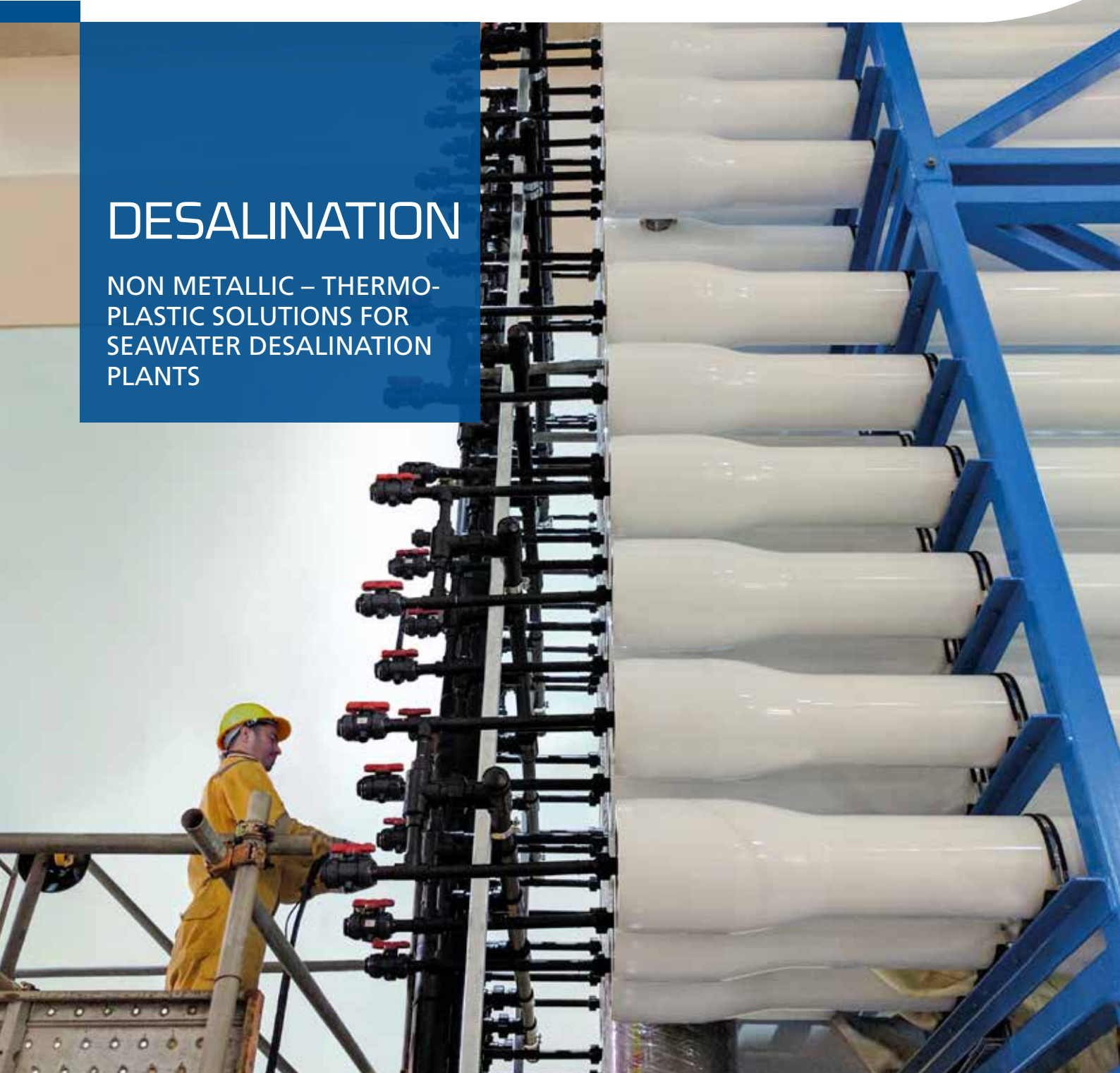
