



Main Characteristics	
EL10N	
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	0.957 kg/h
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated
Hydrogen Purity (after Gas Purification)	As per ISO 14687
Electrical Requirements	
Voltage	3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N)
Frequency	50 Hz ± 5% / 60 Hz ± 3%
Total installed power	68 kW
Stack Consumption (*)	≤ 54.2 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	≤ 68.2 kWh/kg (65.3 kW Nominal Power @ BoL, 100% load)
Feed Water - Demi Water (optional Water Treatment Plant is not included)	
Consumption	< 1 L/Nm ³ H ₂
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Pressure	2-3 barg (29-43 psig)
Temperature	+5 °C to +40 °C (+41 °F to +104 °F)
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)	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 2-2020 & NFPA 70
Other Characteristics	
Duty Cycle	100% (24/7)
Start-up Time (from Stand-by)	< 30 sec
Cold Start Time	< 20 min
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1
(*) This value could be lower, depending on final configuration	
(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ Sensors)
Heat Management (No Cooling Water is Needed)	Instrumentation Air System
Virtual Private Network (VPN) connection	Nitrogen System



Main Characteristics	
Electrolysis Type	EL20N PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	1
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	1.881 kg/h
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated
Hydrogen Purity (after Gas Purification)	As per ISO 14687
Electrical Requirements	
Voltage	3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N)
Frequency	50 Hz ± 5% / 60 Hz ± 3%
Total installed power	122 kW
Stack Consumption (*)	≤ 54.2 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	≤ 62.8 kWh/kg H ₂ (118.1 kW Nominal Power @ BoL, 100% load)
Feed Water - Demi Water (optional Water Treatment Plant is not included)	
Consumption	< 1 L/Nm ³ H ₂
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Pressure	2-3 barg (29-43 psig)
Temperature	+5 °C to +40 °C (+41 °F to +104 °F)
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)	20 ft container (6.0m x 2.4m x 2.9m) (19.7ft x 7.9ft x 9.5ft)
Approx. Weight	6,000 kg (13,227 lb)
Standards & Regulations	
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70
Other Characteristics	
Duty Cycle	100% (24/7)
Start-up Time (from Stand-by)	< 30 sec
Cold Start Time	< 20 min
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1
(*) This value could be lower, depending on final configuration	
(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ 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	2.805 kg/h		
Hydrogen Flow Range	10 -100%		
Operating Pressure	15 - 40 barg (217-580 psig)		
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated		
Hydrogen Purity (after Gas Purification)	As per ISO 14687		
Electrical Requirements			
Voltage	3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N)		
Frequency	50 Hz ± 5% / 60 Hz ± 3%		
Total installed power	183 kW		
Stack Consumption (*)	≤ 54.2 kWh/kg H ₂		
AC Power Consumption (BoP + Stack) (*)	≤ 64.7 kWh/kg H ₂ (181.5 kW Nominal Power @ BoL, 100% load)		
Feed Water - Demi Water (optional Water Treatment Plant is not included)			
Consumption	< 1 L/Nm ³ H ₂		
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb		
Pressure	2-3 barg (29-43 psig)		
Temperature	+5 °C to +40 °C (+41 °F to +104 °F)		
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 °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)	40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)		
Approx. Weight	10,000 kg (22,046 lb)		
Standards & Regulations			
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70		
Other Characteristics			
Duty Cycle	100% (24/7)		
Start-up Time (from Stand-by)	< 30 sec		
Cold Start Time	< 20 min		
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)		
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1		
(*) This value could be lower, depending on final configuration			
(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ 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	5.61 kg/h
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated
Hydrogen Purity (after Gas Purification)	As per ISO 14687
Electrical Requirements	
Voltage	3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N)
Frequency	50 Hz ± 5% / 60 Hz ± 3%
Total installed power	357 kW
Stack Consumption (*)	≤ 54.2 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	≤ 63.7 kWh/kg H ₂ (357.4 kW Nominal Power @ BoL, 100% load)
Feed Water - Demi Water (optional Water Treatment Plant is not included)	
Consumption	< 1 L/Nm ³ H ₂
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Pressure	2-3 barg (29-43 psig)
Temperature	+5 °C to +40 °C (+41 °F to +104 °F)
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 °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)	40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)
Approx. Weight	11,000 kg (24,250 lb)
Standards & Regulations	
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70
Other Characteristics	
Duty Cycle	100% (24/7)
Start-up Time (from Stand-by)	< 30 sec
Cold Start Time	< 20 min
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1
(*) This value could be lower, depending on final configuration	
(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ Sensors)
Heat Management (No Cooling Water is Needed)	Instrumentation Air System
Virtual Private Network (VPN) connection	Nitrogen System



