0	14.7	72.4	49.0
14T	300 to 600	14.0	14.6	86.5	61.0
18	675 to 1200	18.0	18.4	89.2	54.4
18N	675 to 1200	18.0	18.4	98.3	62.4
18T	675 to 1200	18.0	18.4	109.2	74.4
22	1200 to 1600	22.0	22.4	107.1	67.0
22T	1200 to 1600	22.0	22.6	119.4	77.0
26	>1600	26.0	26.5	128.3	80.0

F-165 advantages

ONE-PIECE SEAL

- Straightforward installation
- Minimal occurrences of seal displacement
- Reduced maintenance and cleaning intervals
- Ideal for automated pipe laying, improving efficiency and health and safety
- EPDM rubber prolongs seal life well in excess of 100 years



THE ADVANTAGES OF EPDM-RUBBER

The seal is co-extruded using two specially formulated EPDM compounds of different hardnesses. The hard shell of the seal acts as the clamping and forming element. This is made of 70 IRHD to ensure a secure and accurate joint profile during casting. The combined lip and compression sealing element is made from 50 IRHD allowing the softer rubber to accommodate any minor spigot defects.

Together the two materials combine to give the seal excellent restoring force characteristics, offering excellent installed joint performance for well in excess of 120 years.

STANDARDS AND APPROVALS

The seal meets or exceeds the requirements of all current relevant European Standards including the FBS demands.

Approved in accordance with performance demands: EN1916 + DIN V 1201 + FBS
 (<DN1000 = 2.5 bar hydrostatic pressure,
 >DN1000 = 1.0 bar hydrostatic pressure,
 3 month shear load)

Approved in accordance with material demands:
 EN681-1 + FBS (QR4060)



QUALITY ASSURANCE

Our entire Forsheda range offers the following quality assurance indicators:

ISO 9001

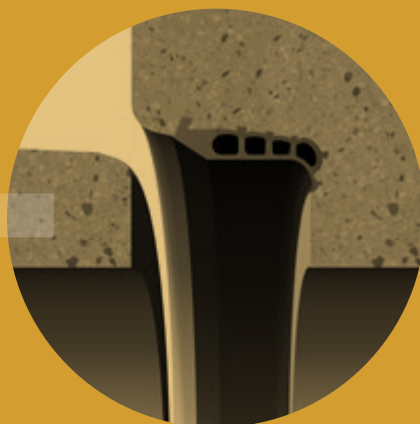
British Standard “Kitemark”

CE-marking

QR 4060

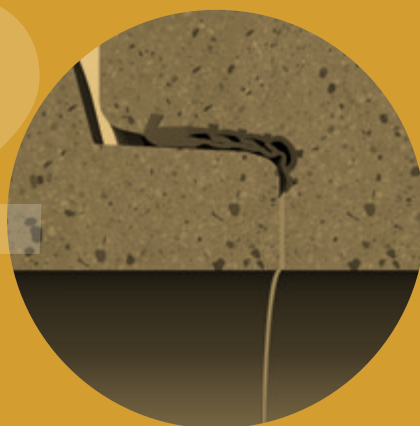
Joint assembly

1



Check that the socket and spigot are in good condition and free from mud and gravel. Do not use damaged pipes. Apply lubricant to the spigot. This should be spread evenly over the entire surface paying special attention to the front radius of the spigot. Additional lubricant applied to the seal may further reduce the jointing force.

2



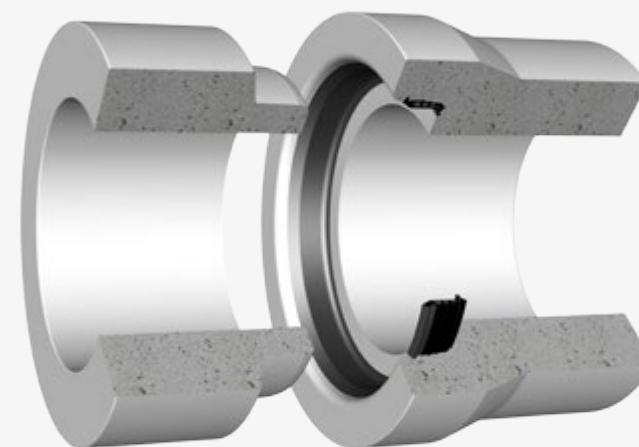
Center the spigot into the socket and push the pipes together. The seal design prevents concrete-to-concrete contact.

WHEN LAYING PIPES, ENSURE:

Sockets and spigots are in good, clean condition

Pipes aren't damaged in any way

Spigot and seal are adequately lubricated

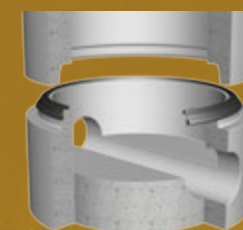


Concrete pipes with Forsheda 165 shall always be laid in accordance with applicable standards and regulations.

Related sealing solutions for concrete pipeline systems

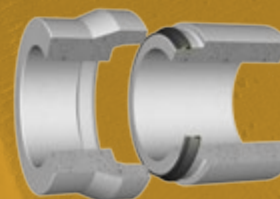
F-171

Forsheda 171 is a pre-lubricated sliding seal with integrated load distribution qualities for highly durable and robust sealing of concrete manhole systems.



F-146

Forsheda 146 is a pre-lubricated sliding seal, with optimum contact width, offering a first-class solution for both trench and jacking pipe applications.



F-910

Forsheda 910 is a flexible sealing system for pipes to manholes and laterals to pipelines.





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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Trelleborg Pipe Seals

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