

EH31 - Fuel Cell Stack

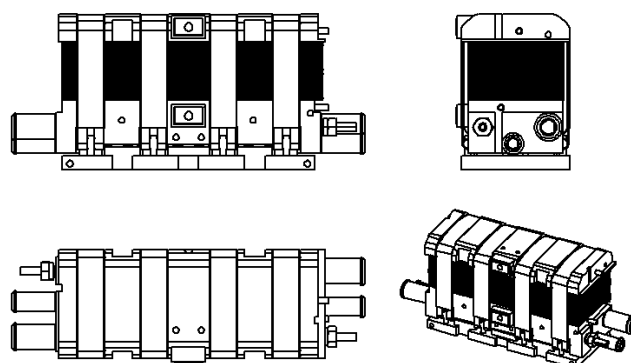
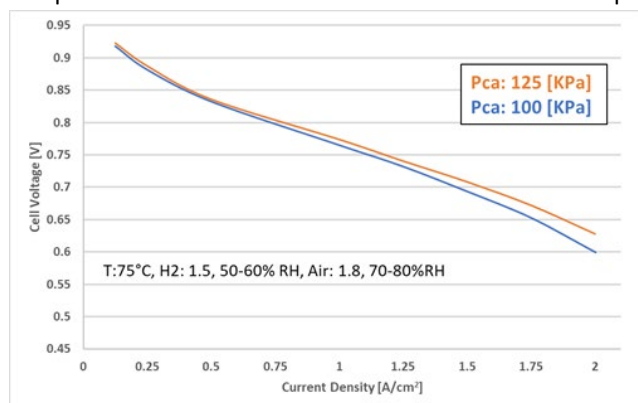
Electrical Specs	EH31 – 1kW	EH31 – 2kW	EH31 – 3kW
Nominal Power [kWe]	1.0	2.0	3.0
Peak Power [kWe]	1.1	2.2	3.3
Current Range [A]	0 – 180		
Voltage Range [V]	6 – 13	11 – 25	17 – 37
Mechanical Specs			
Dimensions [mm] <i>(with manifolds and connection ports)</i> ¹	280 x 90 x 98	280 x 90 x 110	280 x 90 x 130
Weight [kg] (with manifolds and connection ports)	~ 4.0	~ 5.5	~ 7.5

Operating Conditions - Cathode side	
Quality	Filtered, no impurities
Inlet Temp. [°C]	65 – 70
Outlet Temp. [°C]	76 – 80 (85 short run)
RH [%] – No condensation	35 – 80
Stoichiometry [λ]	1.5 – 2.0
Pressure level [kPa g]	< 150
Pressure drop [kPa] <i>(@ 0.6V operation)</i>	< 60

Operating Conditions - Anode side	
Quality	>99.995 (SAE J2719 or ISO 14687:2019 grade D)
Inlet Temp. [°C]	65 – 70
RH [%] – No condensation	< 40
Stoichiometry [λ]	1.2 – 1.8
Pressure level [kPa g]	< 150
Pressure drop [kPa] <i>(@ 0.6V operation)</i>	< 25

Operating Conditions - Coolant side			
Quality	DI water, DI + anti-freeze		
Inlet Temp. [°C]	65 – 70		
ΔT [°C]	6 – 8		
Flow rate [l/min]	3.5 (max)	7.5 (max)	12.0 (max)
Pressure drop [kPa]	< 60		
<i>Maximum dP between Anode/Cathode [kPa]</i>	<i>30</i>		

Example of Performance Curves – Normalised per Cell



- 1 Stacks delivered with integrated gas manifolds
- Performance curves derived using standard MEA from the market
 - Values achieved at EH Group test conditions at beginning of life
 - Addition of customised CVM is possible

- Connection port of Hydrogen side: Swagelok fitting
- Connection port on Cathode side: Hose or Swagelok fitting
- Connection port of Cooling side: Hose or Swagelok fitting
- Please contact us directly for any customisation