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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 (*)	\leq 54.2 kWh/kg H $_{2}$	
AC Power Consumption (BoP + Stack) (*)	\leq 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	







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Main Characteristics	EL20N	
Electrolysis Type	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 (*)	\leq 54.2 kWh/kg H ₂	
AC Power Consumption (BoP + Stack) (*)	\leq 62.8 kWh/kg H ₂ (118.1 kW Nominal Power @ BoL, 100% load)	
Feed Water - Demi Water (optional Water Treatmen		
Consumption	<1 L/Nm ³ H ₂	
-		
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb 2-3 barg (29-43 psig)	
Pressure		
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	







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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 × 400 VAC ± 10% (3Ph+N) / 3 × 480 VAC ± 10% (3Ph+N)	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Total installed power	183 kW	
Stack Consumption (*)	\leq 54.2 kWh/kg H ₂	
AC Power Consumption (BoP + Stack) (*)	\leq 64.7 kWh/kg H ₂ (181.5 kW Nominal Power @ BoL, 100% load)	
Feed Water - Demi Water (optional Water Treatmen		
Consumption	< 1 L/Nm ³ H ₂	
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb	
Pressure	2-3 barg (29-43 psig)	
	+5 °C to +40 °C (+41 °F to +104 °F)	
Temperature	+5 C to +40 C (+41 F to +104 F)	
Control System	Fully subconstant and us other ded with 150 solar teach some	
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 Nm³/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	Additional Outions	
Included Hydrogen Cooling System	Additional Options Oxygen Processing System	
Emergency Shutdown System Overpressure Relief System	Hydrogen Purification System (SAE J2719 September 2011) Water Treatment System	
Redundancy on Critical Safety Parameters	Extreme Environmental Conditions Package (Low and High Tem	
Uninterruptible Power Supply (UPS) Heat Management (No Cooling Water is Needed)	Hydrogen Mass Flow Measure & Purity Measure (H ₂ O & O ₂ Senso Instrumentation Air System	
Virtual Private Network (VPN) connection		
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 × 400 VAC ± 10% (3Ph+N) / 3 × 480 VAC ± 10% (3Ph+N)		
Frequency	50 Hz ± 5% / 60 Hz ± 3%		
Total installed power	357 kW		
Stack Consumption (*)	\leq 54.2 kWh/kg H ₂		
AC Power Consumption (BoP + Stack) (*)	\leq 63.7 kWh/kg H ₂ (357.4 kW Nominal Power @ BoL, 100% load)		
Feed Water – Demi Water (optional Water Treatment			
Consumption	< 1 L/Nm ³ H ₂		
Conductivity Pressure	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb 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		



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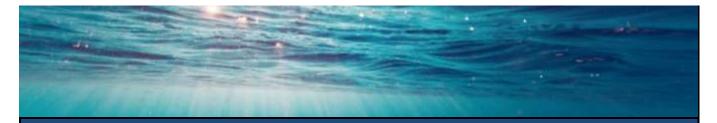
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Main Characteristics	EL200N	
Electrolysis Type	PEM	(Proton exchange membrane, caustic free)
Number of Cell Stacks		1
Hydrogen Gas Production		
Max. Nominal Hydrogen Flow		17.8 kg/h
Hydrogen Flow Range		10 -100%
Operating Pressure		15 - 40 barg (217-580 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 (*)		\leq 54.0 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	< 59.0 kWb/kc	H ₂ (1,050.2 kW Nominal Power @ BoL, 100% Load)
Feed Water - Demi Water (optional Water Treatment		
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		+5 C (0 +55 C (+41 P (0 +95 P)
PLC	Eully gutom	ated and unattended with 15" color touch screen
Communication	· · · · · · · · · · · · · · · · · · ·	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions		Modbus TCP/TP of Profinet (RJ45 port)
	Γ	
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 Start-up Time (from Stand-by)	100% (24/7)	
Cold Start Time	< 30 sec	
	< 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 Nm³/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		Addisional Outions
		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



