



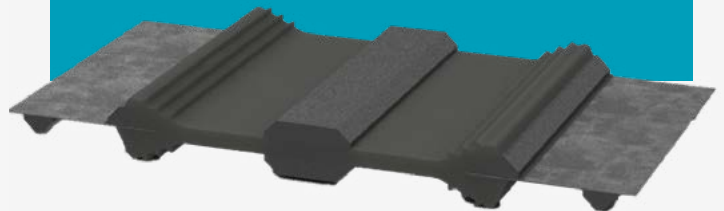
OVER 100 YEARS OF SEALING EXPERTISE

The importance of critical infrastructures, including water infrastructure, immersed tunnels, and underground construction, cannot be overstated. While building resilient infrastructures may appear complex and challenging, it is crucial for sustaining the basic operation of a society's economy. This is especially true as extreme climate events become increasingly frequent, leaving some of the largest economies with recurring and costly disasters due to damage to critical infrastructure.

The process of designing and constructing critical infrastructure projects is a complex one that demands meticulous attention to detail. There can be no compromises when it comes to ensuring the durability and functionality of such structures. Preventing water ingress is especially important to guarantee their safety, efficiency, and longevity.

A failsafe sealing system is one of the most critical solutions for supporting the functional integrity of these structures as well as protecting them from extreme seismic movement. At Trelleborg, we pride ourselves on leveraging our deep expertise in polymer engineering to design and supply

- | **Over 100 projects successfully delivered to date**
- | **Time-tested concept**
- | **Designed to withstand high pressure**
- | **Available in single, double, and non-injection versions**
- | **Lifetime expectancy greater than 120 years**
- | **Robust, durable solution**



customized sealing systems that are built to deliver optimal performance even in the most demanding and challenging environments.

By applying proven design methods and strict quality control, we provide solutions that resolve the most critical challenges in a sustainable way.

Trelleborg's Waterstop Seals the benchmark for reliability

Sealing becomes a crucial concern when working with large concrete structures that cannot be poured as one single unit. In such scenarios, Waterstops play a vital role as they act as effective barriers to prevent any water ingress from seeping through the joints, thus ensuring the overall durability of the structure.

These joints, largely referred to as movement joints, must always be waterproof besides accommodating possible movement between adjacent concrete sections. Moreover, they must also accommodate water pressure.

For a joint, you can choose from three types of Waterstops:

| External Waterstop

The external Waterstop is installed on the wet side of a concrete structure. This type of Waterstop effectively protects the joint from the infiltration of mud or any other substances. It is also an excellent choice for structures that require a “more robust” system, such as nuclear power plants or ramps to motorway tunnels. Its advanced design ensures superior performance and reliability in these critical applications. This type of Waterstop is only recommended for use in open structures, such as tunnel roofs, where debris can become trapped within the joint.

| Internal Waterstop

The internal Waterstop serves as the primary seal between two concrete structures. It is strategically placed in the center of the wall, bridging the movement joint. When you choose to use this specific Waterstop for sealing expansion joints, you'll notice its unique design that includes a central sponge. The central section plays a vital role in creating an open space within the concrete, enabling necessary movement.

With their flexible nature, the sponge rubber strips make it easy to secure the Waterstop into the shuttering. Not only that, but they also ensure a flawless seal between the sponge

rubber and the shuttering. This combination of flexibility and sealing capability guarantees a perfect fit every time. During the process of pouring and casting concrete, cement slurry is prevented from draining off due to shutter leakage, which in turn prevents honeycombing and cavities from forming in the concrete.

The longevity of our Waterstop Seals is also one of their biggest advantages. Designed to last 120 years, they are engineered with precision to stand the test of time.

| Surface joint

Once the concrete structure has fully hardened, that's when the surface joint is installed. Its main purpose is to ensure that the movement joint remains clean and open, preventing any accumulation of dust or dirt. This is crucial as these impurities could potentially cause leakage issues and disrupt the proper functioning of the joint. To ensure a proper fit and accommodate any movement, it is important to take into account the specific dimensions required for the surface joint while designing.

CHOOSING THE RIGHT WATERSTOP

Waterstops come in different types to suit different needs. Your choice of Waterstop will depend on the water pressure, movements and the level of water tightness needed. Trelleborg's full range of Waterstop includes the following:

RUBBER WATERSTOP WITH VULCANISED STEEL STRIPS

Waterstops with steel strips vulcanized into the end bulbs of the rubber waterstop are the ideal choice when working with higher water pressures and zero tolerance for leaks. This

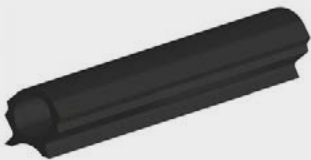
unique combination ensures maximum durability and reliability to keep your structure secure and watertight. Unlike rubber, concrete forms a strong bond with steel strips, ensuring that water stays where it should be. Additionally, the use of steel strips not only enhances the bond but also helps to minimize any potential leakage issues by providing a longer path for water to travel. This combination ensures that your structure maintains the desired level of water tightness.

INJECTION WATERSTOP (SINGLE/DOUBLE)

This effective solution, is a variation of the rubber Waterstop with vulcanized steel strips and ensures a reliable barrier between the concrete and steel, leaving no room for any water to penetrate or cause damage.

**At a glance:
Waterstop Seals**

ECS 67/66



ACME 35



VA 30

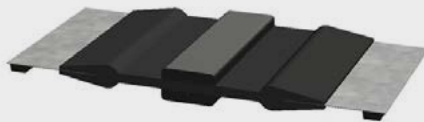


SURFACE JOINTS

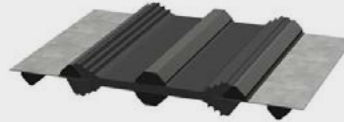
W2L



W9CUI



W29Ui

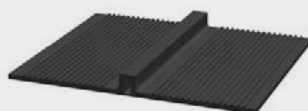


INTERNAL WATERSTOP

AM250



AS300



W5B



EXTERNAL WATERSTOP

From design to delivery and beyond: Trelleborg's full-service approach

As the leading global provider of comprehensive sealing systems, Trelleborg has been a key contributor to numerous groundbreaking projects around the world. Our work extends beyond mere design and delivery; we offer a holistic experience that integrates state-of-the-art technology with unparalleled service. No matter the specific needs, we fully support our clients in all aspects related to their project. Whether it's application consulting, design, testing, simulation, installation, service, or ongoing support, our dedicated engineering and design team is available at every stage to ensure a seamless process from start to finish.

LOCAL KNOW-HOW BACKED BY GLOBAL EXPERTISE

Drawing from a wealth of Dutch heritage, Trelleborg leverages strong engineering expertise and extensive global presence to deliver reliable solutions. With our extensive network of regional offices, we are always within reach, ensuring that we can effectively cater to your needs and provide you with the support you require, no matter where you are located.

GET IN TOUCH

Website | trelleborg.com/marineandinfrastructure
Email | marine_infra@trelleborg.com

**LEARN MORE
ABOUT
WATERSTOP
SEALS**

