

HyLYZER® WATER ELECTROLYZERS



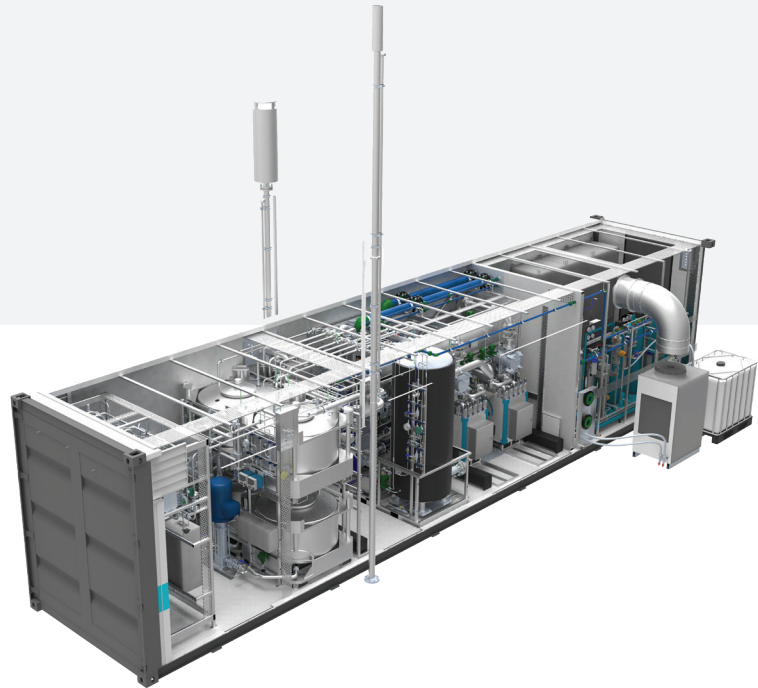
HyLYZER® is Cummins' globally proven modular water electrolyzer system designed for easy on-site installation inside or out, with simple interconnectivity to scale up, and an unrivaled record for reliability, low maintenance and on-site safety. Recommended for projects between 400 - 2,000 Nm³/h.

Proven technology, compliant with highest safety standards

Turnkey solution

Exceptionally compact

30 bar pressurized stacks



FEATURES

	HyLYZER® - 400	HyLYZER® - 500
Technology	PEM water electrolysis	
Hydrogen production	400 Nm ³ /h (862 kg/day)	500 Nm ³ /h (1080 kg/day)
H ₂ delivery pressure	30 bar _g (435 psig) without a compressor	
H ₂ quality max impurities	99.998% O ₂ < 2 ppm, N ₂ < 12 ppm (higher purities optional); Atm. Dew point: -75°C	

TECHNICAL SPECIFICATIONS

	HyLYZER® - 400	HyLYZER® - 500
Operating range	5-100%	
DC power consumption at stack	40 to 48 kWh/kg (3.6 to 4.3 kWh/Nm ³)	
System specific consumption*	≤ 54 kWh/kg	
Utilities required to operate the plant	Electrical power, potable water, nitrogen for purging requirements	
Rectifier specifications	6 to 36kV± 10% - 50/60 Hz - 3.2 MVA 97% efficiency	
Auxiliary installed power	125 kVA	
Potable water consumption	Scope of supply includes a water treatment plant with reverse osmosis that requires 1.2 to 1.5 L/Nm ³ [13 to 17 L/kg of H ₂] to produce 0.8 L/Nm ³ of demin water for the electrolysis process	
Total footprint (including maintenance area)	18 m x 11 m (~ 198 m ²)	
Product setup	Outdoor (2x 40ft ISO container)	
Installation environment	Outdoors -20°C to 40°C / -4°F to 104°F	

*System specific consumption considers: the standard scope of supply (refer to BOS and BOP tables); 100% Load capacity; Beginning Of Life; 1% increase per annum (at ≥8500 hours operation)

STACK AND BALANCE-OF-STACK (BOS)

	Outdoor	Indoor
Cell stacks and gas generation system	■	
Power rectifiers	■	
Control panel	■	
Water polishing system	■	

BALANCE-OF-PLANT (BOP)

	Outdoor	Indoor
Rectifier cooling	■	
Gas cooling	■	
Electrolysis cooling	■	
Water purification system	■	
Instrument air compressor	■	
Hydrogen purification system	■	

Applicable Codes and Standards Pressure Equipment Directive 2014/68/EU, Low Voltage Directive 2014/35/EU, Machinery Directive 2006/42/EC, Electro-Magnetic Compatibility 2014/30/EU, ATEX Directive 2014/34/EU, IEC 61511, IEC 61508, IEC 60079-10-1, NFPA 2, NFPA 497, National Electrical Code (NEC), ANSI/NFPA 70, ASME B31.3-2016, ASME Boiler and Pressure Vessel Code 2017, CSA C22.1 and C22.2, CSA B51 2019, CAN/BNQ 1784-000/2007. Other jurisdictions available on request.

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