3000

Carbonate Fuel Cell Power Plant
Background

Designed for a range of on-site power applications, FuelCell Energy’s 3000 plants generate 2.8 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 3000 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.

### Specifications

**System Data**
- Power @ Plant Rating: 2800 kW
- Standard Output AC Voltage: 13,800 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): 364 scfm
- Heat Rate (at 930 Btu/ft³ LHV): 7,260 Btu/kWh

**Water**
- Consumption Average: 9 gpm
- Discharge Average: 4.5 gpm
- Discharge Peak During WTS Backflush: 30 gpm

**Heat**
- Exhaust Temperature: 700 +/- 50 ºF
- Exhaust Flow: 36,600 lb/h
- Allowable Backpressure: 5 iwc
- Energy for Recovery to 250 ºF: 4,433,000 Btu/h
- Energy for Recovery to 120 ºF: 7,460,000 Btu/h

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

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

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