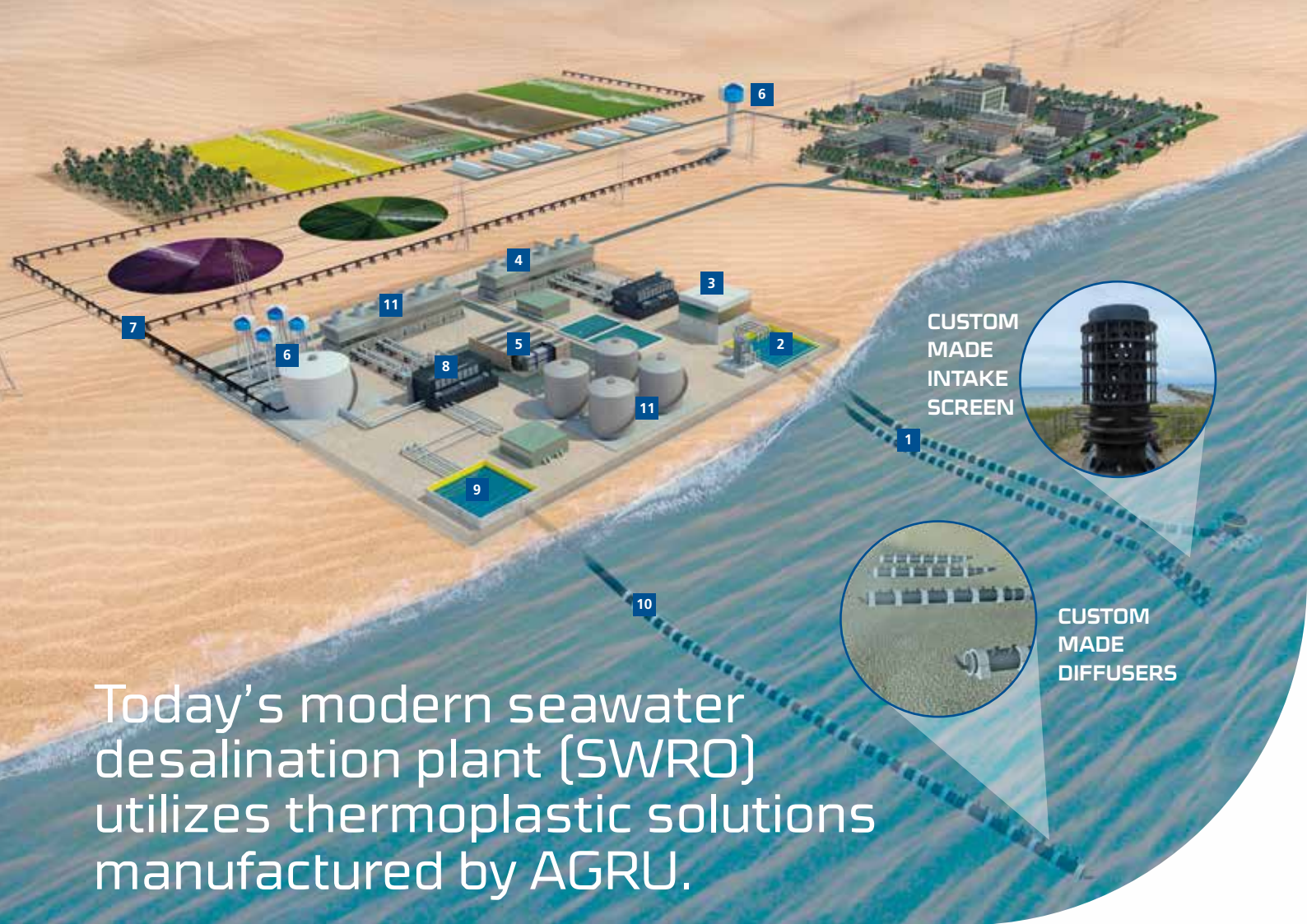


