



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



Main Characteristics		EL3N	
Electrolysis Type	PEM ( Proton exchange membrane, caustic free)		
Number of Cell Stacks	3		
<b>Hydrogen Gas Production</b>			
Max. Nominal Hydrogen Flow	3 Nm <sup>3</sup> /h		
Hydrogen Flow Range	5 -100%		
Operating Pressure	1-20 barg (14.5-290 psig)		
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 5 ppm O <sub>2</sub> ; H <sub>2</sub> O saturated		
Hydrogen Purity (after Gas Purification)	99.999%; < 1 ppm O <sub>2</sub> ; < 1 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)	17.1 kW		
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>		
AC Power Consumption (BoP + Stack)	5.7 kWh/Nm <sup>3</sup> H <sub>2</sub>		
<b>Tap Feed Water</b>			
Consumption	< 6 l/hr		
Conductivity	< 2,000 uS/cm (T 25 °C (77 °F))		
Pressure	2-6 barg (29-87 psig)		
Temperature	+5 °C to +40 °C (+41 °F to +104 °F)		
<b>Demineralized Water (after Water Treatment)</b>			
Consumption	< 1 l/Nm <sup>3</sup> H <sub>2</sub>		
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb		
<b>Control System</b>			
PLC	Fully automated and unattended with 15" 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 0.6m x 1.8m) (5.9ft x 1.9ft x 5.9ft)		
Approx. Weight	500 kg (1,102 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		
<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			