



Product Catalogue

Main Characteristics	EL5N	EL30N	EL90N	EL120N	EL200N
<b>Electrolysis Type</b>	PEM ( Proton exchange membrane, caustic free)				
<b>Number of Cell Stacks</b>	1	1	3	4	1
<b>Hydrogen Gas Production</b>					
Max. Nominal Hydrogen Flow	5 Nm <sup>3</sup> /h (2.9 scfm)	30 Nm <sup>3</sup> /h (17.7 scfm)	90 Nm <sup>3</sup> /h (53 scfm)	120 Nm <sup>3</sup> /h (70.6 scfm)	200 Nm <sup>3</sup> /h (124.6 scfm)
<b>Hydrogen Flow Range</b>	10 -100%				
<b>Operating Pressure</b>	15 - 40 barg (217-580 psig)				
<b>Hydrogen Purity (before Gas Purification)</b>	> 99.9% ; < 5 ppm O <sub>2</sub> ; H <sub>2</sub> O saturated				
<b>Hydrogen Purity (after Gas Purification)</b>	> 99.999% ; < 5 ppm O <sub>2</sub> ; < 5 ppm H <sub>2</sub> O				
<b>Electrical Requirements</b>					
<b>Voltage</b>	3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N)				
<b>Frequency</b>	50 Hz ± 5% / 60 Hz ± 3%				
<b>Stack Power</b>	25 kW	140 kW	3 x 140 kW	4 x 140 kW	1 MW
<b>Stack Consumption</b>	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>				
<b>Installed Power (BoP + Stack)</b>	38 kVA	213kVA	639 kVA	853kVA	1,364 kVA
<b>AC Power Consumption (BoP + Stack)</b>	5.4 kWh/Nm <sup>3</sup> H <sub>2</sub>	5.3 kWh/Nm <sup>3</sup> H <sub>2</sub>			5.1 kWh/Nm <sup>3</sup> H <sub>2</sub>
<b>Tap Feed Water</b>					
<b>Consumption</b>	< 6 l/hr	< 34 l/hr	< 100 l/hr	< 135 l/hr	< 224 l/hr
<b>Conductivity</b>	< 2,000 uS/cm (T 25 °C (77 °F))				
<b>Pressure</b>	2-6 barg (29-87 psig)				
<b>Temperature</b>	+5 °C to +40 °C (+41 °F to +104 °F)				
<b>Deminerlized Water (after Water Treatment)</b>					
<b>Consumption</b>	< 1 l/Nm <sup>3</sup> H <sub>2</sub>				
<b>Quality</b>	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb				
<b>Control System</b>					
<b>PLC</b>	Fully automated and unattended with 15" color touch screen				
<b>Communication</b>	Modbus TCP/IP or Profinet (RJ45 port)				
<b>Ambient Conditions</b>					
<b>Ambient Temperature Range</b>	+5 °C to +45 °C (+41 °F to +113 °F)				
<b>Humidity</b>	0 to + 95% (non-condensing)				
<b>Air Ventilation</b>	Available from a non-hazardous area				
<b>Installation Area</b>	Outdoor				
<b>Dimensions and weight</b>					
<b>Dimensions (LxWxH)</b>	Cabinet (1.2m x 1m x 1.8m) (4ft x 3.2 ft x 6 ft)	20 ft container (6.0m x 2.4m x 2.9m) (20ft x 8 ft x 9.6ft)	40 ft container (12.0m x 2.4m x 2.9m) (40ft x 8 ft x 9.6ft)		
<b>Approx. Weight</b>	400 kg (882 lb)	11,000 kg (24,250 lb)	16,000 kg (35,273 lb)	16,500 kg (36,376 lb)	18,000 kg (39,683 lb)
<b>Standards &amp; Regulations</b>					
<b>Compliance</b>	CE, ISO 22734-1 / NFPA 2-2016 & NFPA 70				
<b>Other Characteristics</b>					
<b>Duty Cycle</b>	100% (24/7)				
<b>Start-up Time (from Stand-by)</b>	< 1 sec				
<b>Cold Start Time</b>	< 5 min				
<b>Nitrogen Supply System</b>	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)				
<b>Instrumentation air System</b>	Consumption 8 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)				

