1 KW FUEL CELL TRAINING SYSTEM

Make : MMI
Model No. : MMI-FC- 002

For this unit to generate electrical power, a supply of hydrogen fuel is necessary. It is important for any operator to be aware of, understand, and follow all local safety requirements related to the handling of hydrogen and compressed gases. Ensure that your facility conforms to all local regulatory requirements, including building codes and recommendations.

The fuel cell system has built-in safeguards and is designed to shut down automatically if any out- of-range operating condition occurs. Possible situations include low cell voltage, high current, high temperature, low fuel pressure.

PEM fuel cell:
A PEM (Proton Exchange Membrane) fuel cell is a device that converts hydrogen and oxygen into water and electricity.
Reactants:
Reactant is a material used to start a chemical reaction. In the fuel cell the reactants are air and hydrogen by which the electricity will be generated.
Humidification:
Humidity that the fuel cells need for running.
Blower:
Supply air to the fuel cells and meanwhile decrease the temperature in the stack.

MICRO MECH INSTRUMENTS
An ISO 9001:2015 Certified Company
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GSTIN: 33BDDPR7627F1ZI

1 KW FUEL CELL TRAINING SYSTEM

PEM FUEL CELL

Make : Horizon
Model: C-1000

Type of fuel cell	PEM
Number of cells	48
Rated Power	1000W
Performance	28.8V @ 35A
H2 Supply valve voltage	12V
Purging valve voltage	12V
Blower voltage	12V
Reactants	Hydrogen and Air
External temperature	5 to 30ºC
Max. stack temperature	65ºC
H2 Pressure	0.45-0.55bar
Hydrogen purity	≧99.995% dry H2

Humidification	self-humidified
Cooling	Air (integrated cooling fan)
Stack weight (with fan & casing)	4000 grams(±100grams)
Controller weight	400 grams(±30grams)
Dimension	23.3cm x 26.8cm x 12.3cm
Flow rate at max output*	13 L/min
Start up time	≦30S at ambient temperature
Efficiency of stack	40% @ 28.8V
Low voltage shut down	24V
Over current shut down	42A
Over temperature shut down	65℃
External power supply**	13V(±1V),8A




HYDROGEN SUPPLY SYSTEM :

Hydrogen Gas is the simplest, lightest element in the Universe. It is made up of one proton & one electron. It is light as it scatters immediately upward in the air. It is non polluting. It is a energy carrier It is not energy it self, but requires energy to produce it. It has more energy per weight, but less energy per volume than any other fuel. It is normal gaseous state it is colourless, odourless, tasteless & non toxic. We provide packaging of Hydrogen gas in Cylinders, Manifolds and Pallets.

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Model No. : MMI-FC- 002

MASS FLOW CONTROLLER FOR HYDROGEN

Material : SS 316L
Fluid : H2 (Hydrogen)
Flow range : 0.6....30.0 ln/min
Accuracy : ± 1% FS (at calibration conditions)
Calibration certificate : None
Inlet pressure (P1) : 2.0.....5.0 bar (g)
Outlet pressure (P2) : 0.45....0.55 bar (g)
Valve function : Normally Closed
Temperature : 35 deg °C
Inlet & Outlet Connection : None
Output signal : RS-232/Modbus® RTU 0...100%(4...20 mA sourcing)
Setpoint: RS-232/Modbus® RTU 0...100 % (4...20 mA sinking)
Power supply: +15...24 Vd

EL-FLOW® Base model F-201AB Mass Flow Controller

POWER CONDITIONING UNIT

Charge Controller:
A charge controller is used to charge the battery from power generated by solar panels and prevent the battery from overcharging.

Inverter :
Capacity - 1650 VA, Maximum bulb load - 1260W
Technology - Intelligent Square Wave
Adaptive battery charging control (ABCC) ensures longer battery life & higher backup time

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Make : MMI
Model No. : MMI-FC- 002

LOADING SYSTEM

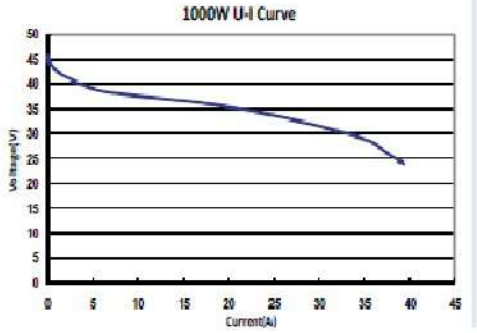
AC LOADING SYSTEM

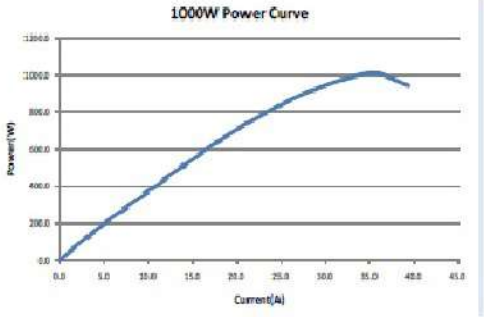
Lamp load provide
300 watts capacity
All lamps are fitted with attractive powder coated panel
voltmeter and Ammeter will provide to find the system volatage and current

DC IOADING SYSTEM

Variable Rheotat Loading System will provide
Voltage Range : 0 - 45 VDC
Loading current : 0 - 40 Amps

FUEL CELL EFFICIENCY





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