Main Characteristics	EL0.5N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	0.5 Nm3/h (1.08 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	1-20 barg (14.5-290 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
Voltage	400 VAC ± 10% (3Ph+N) / 480 VAC ± 10% (3Ph+N)
Frequency	50 Hz ± 5% / 60 Hz ± 3%
Power (BoP + Stack)	3.2 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	6.5 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	< 1 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
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 oC to +45 oC (+41 oF to +113 oF)
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	750 kg (1,653 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

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)
Uninterruptible Power Supply (UPS)	Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)
Heat Management (No Cooling Water is Needed)	
Virtual Private Network (VPN) connection	

Main Characteristics	EL1N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	1 Nm3/h (2.15 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	1-20 barg (14.5-290 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
Voltage	400 VAC ± 10% (3Ph+N) / 480 VAC ± 10% (3Ph+N)
Frequency	50 Hz ± 5% / 60 Hz ± 3%
Power (BoP + Stack)	6.3 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	6.3 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	< 2 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
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 oC to +45 oC (+41 oF to +113 oF)
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	750 kg (1,653 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

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)
Uninterruptible Power Supply (UPS)	Hydrogen Mass Flow Measure & Purity Measure (H2O & O2
Heat Management (No Cooling Water is Needed)	
Virtual Private Network (VPN) connection	

Main Characteristics	EL2N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	2
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	2 Nm3/h (4.31 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	1-20 barg (14.5-290 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
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/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	6.0 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	< 4 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
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 oC to +45 oC (+41 oF to +113 oF)
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

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2**
Heat Management (No Cooling Water is Needed)	
Virtual Private Network (VPN) connection	

Main Characteristics	EL3N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	3
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	3 Nm3/h (6.47 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	1-20 barg (14.5-290 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.7 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	< 6 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
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 oC to +45 oC (+41 oF to +113 oF)
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	850 kg (1,874 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

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2**
Heat Management (No Cooling Water is Needed)	
Virtual Private Network (VPN) connection	

Main Characteristics	EL5N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	5.2 Nm3/h (11.22 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.5 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	< 10.4 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
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 oC to +45 oC (+41 oF to +113 oF)
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	950 kg (2,094 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
Nitrogen System	For each purge, consumption is <0.1 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 4 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**

Main Characteristics	EL10N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	10.05 Nm3/h (21.68 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	53.2 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.3 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	< 20.1 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
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 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	10 ft container (3.0m x 2.4m x 2.9m) (9.8ft x 7.9ft x 9.5ft)
Approx. Weight	5,000 kg (11,023 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
Nitrogen System	For each purge, consumption is <0.1 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 4 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**

Main Characteristics	EL20N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	20 Nm3/h (43 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	106.6 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.2 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	< 41 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
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 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	20 ft container (6.0m x 2.4m x 2.9m) (19.7ft x 7.9ft x 9.5ft)
Approx. Weight	11,000 kg (24,251 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**

Main Characteristics	EL30N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	31.7 Nm3/h (68.40 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	164.8 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.2 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	45.3 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Control System	
PLC	Fully automated and unattended with 15" color touch screen
Communication	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions	
Ambient Temperature Range	+5 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	20 ft container (6.0m x 2.4m x 2.9m) (19.7ft x 7.9ft x 9.5ft)
Approx. Weight	11,000 kg (24,251 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**

Main Characteristics	EL60N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	2
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	63.3 Nm3/h (136.58 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.2 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	90.4 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Control System	
PLC	Fully automated and unattended with 15" color touch screen
Communication	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions	
Ambient Temperature Range	+5 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	20 ft container (6.0m x 2.4m x 2.9m) (19.7ft x 7.9ft x 9.5ft)
Approx. Weight	13,000 kg (28,860 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**

Main Characteristics	EL100N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	105.5 Nm3/h (227.6 kg/day)
Hydrogen Flow Range	10 - 100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	538 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.1 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	150.7 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Control System	
PLC	Fully automated and unattended with 15" color touch screen
Communication	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions	
Ambient Temperature Range	+5 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to +95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)
Approx. Weight	18,000 kg (39,683 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**
	Heat Recovery System
	Medium Voltage Connection

Main Characteristics	EL200N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	207 Nm3/h (446 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	1,055.7 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.1 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	295.7 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Control System	
PLC	Fully automated and unattended with 15" color touch screen
Communication	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions	
Ambient Temperature Range	+5 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)
Approx. Weight	18,000 kg (39,683 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**
	Heat Recovery System
	Medium Voltage Connection

Main Characteristics	EL400N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	2
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	414 Nm3/h (893 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	2,111.4 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.1 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	591.4 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Control System	
PLC	Fully automated and unattended with 15" color touch screen
Communication	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions	
Ambient Temperature Range	+5 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)
Approx. Weight	20,000 kg (44,092 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

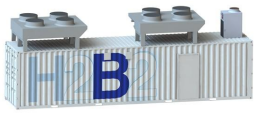
(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**
	Heat Recovery System
	Medium Voltage Connection

Main Characteristics	EL460N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	3
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	477 Nm3/h (1,028 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	2,392 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.1 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	636 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Control System	
PLC	Fully automated and unattended with 15" color touch screen
Communication	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions	
Ambient Temperature Range	+5 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	2 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)]
Approx. Weight	40,000 kg (88,000 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)**
Uninterruptible Power Supply (UPS)	**Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)**
Heat Management (No Cooling Water is Needed)	**Instrumentation Air System**
Virtual Private Network (VPN) connection	**Nitrogen System**
	Heat Recovery System
	Medium Voltage Connection



Main Characteristics	EL580N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	3
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	580 Nm3/h (1,251 kg/day)
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O2; H2O saturated
Hydrogen Purity (after Gas Purification)	99.999%; < 5 ppm O2; < 5 ppm H2O
Electrical Requirements	
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)	2,900 kW
Stack Consumption (*)	4.7 kWh/Nm3 H2
AC Power Consumption (BoP + Stack) (*)	5.1 kWh/Nm3 H2
Feed Water - Tap Water (if Water Treatment Plant is included)	
Consumption	773 L/h
Conductivity	< 2,000 uS/cm (T 25 oC (77 oF))
Pressure	2-6 barg (29-87 psig)
Temperature	+5 oC to +40 oC (+41 oF to +104 oF)
Feed Water - Demi Water (if Water Treatment Plant is not included)	
Consumption	< 1 L/Nm3 H2
Quality	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Control System	
PLC	Fully automated and unattended with 15" color touch screen
Communication	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions	
Ambient Temperature Range	+5 oC to +45 oC (+41 oF to +113 oF)
Humidity	0 to + 95% (non-condensing)
Air Ventilation	Available from a non-hazardous area
Installation Area	Indoor/Outdoor
Dimensions and weight	
Dimensions (LxWxH)	2 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)]
Approx. Weight	45,000 kg (99,207 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
Nitrogen System	For each purge, consumption is <0.2 kg at 3 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm3/h at 10 barg (to be supplied by the customer)

(*) Electrical consumption at maximum current density and operating pressure at the stack; thus is reduced if those are not required.

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)
Uninterruptible Power Supply (UPS)	Hydrogen Mass Flow Measure & Purity Measure (H2O & O2 Sensors)
Heat Management (No Cooling Water is Needed)	Instrumentation Air System
Virtual Private Network (VPN) connection	Nitrogen System
	Heat Recovery System
	Medium Voltage Connection