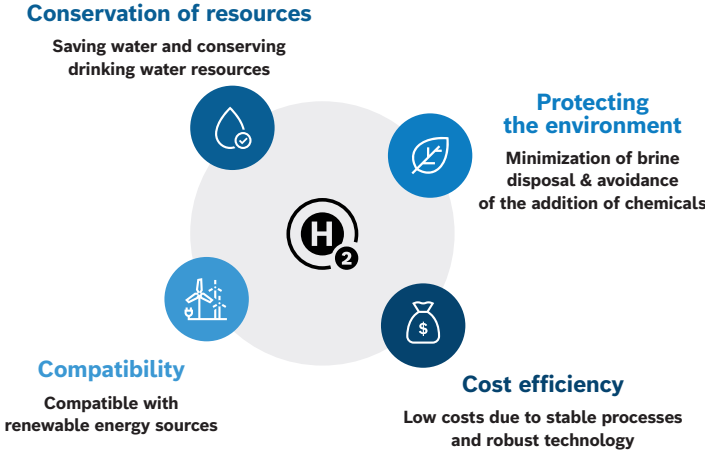
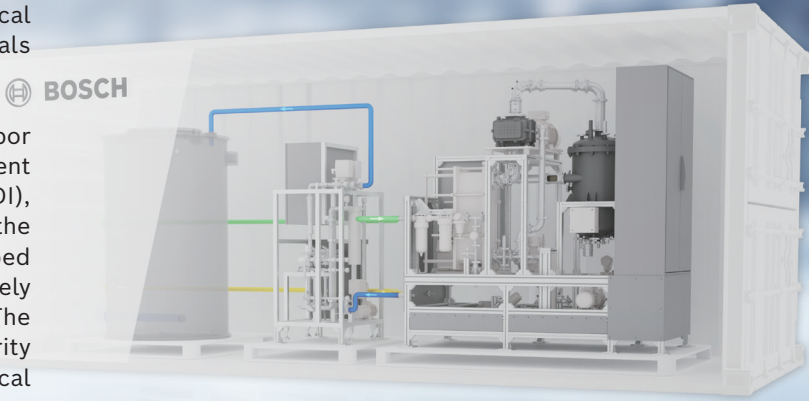


Water purification for electrolysis

Bosch water purification enables green hydrogen production anywhere

To perform electrolysis in remote areas, we offer a water purification device that uses thermal and electrochemical processes to remove constituents such as salts or metals from the water to obtain high-purity water.

An energy-efficient distillation technology, mechanical vapor compression distillation (MVCD), is used as the first treatment step. This process is followed by electro-deionization (EDI), where an electric field removes remaining ions from the distillate. With this water purification system newly developed for application in remote areas, it is possible to completely dispense with the use of filter media and chemicals. The product water of the plant meets the demanding purity requirements of all electrolyzer technologies. Some technical specifications are shown in the table below.



Technical data

Key performance parameter				
Electrolyzer capacity assuming 10 kg H ₂ O = 1kg H ₂	1 MW	5 MW	10 MW	15 MW
Average power consumption	9 kW	35 kW	70 kW	105 kW
Max power input peak	20 kW	103 kW	200 kW	290 kW
	depending on cold start performance			
Water output	0,25 m³/h	1 m³/h	2 m³/h	3 m³/h
Water source	tap water, surface water, sea water			
Water input (sea water)	0,6 m³/h	2,4 m³/h	4,5 m³/h	6,5 m³/h
Water input (tap water)	0,3 m³/h	1,3 m³/h	2,5 m³/h	3,6 m³/h
Ultrapure water storage (tank volume)	0,5 m³	1 m³	2 m³	3 m³
Remote control	yes			
Water output quality	0.1 µS/cm			
Cold start	45 min (may be shorter with increased heating power)			
Hot start	< 5 min			
Chemical consumables	none (using saline water input)			
Operation and maintenance				
Maintenance period	1 year			
Input water temperature	from +4 °C to +40 °C			
Operating temperatures	from -20 °C to +40 °C (air conditioning is needed)			
Size				
Container size	20 feet	20 feet	20 – 40 feet	40 feet
Total wet weight	4500 kg	7000 kg	8800 kg	11800 kg

Questions? Get in contact with us

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