# C800 800 kW Power Package High-pressure Natural Gas



## World's largest air-bearing microturbine produces 800kW 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
- Upgradable to 1 MW with field installation of Capstone 200 kW power module
- Internal fuel gas compressor available for low fuel pressure Natural Gas applications



C800 MicroTurbine

#### **Electrical Performance**(1)

Electrical Power Output 800 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 1,160A RMS @ 400V, grid connect operation

960A RMS @ 480V, grid connect operation 1,240A RMS, stand alone operation<sup>(2)</sup>

**CARB Version** 

Electrical Efficiency LHV 33%

#### Fuel/Engine Characteristics(1)

Natural Gas HHV 30.7 to 47.5 MJ/m³ (825 to 1,275 BTU/scf)

Inlet Pressure<sup>(3)</sup> 517-552 kPa gauge (75-80 psig)
Fuel Flow HHV 9,600 MJ/hr (9,120,000 BTU/hr)
Net Heat Rate LHV 10.9 MJ/kWh (10,300 BTU/kWh)

#### Exhaust Characteristics(1)

 NOx Emissions @ 15% O<sub>2</sub><sup>(4)</sup>
 9 ppmvd (18 mg/m³)
 4 ppmvd (8 mg/m³)

 NOx/Electrical Output<sup>(4)</sup>
 0.14 g/bhp-hr (0.4 lb/MWhe)
 0.05 g/bhp-hr (0.14 lb/MWhe)

 Exhaust Gas Flow
 5.3 kg/s (11.7 lbm/s)
 5.3 kg/s (11.7 lbm/s)

 Exhaust Gas Temperature
 280°C (535°F)
 280°C (535°F)

 Exhaust Energy
 5,680 MJ/hr (5,400,000 BTU/hr)
 5,680 MJ/hr (5,400,000 BTU/hr)

Standard

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

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

Width x Depth x Height 2.4 x 9.1 x 2.9 m

(96 x 360 x 114 in)

Weight - Grid Connect Model 12700 kg (28,000 lbs) Weight - Dual Mode Model 14515 kg (32,000 lbs)

#### Minimum Clearance Requirements<sup>(6)</sup>

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)

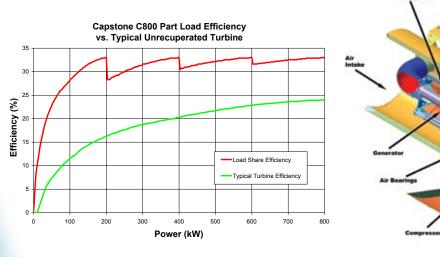
#### **Sound Levels**

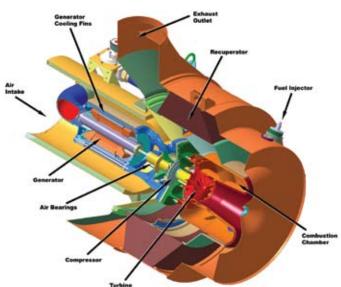
Acoustic Emissions at Full Load Power

Nominal at 10 m (33 ft) 65 dBA

#### **Planned Certifications**

- UL 2200 and UL 1741 for natural gas operation under exsisting UL files<sup>(7)</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





C200 Engine

- Nominal full power performance at ISO conditions: 59°F, 14.696 psia, 60% RH
- With linear load
- Inlet pressure for standard natural gas at 39.4 MJ/Nm<sup>3</sup> (1,000 BTU/scf) (HHV)
- Emissions for standard natural gas at 39.4 MJ/Nm<sup>3</sup> (1,000 BTU/scf) (HHV)
- Approximate dimensions and weights
  Clearance requirements may increase due to local code considerations
  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.

