

Brabant Water and Nijhuis Saur Industries launch unique Dutch pilot for large-scale drinking water desalination

Brabant Water and Nijhuis Saur Industries (NSI), part of the Saur Group, are launching a groundbreaking seawater desalination pilot. This pilot investigates how seawater can contribute to a future-proof drinking water supply. The pilot installation, which processes 90 m³/h of seawater into drinking water, supports Brabant Water in determining the optimal treatment configuration and gaining practical experience with desalination technology. This provides crucial input for the design and future operations of a full-scale drinking water installation.

Future-proof water management requires resilience and collaboration

The Netherlands needs more source diversity to safeguard security of supply. The combination of rising drinking water demand and increasing pressure on existing sources makes the development of additional, future-proof water sources essential. Seawater, available 365 days a year, is therefore an important addition to the national water portfolio. Brabant Water and NSI share the conviction that diversifying water sources is vital to strengthen the Netherlands' resilience against drought and salinization. In addition, Saur's experience in desalination and operational excellence is combined with NSI's proven membrane technology and data optimization to deliver sustainable, safe, and affordable drinking water.

Pilot technology: robust, flexible, and future-ready

The pilot consists of three modular Sea Water Reverse Osmosis (SWRO) treatment lines. Two lines focus on direct intake, testing two types of pretreatment: one line with DAF + media filtration and one with ceramic membrane filtration. For the study on saline groundwater, a vertical groundwater well ("indirect intake") is used, connected to the third RO line. This setup provides flexibility, robustness, and insight into energy and chemical efficiency under varying seasonal conditions, representative of full-scale application. In addition to constructing and commissioning the modular installation, NSI provides project management and engineering, working with renowned partners such as ADS Group as construction partner and GW Leidingtechniek for installation of underground pipelines.

Water is in transition

In the next phase, the pilot systems will be tested and further optimized under a variety of conditions. The real-time data provides Brabant Water and NSI with shared insights into performance, reliability, energy and chemical consumption, and operational stability of the different configurations. Equally important is the pilot's function as a shared learning environment: within this collaboration, Brabant Water gains hands-on experience with the management, maintenance, and asset management of desalination technology, supported by NSI's technical and operational expertise. This combination of joint insights, technical results, and operational knowledge enables both parties to explore which configurations are most suitable for safe and scalable application in the Dutch context.

"In the Antilles, Las Palmas, and other places around the world, seawater is already being successfully used to produce high-quality drinking water. This proves that it can be done. Now we want to discover the best way to do this with Dutch seawater. Thanks to the construction of this pilot installation, we can now truly start testing." – **Patrick van der Wens, Project Director**

“Around the world, pressure on water resources is increasing. Water is in transition: the way we value, use, and protect water is changing fundamentally. Drought, salinization, and stricter regulations demonstrate that water security increasingly requires source diversification.

Brabant Water and Nijhuis Saur Industries share this vision. This unique pilot brings together learning, innovation, and collaboration, strengthened by our international expertise as part of the Saur Group. Driven by our unique #MissionWater, we work with our customers on solutions that bring water security closer and jointly lay the foundation for a full-scale desalination plant—one that will be essential to meet the growing need for reliable, high-quality, and sustainable drinking water within Brabant Water’s service area.”

Paul Baan, CEO BeNeLux & DACH, Nijhuis Saur Industries