Included	Additional Options
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)	



Product Catalogue	
ELSN	
<b>Main Characteristics</b>	
Electrolysis Type	PEM ( Proton exchange membrane, caustic free)
Number of Cell Stacks	1
<b>Hydrogen Gas Production</b>	
Max. Nominal Hydrogen Flow	5 Nm <sup>3</sup> /h (2.9 scfm)
Hydrogen Flow Range	10 -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%
Stack Power	25 kW
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>
Installed Power (BoP + Stack)	38 kVA
AC Power Consumption (BoP + Stack)	5.4 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>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)	Cabinet (1.2m x 1m x 1.8m) (4ft x 3.2 ft x 6 ft)
Approx. Weight	400 kg (882 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 8 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)

Included	Additional Options
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)	



Product Catalogue	
EL30N	
<b>Main Characteristics</b>	
Electrolysis Type	PEM ( Proton exchange membrane, caustic free)
Number of Cell Stacks	1
<b>Hydrogen Gas Production</b>	
Max. Nominal Hydrogen Flow	30 Nm <sup>3</sup> /h (17.7 scfm)
Hydrogen Flow Range	10 -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%
Stack Power	140 kW
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>
Installed Power (BoP + Stack)	213 kVA
AC Power Consumption (BoP + Stack)	5.3 kWh/Nm <sup>3</sup> H <sub>2</sub>
<b>Tap Feed Water</b>	
Consumption	< 34 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	11,000 kg (24,250 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 8 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)

Included	Additional Options
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)	



Product Catalogue	
EL90N	
<b>Main Characteristics</b>	
Electrolysis Type	PEM ( Proton exchange membrane, caustic free)
Number of Cell Stacks	3
<b>Hydrogen Gas Production</b>	
Max. Nominal Hydrogen Flow	90 Nm <sup>3</sup> /h (53 scfm)
Hydrogen Flow Range	10 -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%
Stack Power	3 x 140 kW
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>
Installed Power (BoP + Stack)	639 kVA
AC Power Consumption (BoP + Stack)	5.3 kWh/Nm <sup>3</sup> H <sub>2</sub>
<b>Tap Feed Water</b>	
Consumption	< 100 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 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)	40 ft container (12.0m x 2.4m x 2.9m) (40ft x 8 ft x 9.6ft)
Approx. Weight	16,000 kg (35,273 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 8 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)

Included	Additional Options
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)	



Product Catalogue	
<b>EL120N</b>	
<b>Main Characteristics</b>	
Electrolysis Type	PEM ( Proton exchange membrane, caustic free)
Number of Cell Stacks	4
<b>Hydrogen Gas Production</b>	
Max. Nominal Hydrogen Flow	120 Nm <sup>3</sup> /h (70.6 scfm)
Hydrogen Flow Range	10 -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%
Stack Power	4 x 140 kW
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>
Installed Power (BoP + Stack)	853 kVA
AC Power Consumption (BoP + Stack)	5.3 kWh/Nm <sup>3</sup> H <sub>2</sub>
<b>Tap Feed Water</b>	
Consumption	< 135 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 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)	40 ft container (12.0m x 2.4m x 2.9m) (40ft x 8 ft x 9.6ft)
Approx. Weight	16,500 kg (36,376 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 8 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)

Included	Additional Options
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)	



Product Catalogue	
EL200N	
<b>Main Characteristics</b>	
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
<b>Hydrogen Gas Production</b>	
Max. Nominal Hydrogen Flow	200 Nm <sup>3</sup> /h (124.6 scfm)
Hydrogen Flow Range	10 -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%
Stack Power	1 MW
Stack Consumption	4.7 kWh/Nm <sup>3</sup> H <sub>2</sub>
Installed Power (BoP + Stack)	1,364 kVA
AC Power Consumption (BoP + Stack)	5.1 kWh/Nm <sup>3</sup> H <sub>2</sub>
<b>Tap Feed Water</b>	
Consumption	224 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 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)	40 ft container (12.0m x 2.4m x 2.9m) (40ft x 8 ft x 9.6ft)
Approx. Weight	18,000 kg (36,683 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 8 Nm <sup>3</sup> /h at 10 barg (to be supplied by the customer)

Included	Additional Options
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)	