

# C200 MicroTurbine High-pressure Natural Gas



World's largest air-bearing microturbine produces 200kW of clean, green and reliable power.

- Ultra-low emissions
- One moving part: Minimal maintenance and downtime
- Patented air bearing: No lubricating oil or coolant
- 5 and 9 year Factory Protection Plans available
- Remote monitoring and diagnostic capabilities
- Integrated utility synchronization and protection
- Small, modular design allows for easy, low-cost installation
- Proven technology with tens of millions of run hours and counting
- Internal fuel gas compressor available for low fuel pressure Natural Gas applications



C200 MicroTurbine

## Electrical Performance<sup>(1)</sup>

Electrical Power Output	200 kW
Voltage	400 to 480 VAC
Electrical Service	3-Phase, 4 wire
Frequency	50/60 Hz, grid connect operation 10-60 Hz, stand alone operation
Maximum Output Current	290A RMS @ 400V, grid connect operation 240A RMS @ 480V, grid connect operation 310A RMS, stand alone operation <sup>(2)</sup>
Electrical Efficiency LHV	33%

## Fuel/Engine Characteristics<sup>(1)</sup>

Natural Gas HHV	30.7 to 47.5 MJ/m <sup>3</sup> (825 to 1,275 BTU/scf)
Inlet Pressure <sup>(3)</sup>	517-552 kPa gauge (75-80 psig)
Fuel Flow HHV	2,400 MJ/hr (2,280,000 BTU/hr)
Net Heat Rate LHV	10.9 MJ/kWh (10,300 BTU/kWh)

## Exhaust Characteristics<sup>(1)</sup>

	Standard	2008 CARB Certified
NOx Emissions @ 15% O <sub>2</sub> <sup>(4)</sup>	9 ppmvd (18 mg/m <sup>3</sup> )	4 ppmvd (8 mg/m <sup>3</sup> )
NOx/Electrical Output <sup>(4)</sup>	0.14 g/bhp-hr (0.14 lb/MWhe)	0.05 g/bhp-hr (0.14 lb/MWhe)
Exhaust Gas Flow	1.3 kg/s (2.9 lbm/s)	1.3 kg/s (2.9 lbm/s)
Exhaust Gas Temperature	280°C (535°F)	280°C (535°F)
Exhaust Energy	1,420 MJ/hr (1,350,000 BTU/hr)	1,420 MJ/hr (1,350,000 BTU/hr)

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

## Dimensions & Weight<sup>(5)</sup>

Width x Depth x Height <sup>(6)</sup>	1.7 x 3.7 x 2.5 m (67 x 144 x 98 in)
Weight – Grid Connect Model	2775 kg (6,120 lb)
Weight – Dual Mode Model	3413 kg (7,525 lb)

## Minimum Clearance Requirements<sup>(7)</sup>

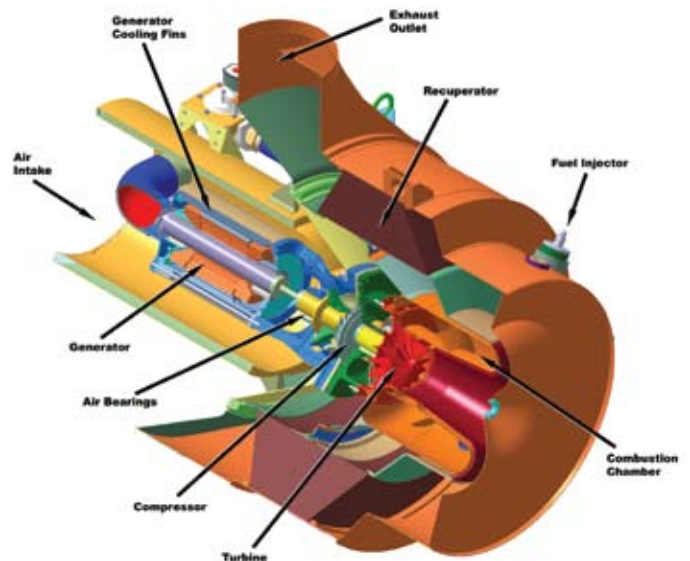
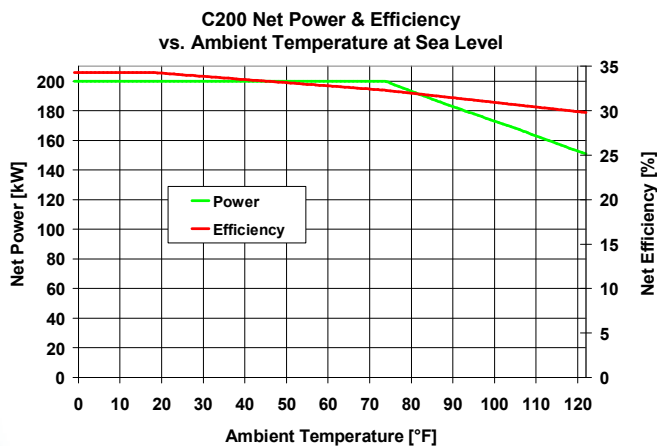
Vertical Clearance	0.6 m (24 in)
Horizontal Clearance	
Left & Right	1.1 m (42 in)
Front	1.1 m (42 in)
Rear	1.8 m (70 in)

## Sound Levels

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

## Planned Certifications

- UL 2200 and UL 1741 to be listed for natural gas operations under existing UL files<sup>(8)</sup>
- 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



- (1) Nominal full power performance at ISO conditions: 59°F, 14.696 psia, 60% RH
  - (2) With linear load
  - (3) Inlet pressure for standard natural gas at 39.4 MJ/Nm<sup>3</sup> (1,000 BTU/scf) (HHV)
  - (4) Emissions for standard natural gas at 39.4 MJ/Nm<sup>3</sup> (1,000 BTU/scf) (HHV)
  - (5) Approximate dimensions and weight
  - (6) Height dimensions are to the roof line. Exhaust outlet extends at least 8 inches above the roof line
  - (7) Clearance requirements may increase due to local code considerations
  - (8) 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.*

