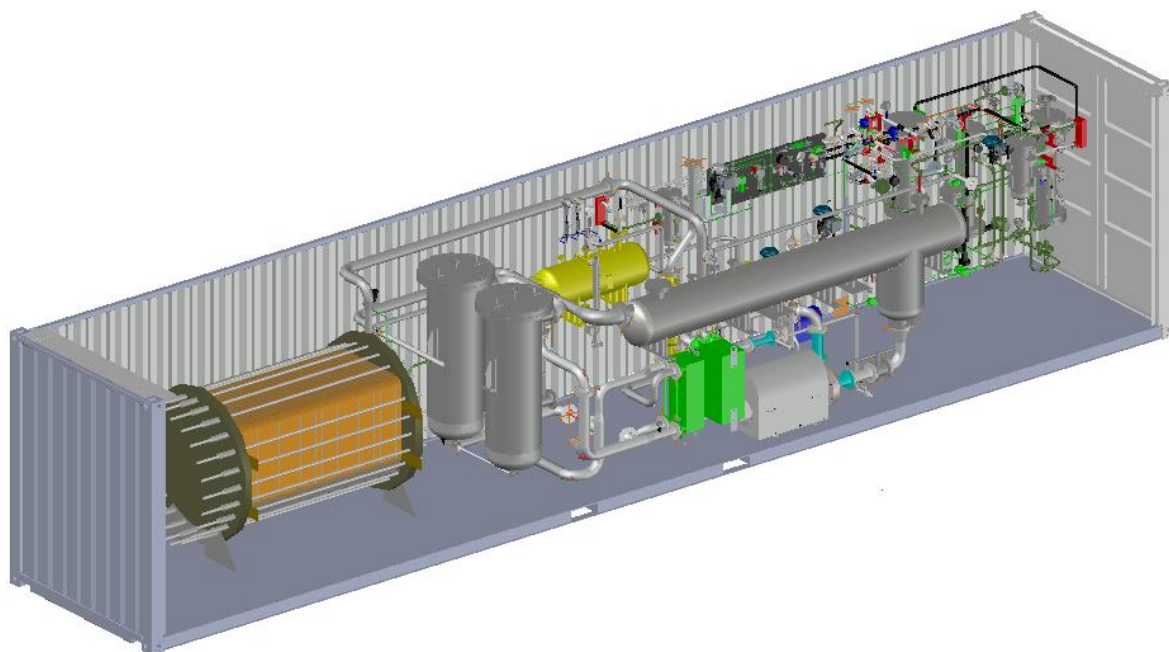


AWE

1 MW Alkaline Water Electrolyte containerized electrolyzer stack
complemented by the balance of plant (BoP).



Key features

- ⊗ H₂ Output: 200 Nm³/h (~ 18 kg/h), up to 16 barg, 99.9% purity (99.999% with optional dryer)
- ⊗ High degree of redundancy
- ⊗ More reliability and availability
- ⊗ N₂ or other gasses provided for purging.

Specification

Nominal H₂ flow	200 Nm ³ /h ~ 430 kg/24 h	Net volume flow rate
H₂ outlet pressure	Up to 15 barg	
H₂ purity	99.8% in molar fraction, equals dew point of -30 °C	Impurities Electrolyte Solution and O ₂
Nominal O₂ flow	100 Nm ³ /h	Net volume flow rate
O₂ outlet pressure	Up to 15 barg	
Sound pressure level	< 60 dB(A)	at 10 m
Flexibility	30% – 100%	Of nominal production rate
Stack nominal electrical power consumption	860 kW 1000 kW	Beginning of life (BOL) Near end of life (EOL)
Specific power consumption (efficiency)	5.6 kWh/Nm ³ _{H₂} 63 kWh/kg _{H₂}	Including all utilities inside the battery limits of the Electrolyzer container (at beginning of life)
System efficiency over different loads	60 – 100%: 5.6 kWh/Nm ³ 30 – 60%: 5.8 kWh/Nm ³ 10 – 30%: 6.2 kWh/Nm ³	
Ambient operating temperature	-20 – 40 °C	
Nominal water consumption	400 L/h	Purified water
Aqueous Solution	30% KOH	
Water inlet temperature	20 – 70 °C	
Hot startup time	0 – 30% in 30 min	
Hot standby power consumption	Max. 300 kW	Stacks are hydrated and electrolyte solution is in circulation at minimum temperature
Cold startup time	0 – 30% in 30 minutes	Depending on ambient temperature
Ramp-up time	30% – 100% in 15 minutes	Anode water at ≥20° C
Cold standby power consumption	Max. 50 kW	All components are in standby and container heating is on
Shut down time	From min to max in 60 minutes	
Shut down period	Max. 8 weeks	
Maximum Voltage	380 VDC	
Frequency	50/60 Hz	
Dimensions	L: 12.2 m × W: 2.4 m × H: 2.6 m	
Weight	~ 30 t	
Stack lifetime	~ 140 000 operation hours	