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	Electrolysis



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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 (*)		\leq 54.0 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	< 58.6 KWh/ke	g H ₂ (2,086.2 kW Nominal Power @ BoL, 100% Load)
Feed Water - Demi Water		
Consumption		$< 1 L/Nm^3 H_2$
Conductivity	3	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		+5 C (0 +35 C (+41 F (0 +95 F)
PLC	Fully autom	nated and unattended with 15" color touch screen
Communication		Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions		Modbus TCP/IP of Profinet (RJ45 port)
Ambient Temperature Range		+5 °C to +45 °C (+41 °F to +113 °F)
Humidity	0 to + 95% (non-condensing)	
Air Ventilation Installation Area	Available from a non-hazardous area	
Dimensions and weight	Indoor/Outdoor	
Dimensions (LxWxH)	40 ft contra	iner (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)
Approx. Weight	40 11 conta	38,000 kg (83,775 lb)
Standards & Regulations		38,000 kg (83,775 lb)
Compliance (**)		
Other Characteristics		, ISO 22734-1 / NFPA 2-2020 & NFPA 70
Duty Cycle		100% (24/Z)
Start-up Time (from Stand-by)	100% (24/7)	
Cold Start Time	< 30 sec	
Nitrogen System	< 20 min	
Instrumentation Air System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)	
(*) This value could be lower, depending on final configuration	Consumption 7 Nm³/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
		Hydrogen Processing System Hydrogen Purification System (SAE J2719 September 2011)
Emergency Shutdown System Overpressure Relief System		Water Treatment System
		Extreme Environmental Conditions Package (Low and High Temp)
Redundancy on Critical Safety Parameters 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
Heat Management (No Cooling Water is Needed) Virtual Private Network (VPN) connection		Nitrogen System
VIItual Private Network (VPN) connection		Heat Recovery System
		Medium Voltage Connection
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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	0.0 24 KV for rectillers and	50 Hz ± 5% / 60 Hz ± 3%
Total installed power		4,000 kW
Stack Consumption (*)		≤ 54.0 kWh/kg H ₂
	< 50 4 HML/	
AC Power Consumption (BoP + Stack) (*)	-	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 autom	ated and unattended with 15" color touch screen
Communication	1	Modbus TCP/IP or Profinet (RJ45 port)
Environmental Conditions		
Ambient Temperature Range		+5 °C to +45 °C (+41 °F to +113 °F)
Humidity	+5 C t0 +45 C (+41 F t0 +113 F) 0 to + 95% (non-condensing)	
Air Ventilation	Available from a non-hazardous area	
Installation Area	Indoor/Outdoor	
Dimensions and weight		maconjouración
Dimensions (LxWxH)	2 x [40 ft cont	giner (12 0m x 2 4m x 2 9m) (39 4ft x 7 9ft x 9 5ft)]
Approx. Weight	2 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)] 45,000 kg (99,207 lb)	
Standards & Regulations		40,000 kg (00,201 kg)
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70	
Other Characteristics	L CE, ISO 22/34-1/ NFPA 2-2020 & NFPA /0	
Duty Cycle	100% (24/7)	
Start-up Time (from Stand-by)	< 30 sec	
Cold Start Time	< 30 sec	
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
lydrogen Cooling System		Oxygen Processing System
nergency Shutdown System		Hydrogen Purification System (SAE J2719 September 2011)
verpressure Relief System		Water Treatment System
edundancy 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



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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 \pm 10% (3Ph+N) / 3 x 480 VAC \pm 10% (3Ph+N) for BoP	
Frequency	50 Hz ± 5% / 60 Hz ± 3%	
Total installed power	5,400 kW	
Stack Consumption (*)	\leq 54.0 kWh/kg H $_2$	
AC Power Consumption (BoP + Stack) (*)	\leq 57.8 kWh/kg H ₂ (4,115.4 kW Nominal Power @ BoL, 100% Load)	
Feed Water - Demi Water (optional Water Treatment		
Consumption	< 1 L/Nm ³ H ₂	
Conductivity	> 10 MΩcm (< 0.1 uS/cm); TOC < 30 ppb	
Pressure	8-10 barg (116-145 psig)	
	+5 °C to +35 °C (+41 °F to +95 °F)	
Temperature Control System	+5 C (0 +35 C (+41 F (0 +35 F)	
Control System PLC	Fully automated and unattended with 15" color touch screen	
Communication	Fully automated and unattended with 15" color touch screen Modbus TCP/IP or Profinet (RJ45 port)	
Environmental Conditions		
Ambient Temperature Range	+5 °C to +45 °C (+41 °F to +113 °F)	
Humidity Air Ventilation	0 to + 95% (non-condensing) Available from a non-hazardous area	
Installation Area	Indoor/Outdoor	
Dimensions and weight		
Dimensions (LxWxH)		
Approx. Weight	2 x [40 ft container (12.0m x 2.4m x 2.9m) (39.4ft x 7.9ft x 9.5ft)] 48,000 kg (99,207 lb)	
Standards & Regulations	48,000 kg (99,207 lb)	
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	< 20 min For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)	
	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1	
Instrumentation Air System	Consumption 7 win /i at to barg (to be supplied by the castomer) class v as per 150 8575.1	
(*) 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 Hydrogen Purification System (SAE J2719 September 2011)	
Emergency Shutdown System		
Overpressure Relief System Redundancy on Critical Safety Parameters	Water Treatment System 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	
VIEdal Private Network (VPN) connection	Heat Decovery System	

Heat Recovery System Medium Voltage Connection



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	Electrolysis



Electrolysis		
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 an	d 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 (*)		\leq 54.0 kWh/kg H ₂
AC Power Consumption (BoP + Stack) (*)	< 57.7 kWh/ko	H ₂ (5,135.3 kW Nominal Power @ BoL, 100% load)
Feed Water - Demi Water (optional Water Treatment		,,
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 autom	ated 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	
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
mergency Shutdown System		Hydrogen Purification System (SAE J2719 September 2011)
rerpressure 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



GreenH	GreenH
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 (*)	\leq 54.0 kWh/kg H $_{ m 2}$
AC Power Consumption (BoP + Stack) (*)	\leq 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	
	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)
Dimensions (LxWxH)	(19.7ft × 7.9ft × 9.5 ft)]
Approx. Weight	115,000 kg
Standards & Regulations	
Compliance (**)	CE, ISO 22734-1 / NFPA 2-2020 & NFPA 70
Other Characteristics	100% (24/7)
Duty Cycle Start-up Time (from Stand-by)	100% (24/7) < 30 sec
Cold Start Time	< 30 sec
Nitrogen System	For each purge, consumption is <0.2 kg at >1 barg (to be supplied by the customer)
· · · ·	Consumption 7 Nm ³ /h at 10 barg (to be supplied by the customer) Class V as per ISO 8573.1
Instrumentation Air System	Consumption 7 Nm /n at 10 barg (to be supplied by the castomer) class V as per 150 8575.1
(*) 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