# CR1000 Megawatt Power Package
# Renewable Fuels

## World's largest air-bearing turbine system produces 1000kW of clean, green and reliable power.

- High electrical efficiency over a very wide operating range
- Low maintenance air bearings require no lube oil or coolant
- Ultra-low emissions
- High availability – part load redundancy
- Proven technology with tens of millions of operating hours
- Integrated utility synchronization and protection with a modular design
- 5 and 9 year factory protection plans available
- Remote monitoring and diagnostic capabilities

**CR1000 MicroTurbine**

### Electrical Performance[1]

| | |
|---|---|
| Electrical Power Output | 1000 kW |
| Voltage | 400 to 480 VAC |
| Electrical Service | 3-Phase, 4 wire |
| Frequency | 50/60 Hz, grid connect operation |
| Maximum Output Current | 1,450A RMS @ 400V, grid connect operation |
| | 1,200A RMS @ 480V, grid connect operation |
| Electrical Efficiency LHV | 33% |

### Fuel/Engine Characteristics[1]

| | |
|---|---|
| Digester/Landfill Gas HHV | 13.0 to 22.4 MJ/m$^3$ (350 to 600 BTU/scf) |
| | 20.5 to 32.6 MJ/m$^3$ (550 to 875 BTU/scf) |
| Inlet Pressure | 517-552 kPa gauge (75-80 psig) |
| Fuel Flow HHV | 12,000 MJ/hr (11,400,000 BTU/hr) |
| Net Heat Rate LHV | 10.9 MJ/kWh (10,300 BTU/kWh) |
| $H_2S$ Content | <5,000 ppm |

### Exhaust Characteristics[1]

| | |
|---|---|
| NOx Emissions @ 15% $O_2$[2] | 9 ppmvd (18 mg/m$^3$) |
| NOx/Electrical Output[2] | 0.14 g/bhp-hr (0.4 lb/MWhe) |
| Exhaust Gas Flow | 6.7 kg/s (14.7 lbm/s) |
| Exhaust Gas Temperature | 280°C (535°F) |
| Exhaust Energy | 7,100 MJ/hr (6,750,000 BTU/hr) |

*Reliable power when and where you need it. Clean and simple.*

## Dimensions & Weight[3]

| | |
|---|---|
| Width x Depth x Height | 2.4 x 9.1 x 2.9 m<br>(96 x 360 x 114 in) |
| Weight - Grid Connect Model | 14106 kg (31,100 lbs) |

## Minimum Clearance Requirements[4]

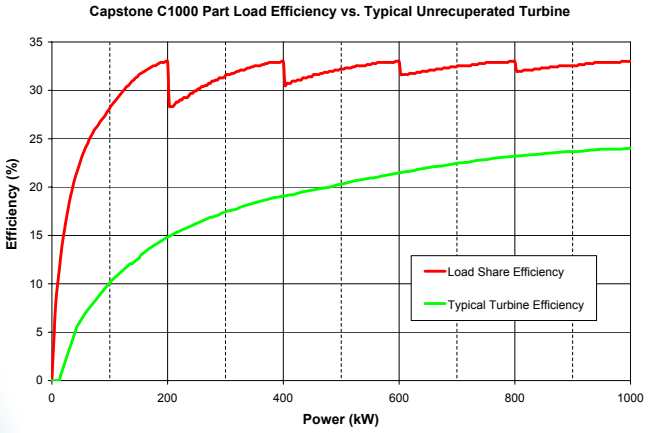
| | |
|---|---|
| Vertical Clearance | 0.6 m (24 in) |
| Horizontal Clearance | |
| Left & Right | 1.5 m (60 in) |
| Front | 1.5 m (60 in) |
| Rear | 1.8 m (72 in) |

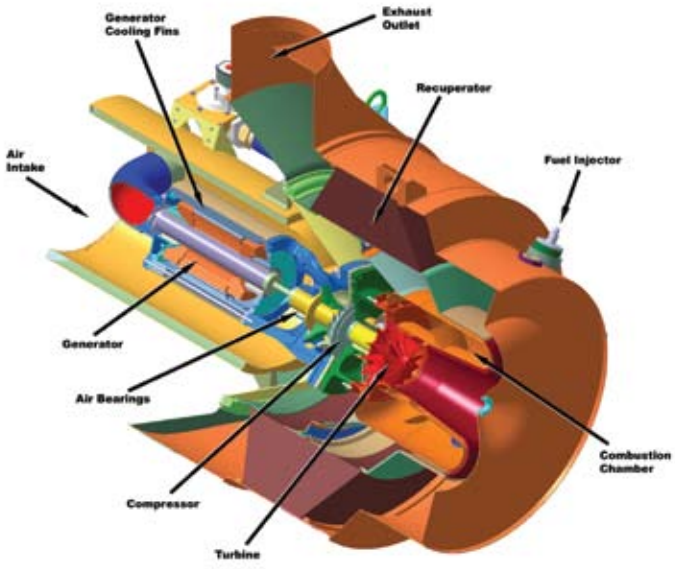
## Sound Levels

| | |
|---|---|
| Acoustic Emissions at Full Load Power | |
| Nominal at 10 m (33 ft) | 65 dBA |

## Planned Certifications

- Will comply with UL 2200 and UL 1741 for raw natural gas and biogas operation under exsisting UL files[5]
- Will comply with IEEE 1547 and will meet statewide utility interconnection requirements for California Rule 21 and the New York State Public Service Commission
- Models will be available with optional equipment for CE marking




**C200 Engine**

(1) Nominal full power performance at ISO conditions: 59˚F, 14.696 psia, 60% RH
(2) For surrogate landfill and digester gases. Please contact Capstone for additional details
(3) Approximate dimensions and weights
(4) Clearance requirements may increase due to local code considerations
(5) All models are planned to be UL Listed or available with optional equipment for CE marking

*Specifications are not warranted and are subject to change without notice.*

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