



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



Main Characteristics		EL60N
Electrolysis Type	PEM ( Proton exchange membrane, caustic free)	
Number of Cell Stacks	2	
<b>Hydrogen Gas Production</b>		
Max. Nominal Hydrogen Flow	63.3 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)	329.2 kW	
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>	
AC Power Consumption (BoP + Stack)	5.2 kWh/Nm <sup>3</sup> H <sub>2</sub>	
<b>Tap Feed Water</b>		
Consumption	100 l/h	
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 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	Outdoor	
<b>Dimensions and weight</b>		
Dimensions (LxWxH)	20 ft container (6.0m x 2.4m x 2.9m) (20ft x 8 ft x 9.6ft)	
Approx. Weight	13,000 kg (28,860 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 <0.2 kg at 3 barg (to be supplied by the customer)	
Instrumentation air System	Consumption 7 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)	
<b>Included</b>		
<b>Additional Options</b>		
Hydrogen Purification System (SAE J2719 September 2011)	Oxygen Processing System	
Water Treatment System	Instrumentation Air System	
Hydrogen Cooling System	Nitrogen System	
Emergency Shutdown System		
Overpressure Relief System		
Redundancy on Critical Safety Parameters		
Uninterruptible Power Supply (UPS)		
Hydrogen Mass Flow Measure		
Hydrogen Purity Measure (Moisture & Oxygen Sensors)		