1500
Carbonate Fuel Cell Power Plant
Background

Designed for a range of on-site power applications, FuelCell Energy’s 1500 plant generates 1.4 MW of reliable, efficient, and ultra-clean power. On-site power can maximize a site’s production uptime by avoiding costly outages. The plant’s electrochemical process results in electricity, heat, and water, with the ability to recycle CO₂ into a valuable product. Operating from a compact footprint, the 1500 is ideal for sites with limited space and can combine with more modules to meet higher power demands. The system operates at high temperatures and can use its own heat to increase overall efficiency. The quiet and combustion-free process emits water, not pollutants, supporting a customer’s net zero goals.

System Data

- Power @ Plant Rating: 1400 kW
- Standard Output AC Voltage: 480 V
- Standard Frequency: 60 Hz
- Optional Output AC Voltages: By Request
- Optional Output Frequency: 50 Hz
- Sound Level: 72 dB(A) at 10 Feet

Fuel Consumption

- Natural Gas (at 930 Btu/ft³ LHV): 182 scfm
- Heat Rate (at 930 Btu/ft³): 7,260 Btu/kWh

Water

- Consumption Average: 4.5 gpm
- Discharge Average: 2.25 gpm
- Discharge Peak During WTS Backflush: 15 gpm

Heat

- Exhaust Temperature: 700 +/- 50 °F
- Exhaust Flow: 18,300 lb/h
- Allowable Backpressure: 5 iwc
- Energy for Recovery to 250 °F: 2,216,000 Btu/h
- Energy for Recovery to 120 °F: 3,730,000 Btu/h

Efficiency

- Initial Operation LHV: Approximately 47 +/- 2%

Emissions

- NOx: 0.01 lb/MWh
- SOx: 0.05 g/MWh
- PM10: 0.009 g/MWh
- CO₂: 980 lb/MWh
- CO₂ (with waste heat recovery): 520 - 680 lb/MWh

Specifications subject to change without notice.

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