

WATER FUEL CELL (Demonstration Unit)

WATER FUEL CELL CHARACTERISTICS
(Demonstration Unit)

1. Fuel: Hydrogen gas, produced by electrolysis of water.
2. Oxidant: Oxygen gas, produced by electrolysis of water.
3. Electrolyte: Aqueous solution of potassium hydroxide (KOH).
4. Operating Temperature: 100°C (212°F).
5. Power Output: 100 Watts (DC).
6. Efficiency: 40%.

WATER FUEL CELL COMPONENTS
(Demonstration Unit)

1. Fuel Cell Stack: Consists of 10 individual fuel cells connected in series.
2. Gas Inlet: For hydrogen and oxygen gases.
3. Gas Outlet: For unreacted gases.
4. Water Inlet: For the electrolyte solution.
5. Water Outlet: For the electrolyte solution.
6. Electrical Output: DC voltage and current.
7. Temperature Control: Cooling system to maintain operating temperature.

WATER FUEL CELL OPERATION
(Demonstration Unit)

1. Hydrogen gas is fed into the fuel cell stack.
2. Oxygen gas is fed into the fuel cell stack.
3. The electrolyte solution is circulated through the fuel cell stack.
4. The fuel cell stack produces DC voltage and current.
5. The temperature of the fuel cell stack is controlled by the cooling system.

WATER FUEL CELL SAFETY
(Demonstration Unit)

1. Hydrogen gas is highly flammable and explosive.
2. Oxygen gas is highly oxidizing and can support combustion.
3. The electrolyte solution is caustic and can cause skin irritation.
4. The operating temperature is high and can cause burns.
5. The electrical output is DC voltage and current, which can be dangerous if mishandled.

WATER FUEL CELL MAINTENANCE
(Demonstration Unit)

1. Check the gas inlet and outlet lines for leaks.
2. Check the electrolyte solution level and concentration.
3. Check the temperature of the fuel cell stack.
4. Check the electrical output voltage and current.

WATER FUEL CELL DISASSEMBLY
(Demonstration Unit)

1. Disconnect the gas inlet and outlet lines.
2. Disconnect the electrolyte solution inlet and outlet lines.
3. Disconnect the electrical output lines.
4. Carefully remove the fuel cell stack from the housing.

WATER FUEL CELL REASSEMBLY
(Demonstration Unit)

1. Carefully place the fuel cell stack back into the housing.
2. Reconnect the gas inlet and outlet lines.
3. Reconnect the electrolyte solution inlet and outlet lines.
4. Reconnect the electrical output lines.

WATER FUEL CELL STORAGE
(Demonstration Unit)

1. Store the fuel cell stack in a dry, cool place.
2. Store the electrolyte solution in a sealed container.
3. Store the gas inlet and outlet lines in a safe place.

WATER FUEL CELL DISPOSAL
(Demonstration Unit)

1. Dispose of the fuel cell stack according to local regulations.
2. Dispose of the electrolyte solution according to local regulations.
3. Dispose of the gas inlet and outlet lines according to local regulations.

WATER FUEL CELL WARRANTY
(Demonstration Unit)

1. The fuel cell stack is warranted for 1000 hours of operation.
2. The electrolyte solution is warranted for 1000 hours of operation.
3. The gas inlet and outlet lines are warranted for 1000 hours of operation.

WATER FUEL CELL CONTACT INFORMATION
(Demonstration Unit)

1. Stanley A. Meyer, Inc.
2. 1000 North 1st Street
3. Tempe, Arizona 85281
4. Phone: (602) 966-1000
5. Fax: (602) 966-1001

WATER FUEL CELL NOTES
(Demonstration Unit)

1. This demonstration unit is for educational purposes only.
2. It is not intended for use in any other application.
3. The manufacturer is not responsible for any damage or injury caused by the use of this unit.

WATER FUEL CELL LEGEND
(Demonstration Unit)

1. Fuel Cell Stack
2. Gas Inlet
3. Gas Outlet
4. Water Inlet
5. Water Outlet
6. Electrical Output
7. Temperature Control
8. Support Gas Assy
9. Side View
10. Bottom View

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