



POWERED FOR THE FUTURE

Hydrogen is the fuel of the future

Introducing ET Energies, a pioneering company dedicated to revolutionizing hydrogen production through cutting-edge PEM electrolyzer stacks. Our PEM electrolyzer stacks are specifically engineered for high efficiency and pressure, catering to niche markets seeking a compact yet powerful solution. Traditionally, smaller electrolyzer stacks have posed challenges with their cost per kilowatt ratio, limiting their adoption in various industries. However, ET Energies has successfully patented ground-breaking technology that addresses this issue head-on. By focusing on cost optimization without compromising on performance, we have unlocked the potential to make hydrogen production economically viable for small to medium-sized markets.

STACK SPECIFICATIONS

At ET Energies LLC our vision is to pave the way for a cleaner and more sustainable hydrogen future, where hydrogen becomes the gold standard for achieving ambitious energy transformation goals. With our advanced PEM electrolyzers, we strive to empower industries with the ability to generate hydrogen on-site easily and affordably. At ET Energies, we are committed to making hydrogen synthesis readily available, playing a pivotal role in fostering a greener, more sustainable world. Join us on this transformative journey towards a brighter, hydrogen-powered future.

STACK PARAMETER	UNIT	ET-50.OK	ET-100.OK
Power and electrical specifications	kW	50 ⁽¹⁾	100 ⁽¹⁾
Voltage	VDC	70 ~ 115 ⁽²⁾	140 ~ 230 ⁽²⁾
Current	A	100 ~ 600	
Power quality		5% peak – peak, min 300 Hz	
Ramp rate	A/s	<30	
Peak power ⁽³⁾	kW	63 ⁽³⁾	126 ⁽³⁾
Connectors	M14	4 (2x3 per terminal)	4 (2x3 per terminal)
Mechanical specifications			
Stack weight	Kg	139	253
Dimensions (W×H×L)	mm	250×250×403	250×250×735
Oxygen discharge pressure ⁽⁴⁾	barg	35 ⁽⁴⁾	
Hydrogen discharge pressure	barg	35	
Water Supply		ISO 3696 grade 1 (Ultrapure water)	
Anode water feed ⁽⁵⁾	L/min	20 ~ 40	40 ~ 80
Minimum quality, process ⁽⁶⁾	MΩ·cm (μS/cm)	10 (0.1)	
Recommended quality, process ⁽⁷⁾	MΩ·cm (μS/cm)	18 (0.056)	
Hydrogen Production			
Flow Rate	NLPM (Nm ³ /h)	0 – 200 (0 - 12)	0 – 400 (0 - 24)
	Kg/day	0 - 24	0 - 48
Oxygen Production			
Flow Rate	NLPM (Nm ³ /h)	0 – 100 (0 - 6)	0 – 200 (0 - 12)
	Kg/day	0 - 192	0 - 384
PEM Stack Specs			
Temperature range	°C	25 - 80	
Recommended dT at anode	°C	<6	
Efficiency	%	>82% (HHV)	
Max heat dissipation ⁽⁸⁾	kW	<7	<14
MTBF	hrs	>80000	
Notes		*Subject to change without notice	

- Nominal power rating before EoL and 25°C.
- Voltage at specified current is dependent on temperature.
- Peak power rating is only allowed for a short duration with a temperature < 70°C and voltage lower than 2.1v/cell.
- Intended for 5 bar(g), but can safely sustain rated pressure on Oxygen side.
- dP at given flow is less than 7 bar(g).
- ASTM D1193 Type I type deionized water is the minimum quality allowed but may cause rapid degradation of the stack.
- Ultrapure water, ISO 3696 grade 1.
- During peak power operation