DESALINATION

NON METALLIC – THERMO-
PLASTIC SOLUTIONS FOR
SEAWATER DESALINATION
PLANTS



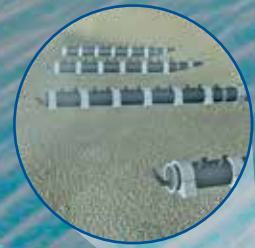


Today's modern seawater desalination plant (SWRO) utilizes thermoplastic solutions manufactured by AGRU.

CUSTOM MADE INTAKE SCREEN



CUSTOM MADE DIFFUSERS



Drinking water is a scarce resource; as only one percent of the world's water supply is suitable for drinking. Due to the growing world population and climate changes, the desalination of seawater for drinking water production is becoming increasingly important. AGRU supplies the thermoplastic technology for seawater desalination which uses the reverse osmosis technique. Our range of solutions encompasses Piping Systems, Concrete Protective Liners and Semi-Finished products made from environmentally friendly thermoplastic materials.



Seawater intake

Corrosion resistant intake screens and chlorination piping systems. PE 100 (-RC) pipes and intake heads from AGRU are available in dimensions up to OD 3500 mm with various pressure ratings for seawater intake lines.



Particle settlement tanks

For protection of concrete basins the AGRU UltraGrip liner (NSF61 approved) provides the perfect solution. This sheet is produced in a single-step production process with integrated anchor studs which provide a safe and secure bonding between the concrete and the UltraGrip sheet. Fast and cost effective in installation and operation.



Filter feed pumps

In the pump station area PE 100-RC and PP pipes and fittings are utilized up to a diameter of 500 mm. Fully pressure rated fittings up to 16 bar enable safe operation. For larger dimensions segmented or machined fittings are available. Excellent flow characteristic and high abrasion resistance are beneficial for this application area in an SWRO plant.

4



Pretreatment filters

Polypropylene piping systems welded by butt or IR fusion welding techniques provide fast and efficient installation. Excellent abrasion resistance and pressure rating up to 10 bar to provide high durability.

5



RO-Modules

For the installation of permeate piping as well as feed pipes for the RO-membranes, PP piping (NSF61 approved) with a specially adjusted fitting range is available. Standard and customized solutions for header pipes available.

6



Product Water Holding Tanks

For the secure storage of potable water PE 80 blue HYDRO^{CLICK} sheets (NSF61 approved) provide the most effective solution. These sheets have all necessary approvals for contact with potable water.

7



Potable water supply

PE 100 and PE 100-RC pipes with long life time and high resistance to puncture loads for the supply of potable water to the enduser.

8



Process Chemical Tankfarm

In the buffer station the large supply range of AGRU pipes, fittings and valves up to 500 mm SDR 11 in PE 100-RC or PP can be applied. PH control injection piping systems in PVDF and ECTFE provide excellent durability for aggressive media such as H₂SO₄ and Sodium Hypochlorite.

9



Brine Discharge Tanks

AGRU HDPE UltraGrip liners in thicknesses from 2.5 mm up to 5.0 mm are used to protect concrete structures.

10



Discharge pipe

PE 100 (-RC) for discharge pipes provides excellent corrosion resistance, high flow characteristics, durability, flow and diffuser structures.

11



Storage tanks

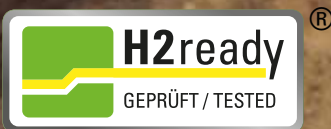
Storage tanks can be lined with fabric-backed sheets in 3, 4, 5, or 6 mm which are bonded to steel tanks. PE and PP materials with polyester - or polypropylene fabric are used to improve the tanks' life expectancy and reduce maintenance intervals.



AGRU offers reliable welding solutions

For welding of various plastic piping systems AGRU provides infrared welding, butt welding, beadless welding and electro fusion socket welding machines.

AGRU: Your Partner in Hydrogen Technology Solutions



Hydrogen, a clean and sustainable energy source, takes center stage in the fight against climate change. AGRU provides key technical plastic products, from electrolysis equipment to efficient water transport systems, ensuring smooth operation across the hydrogen value chain. Our innovative solutions contribute to a cleaner future powered by hydrogen technology.

Benefits:

Extensive experience: Proven expertise in the hydrogen industry.