Main Characteristics		EL200N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)	
Number of Cell Stacks	1	
Hydrogen Gas Production		
Max. Nominal Hydrogen Flow	17.8 kg/h	
Hydrogen Flow Range	10 -100%	
Operating Pressure	15 - 40 barg (217-580 psig)	
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated	
Hydrogen Purity (after Gas Purification)	As per ISO 14687	
Electrical Requirements		
Voltage	6.6-24 kV for rectifiers and 3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N) for BoP	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Total installed power	1,340 kW	
Stack Consumption (*)	≤ 54.0 kWh/kg H ₂	
AC Power Consumption (BoP + Stack) (*)	≤ 59.0 kWh/kg H ₂ (1,050.2 kW Nominal Power @ BoL, 100% Load)	
Feed Water - Demi Water (optional Water Treatment Plant is not included)		
Consumption	< 1 L/Nm ³ H ₂	
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb	
Pressure	8-10 barg (116-145 psig)	
Temperature	+5 °C to +35 °C (+41 °F to +95 °F)	
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 °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)	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 2-2020 & NFPA 70	
Other Characteristics		
Duty Cycle	100% (24/7)	
Start-up Time (from Stand-by)	< 30 sec	
Cold Start Time	< 20 min	
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)	
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1	

(*) This value could be lower, depending on final configuration

(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ 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	35.6 kg/h
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated
Hydrogen Purity (after Gas Purification)	As per ISO 14687
Electrical Requirements	
Voltage	6.6-24 kV for rectifiers and 3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N) for BoP
Frequency	50 Hz ± 5% / 60 Hz ± 3%
Total installed power	2,700 kW
Stack Consumption (*)	≤ 54.0 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	≤ 58.6 KWh/kg H ₂ (2,086.2 kW Nominal Power @ BoL, 100% Load)
Feed Water - Demi Water	
Consumption	< 1 L/Nm ³ H ₂
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Pressure	8-10 barg (116-145 psig)
Temperature	+5 °C to +35 °C (+41 °F to +95 °F)
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 °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)	40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)
Approx. Weight	38,000 kg (83,775 lb)
Standards & Regulations	
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70
Other Characteristics	
Duty Cycle	100% (24/7)
Start-up Time (from Stand-by)	< 30 sec
Cold Start Time	< 20 min
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1

(*) This value could be lower, depending on final configuration

(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ 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		EL600N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)	
Number of Cell Stacks	3	
Hydrogen Gas Production		
Max. Nominal Hydrogen Flow	53.4 kg/h	
Hydrogen Flow Range	10 -100%	
Operating Pressure	15 - 40 barg (217-580 psig)	
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated	
Hydrogen Purity (after Gas Purification)	As per ISO 14687	
Electrical Requirements		
Voltage	6.6-24 kV for rectifiers and 3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N) for BoP	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Total installed power	4,000 kW	
Stack Consumption (*)	≤ 54.0 kWh/kg H ₂	
AC Power Consumption (BoP + Stack) (*)	≤ 58.1 kWh/kg H ₂ (3,102.5 kW Nominal Power @ BoL, 100% Load)	
Feed Water - Demi Water (optional Water Treatment Plant is not included)		
Consumption	< 1 L/Nm ³ H ₂	
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb	
Pressure	8-10 barg (116-145 psig)	
Temperature	+5 °C to +35 °C (+41 °F to +95 °F)	
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 °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)	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 2-2020 & NFPA 70	
Other Characteristics		
Duty Cycle	100% (24/7)	
Start-up Time (from Stand-by)	< 30 sec	
Cold Start Time	< 20 min	
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)	
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1	

