

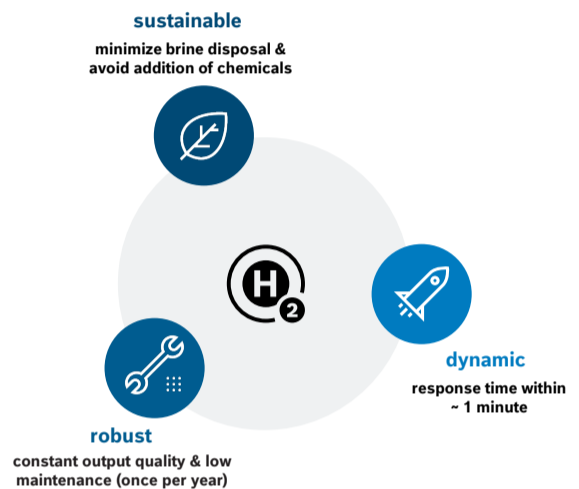
Water purification for electrolysis



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.



Key parameters

Parameters	Electrolyzer capacity			
	5 MW	10 MW	15 MW	20 MW
MVCD key performance parameter				
Average power consumption	35 kW	70 kW	105 kW	140 kW
Max power input peak	103 kW	200 kW	290 kW	380 kW
	depending on cold start performance			
MVCD water output	1 m ³ /h	2 m ³ /h	3 m ³ /h	4 m ³ /h
Water source	tap water, surface water, sea water			
MVCD water input (sea water)	2,4 m ³ /h	4,5 m ³ /h	6,5 m ³ /h	8,6 m ³ /h
MVCD water input (tap water)	1,3 m ³ /h	2,5 m ³ /h	3,6 m ³ /h	4,7 m ³ /h
Ultrapure water storage (tank volume)	1 m ³	2 m ³	3 m ³	4 m ³
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 – 40 feet		40 feet
Total wet weight	7000 kg	8800 kg	11800 kg	15500 kg

Questions? Get in contact with us



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