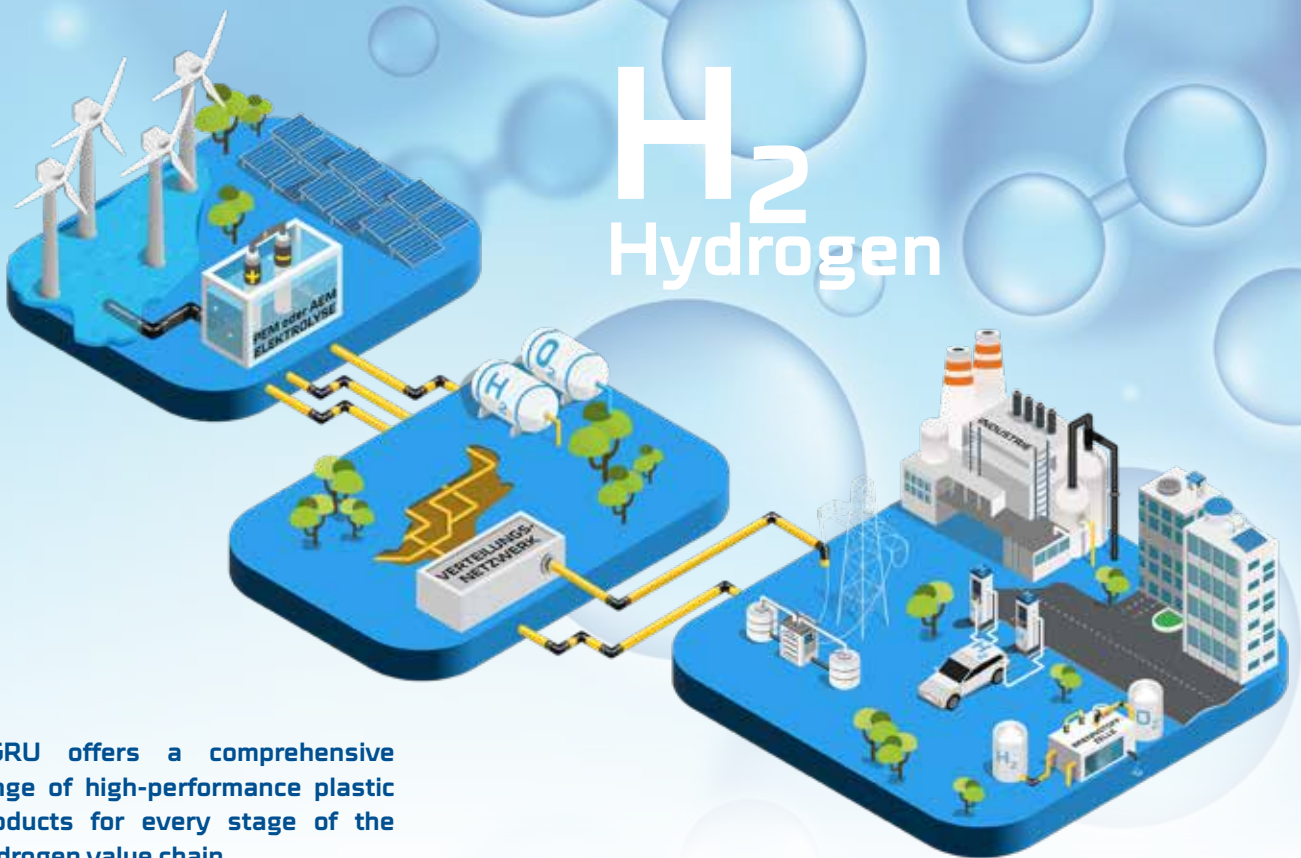
Comprehensive solutions: Products for every step of the hydrogen value chain.

High-quality materials: Reliable and durable performance.

Sustainability: Committed to minimizing environmental impact.



H₂ Hydrogen



AGRU offers a comprehensive range of high-performance plastic products for every stage of the hydrogen value chain.

Water Transport: The specialized AGRULINE and XXL piping systems are designed to efficiently transport large volumes of water to processing units, meeting the high water demands of electrolysis processes. By ensuring a safe and uninterrupted water supply, they play a critical role in facilitating hydrogen production.

Handling of Ultrapure Water: AGRU's PURAD system, made of PP-pure or PVDF, secures the transport of ultrapure water essential for electrolysis. These solutions minimize the risk of contamination and ensure the longevity and reliability of electrolysis processes.



Electrolysis Processes: AGRU's technical plastics are essential for PEM and alkaline electrolysis processes, serving as integral components in the production of green hydrogen. These products ensure efficient material transport throughout the electrolysis process, facilitating the generation of pure hydrogen and oxygen without environmental harm.

Handling of Caustic Potash (KOH) Solution: AGRUCHEM or Semi-Finished products are suitable for handling the caustic potash solution used in alkaline electrolysis. Their chemical resistance and operational safety make them ideal for storing and transporting this aggressive solution.

Hydrogen Transport: The AGRULINE PE 100-RC pipe system offers a safe and cost-efficient solution for hydrogen transport. It not only meets relevant standards and norms but is also tested for 100% hydrogen transport, highlighting its versatility and reliability.



Fuel Cell Applications: In fuel cells, AGRU's AGRULINE PE 100-RC system transports hydrogen, oxygen, and cooling water efficiently to the "stack". It demonstrates compatibility with fuel cell technology, ensuring reliable resource delivery for electricity generation, showcasing AGRU's role in supporting renewable energy advancements.



Link to website or contact information

Applications



Desalination intake pipelines are best made from AGRULINE PE 100-RC XXL piping systems for optimal durability and resistance.





AGRUCHEM piping systems made of PP meet the high purity requirements essential for reverse osmosis.





The Plastics Experts.

Your distributor

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agru Kunststofftechnik Gesellschaft m.b.H.
Ing.-Pesendorfer-Strasse 31
4540 Bad Hall, Austria

T. +43 7258 7900
F. +43 7258 790 - 2850
office@agru.at



www.agru.at