(*) This value could be lower, depending on final configuration

(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ 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	EL800N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)
Number of Cell Stacks	4
Hydrogen Gas Production	
Max. Nominal Hydrogen Flow	71.2 kg/h
Hydrogen Flow Range	10 -100%
Operating Pressure	15 - 40 barg (217-580 psig)
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated
Hydrogen Purity (after Gas Purification)	As per ISO 14687
Electrical Requirements	
Voltage	6.6-24 kV for rectifiers and 3 x 400 VAC ± 10% (3Ph+N) / 3 x 480 VAC ± 10% (3Ph+N) for BoP
Frequency	50 Hz ± 5% / 60 Hz ± 3%
Total installed power	5,400 kW
Stack Consumption (*)	≤ 54.0 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	≤ 57.8 kWh/kg H ₂ (4,115.4 kW Nominal Power @ BoL, 100% Load)
Feed Water - Demi Water (optional Water Treatment Plant is not included)	
Consumption	< 1 L/Nm ³ H ₂
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb
Pressure	8-10 barg (116-145 psig)
Temperature	+5 °C to +35 °C (+41 °F to +95 °F)
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 °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)	2 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)]
Approx. Weight	48,000 kg (99,207 lb)
Standards & Regulations	
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70
Other Characteristics	
Duty Cycle	100% (24/7)
Start-up Time (from Stand-by)	< 30 sec
Cold Start Time	< 20 min
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1

(*) This value could be lower, depending on final configuration

(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ 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		EL1000N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)	
Number of Cell Stacks	5	
Hydrogen Gas Production		
Max. Nominal Hydrogen Flow	89 kg/h	
Hydrogen Flow Range	10 -100%	
Operating Pressure	15 - 40 barg (217-580 psig)	
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated	
Hydrogen Purity (after Gas Purification)	As per ISO 14687	
Electrical Requirements		
Voltage	6.6-24 kV for rectifiers and 3 x 400 VAC 10% (3Ph+N) / 3 x 480 VAC 10% (3Ph+N) for BoP	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Total installed power	6,700 kW	
Stack Consumption (*)	≤ 54.0 kWh/kg H ₂	
AC Power Consumption (BoP + Stack) (*)	≤ 57.7 kWh/kg H ₂ (5,135.3 kW Nominal Power @ BoL, 100% load)	
Feed Water - Demi Water (optional Water Treatment Plant is not included)		
Consumption	< 1 L/Nm ³ H ₂	
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb	
Pressure	8-10 barg (116-145 psig)	
Temperature	+5 °C to +35 °C (+41 °F to +95 °F)	
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 °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)	2 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)] + 2 x [20 ft container (6.0m x 2.4m x 2.9m) (19.7ft x 7.9ft x 9.5ft)]	
Approx. Weight	58,000 kg (127,868 lb)	
Standards & Regulations		
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70	
Other Characteristics		
Duty Cycle	100% (24/7)	
Start-up Time (from Stand-by)	< 30 sec	
Cold Start Time	< 20 min	
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)	
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1	
(*) This value could be lower, depending on final configuration		
(**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ 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		EL2000N
Electrolysis Type	PEM (Proton exchange membrane, caustic free)	
Number of Cell Stacks	10	
Hydrogen Gas Production		
Max. Nominal Hydrogen Flow	178 kg/h	
Hydrogen Flow Range	5 -100%	
Operating Pressure	15 - 40 barg (217-580 psig)	
Hydrogen Purity (before Gas Purification)	> 99.9% ; < 25 ppm O ₂ ; H ₂ O saturated	
Hydrogen Purity (after Gas Purification)	As per ISO 14687	
Electrical Requirements		
Voltage	6.6-24 kV for rectifiers and 3 x 400 VAC 10% (3Ph+N) / 3 x 480 VAC 10% (3Ph+N) for BoP	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Total Installed Power	14,000 kW	
Stack Consumption (*)	≤ 54.0 kWh/kg H ₂	
AC Power Consumption (BoP + Stack) (*)	≤ 56.9 kWh/kg H ₂ (10,128.2 kW Nominal Power @ BoL, 100% load)	
Feed Water - Demi Water (optional Water Treatment Plant is not included)		
Consumption	< 1 L/Nm ³ H ₂	
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb	
Pressure	8-10 barg (116-145 psig)	
Temperature	+5 °C to +35 °C (+41 °F to +95 °F)	
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 °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)	5 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)] + 2 x [20 ft container (6.0m x 2.4m x 2.9m) (19.7ft x 7.9ft x 9.5 ft)]	
Approx. Weight	115,000 kg	
Standards & Regulations		
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70	
Other Characteristics		
Duty Cycle	100% (24/7)	
Start-up Time (from Stand-by)	< 30 sec	
Cold Start Time	< 20 min	
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)	
Instrumentation Air System	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1	

(*) This value could be lower, depending on final configuration
 (**) GreenH can accommodate to local standards if 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 (H ₂ O & O ₂ Sensors)
Heat Management (No Cooling Water is Needed)	Instrumentation Air System
Virtual Private Network (VPN) connection	Nitrogen System
	Heat Recovery System
	Medium Voltage Connection