



H₂B₂



Main Characteristics		EL800N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)	
Number of Cell Stacks	4	
Hydrogen Gas Production		
Max. Nominal Hydrogen Flow	800 Nm ³ /h (1,726 kg/day)	
Hydrogen Flow Range	10 -100%	
Operating Pressure	15 - 40 barg (217-580 psig)	
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated	
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O ₂ ; < 5 ppm H ₂ O	
Electrical Requirements		
Voltage	3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N)	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Power (BoP + Stack)	4,130 kW	
Stack Consumption (*)	4.7 kWh/Nm ³ H ₂	
AC Power Consumption (BoP + Stack) (*)	5.1 kWh/Nm ³ H ₂	
Feed Water - Demi Water (optional Water Treatment Plant is not included)		
Consumption	< 1 L/Nm ³ H ₂	
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb	
Pressure	2-3 barg (29-43 psig)	
Temperature	+5 °C to +40 °C (+41 °F to +104 °F)	
Control System		
PLC	Fully automated and unattended with 15" color touch screen	
Communication	Modbus TCP/IP or Profinet (RJ45 port)	
Environmental Conditions		
Ambient Temperature Range	+5 °C to +45 °C (+41 °F to +113 °F)	
Humidity	0 to + 95% (non-condensing)	
Air Ventilation	Available from a non-hazardous area	
Installation Area	Indoor/Outdoor	
Dimensions and weight		
Dimensions (LxWxH)	2 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)]	
Approx. Weight	48,000 kg (99,207 lb)	
Standards & Regulations		
Compliance	CE, ISO 22734-1 / NFPA 2-2016 & NFPA 70	
Other Characteristics		
Duty Cycle	100% (24/7)	
Start-up Time (from Stand-by)	< 1 sec	
Cold Start Time	< 5 min	
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)	
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer)	
(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.		
Included		Additional Options
Hydrogen Cooling System		Oxygen Processing System
Emergency Shutdown System		Hydrogen Purification System (SAE J2719 September 2011)
Overpressure Relief System		Water Treatment System
Redundancy on Critical Safety Parameters		Extreme Environmental Conditions Package (Low and High Temp)
Uninterruptible Power Supply (UPS)		Hydrogen Mass Flow Measure & Purity Measure (H ₂ O & O ₂ Sensors)
Heat Management (No Cooling Water is Needed)		Instrumentation Air System
Virtual Private Network (VPN) connection		Nitrogen System
		Heat Recovery System
		Medium Voltage Connection