



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



Main Characteristics		EL5N	
Electrolysis Type	PEM ( Proton exchange membrane, caustic free)		
Number of Cell Stacks	1		
<b>Hydrogen Gas Production</b>			
Max. Nominal Hydrogen Flow	5.2 Nm <sup>3</sup> /h		
Hydrogen Flow Range	5 -100%		
Operating Pressure	15 - 40 barg (217-580 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	3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N)		
Frequency	50 Hz ± 5% / 60 Hz ± 3%		
Power (BoP + Stack)	28.6 kW		
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>		
AC Power Consumption (BoP + Stack)	5.5 kWh/Nm <sup>3</sup> H <sub>2</sub>		
<b>Tap Feed Water</b>			
Consumption	< 10 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>Deminerlized 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 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 (2.8m x 0.6m x 1.80m) (9.2ft x 1.9ft x 5.9ft)		
Approx. Weight	750 kg (1,653 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		
Nitrogen Supply System	For each purge, consumption is <0.1 kg at 3 barg (to be supplied by the customer)		
Instrumentation air System	Consumption 4 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)		
		<b>Included</b>	<b>Additional Options</b>
Hydrogen Cooling System	Oxygen Processing System		
Emergency Shutdown System	Instrumentation Air System		
Overpressure Relief System	Nitrogen System		
Redundancy on Critical Safety Parameters	Hydrogen Purification System (SAE J2719 September 2011)		
	Water Treatment System		
	Uninterruptible Power Supply (UPS)		