



# H<sub>2</sub>B<sub>2</sub>



Main Characteristics		EL2N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)	
Number of Cell Stacks	2	
<b>Hydrogen Gas Production</b>		
Max. Nominal Hydrogen Flow	2 Nm <sup>3</sup> /h (4.31 kg/day)	
Hydrogen Flow Range	10 -100%	
Operating Pressure	1-20 barg (14.5-290 psig)	
Hydrogen Purity (before Gas Purification)	> 99.9%; < 25 ppm O <sub>2</sub> ; H <sub>2</sub> O saturated	
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O <sub>2</sub> ; < 5 ppm H <sub>2</sub> O	
<b>Electrical Requirements</b>		
Voltage	400 VAC ± 10% (3Ph+N) / 480 VAC ± 10% (3Ph+N)	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Power (BoP + Stack)	12 kW	
Stack Consumption (*)	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>	
AC Power Consumption (BoP + Stack) (*)	6.0 kWh/Nm <sup>3</sup> H <sub>2</sub>	
<b>Feed Water - Demi Water (optional Water Treatment Plant is not included)</b>		
Consumption	< 1 L/Nm <sup>3</sup> H <sub>2</sub>	
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)	
<b>Control System</b>		
PLC	Fully automated and unattended with 7" color touch screen	
Communication	Modbus TCP/IP or Profinet (RJ45 port)	
<b>Environmental Conditions</b>		
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	
<b>Dimensions and weight</b>		
Dimensions (LxWxH)	Cabinet (1.8m x 0.8m x 2.1m) (5.9ft x 2.6ft x 6.9ft)	
Approx. Weight	800 kg (1,763 lb)	
<b>Standards &amp; Regulations</b>		
Compliance	CE, ISO 22734-1 /NFPA 2-2016 & NFPA 70	
<b>Other Characteristics</b>		
Duty Cycle	100% (24/7)	
Start-up Time (from Stand-by)	< 1 sec	
Cold Start Time	< 5 min	
(*) Electrical consumption at maximum current density and operating pressure at the stack; this is reduced if those are not required.		
<b>Included</b>		<b>Additional Options</b>
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 <sub>2</sub> O & O <sub>2</sub> Sensors)
Heat Management (No Cooling Water is Needed)		
Virtual Private Network (VPN) connection		