



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



Main Characteristics		EL2N																
Electrolysis Type	PEM (Proton exchange membrane, caustic free)																	
Number of Cell Stacks	2																	
Hydrogen Gas Production																		
Max. Nominal Hydrogen Flow	2 Nm <sup>3</sup> /h																	
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																	
Electrical Requirements																		
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>																	
Feed Water - Tap Water (if Water Treatment Plant is included)																		
Consumption	< 4 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)																	
Feed Water - Demi Water (if Water Treatment Plant is not included)																		
Consumption	< 1 l/Nm <sup>3</sup> H <sub>2</sub>																	
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb																	
Control System																		
PLC	Fully automated and unattended with 7" 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)	Cabinet (1.8m x 0.8m x 2.1m) (5.9ft x 2.6ft x 6.9ft)																	
Approx. Weight	800 kg (1,763 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																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%; text-align: center;">Included</th> <th style="width:50%; text-align: center;">Additional Options</th> </tr> </thead> <tbody> <tr> <td>Hydrogen Cooling System</td> <td>Oxygen Processing System</td> </tr> <tr> <td>Emergency Shutdown System</td> <td>Hydrogen Purification System (SAE J2719 September 2011)</td> </tr> <tr> <td>Overpressure Relief System</td> <td>Water Treatment System</td> </tr> <tr> <td>Redundancy on Critical Safety Parameters</td> <td>Extreme Environmental Conditions Package (Low and High Temp)</td> </tr> <tr> <td>Heat Management (No Cooling Water is Needed)</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>			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)	Heat Management (No Cooling Water is Needed)					
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