

# C1000S Megawatt Power Package

High-pressure Natural Gas, ICHP



The Signature Series Microturbine provides ultra-low emissions and reliable electrical/thermal generation from natural gas.

- + Ultra-low emissions
- + One moving part – minimal maintenance and downtime
- + Patented air bearings – no lubricating oil or coolant
- + Integrated utility synchronization – no external switchgear
- + Compact modular design allows for easy, low-cost installation
- + High electrical efficiency over a very wide operating range
- + High availability – part load redundancy
- + Remote monitoring and diagnostic capabilities
- + Proven technology with tens of millions of operating hours
- + Various Factory Protection Plans available



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

|                           |                     |
|---------------------------|---------------------|
| Electrical Power Output   | 1000kW              |
| Voltage                   | 400/480 VAC         |
| Electrical Service        | 3-Phase, 4 Wire Wye |
| Frequency                 | 50/60 Hz            |
| Electrical Efficiency LHV | 33%                 |

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

|                   |   |
|-------------------|---|
| Natural Gas HHV   | 30.7–47.5 MJ/m <sup>3</sup> (825–1,275 BTU/scf) |
| Inlet Pressure    | 517–551 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)                    |

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

|  |  |
|--|--|
| NO <sub>x</sub> Emissions @ 15% O <sub>2</sub> | < 9 ppmvd (18 mg/m <sup>3</sup> )      |
| Exhaust Mass Flow                              | 6.7 kg/s (14.7 lbm/s)                  |
| Exhaust Gas Temperature                        | 280°C (535°F) (Heat Recovery Bypassed) |

## Dimensions & Weight<sup>(2)</sup>

|                                       |  |
|---------------------------------------|--|
| Width x Depth x Height <sup>(3)</sup> | 3.0 x 9.1 x 4.0 m (117 x 360 x 157 in) |
| Weight - Grid Connect Model, dry      | 21,200 kg (46,800 lbs)                 |
| Weight - Dual Mode Model, dry         | 24,750 kg (54,500 lbs)                 |

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

## Minimum Clearance Requirements<sup>(4)</sup>

| Horizontal Clearance |               |
|----------------------|---------------|
| Left                 | 1.5 m (60 in) |
| Right                | 0.0 m (0 in)  |
| Front                | 1.7 m (65 in) |
| Rear                 | 2.0 m (80 in) |

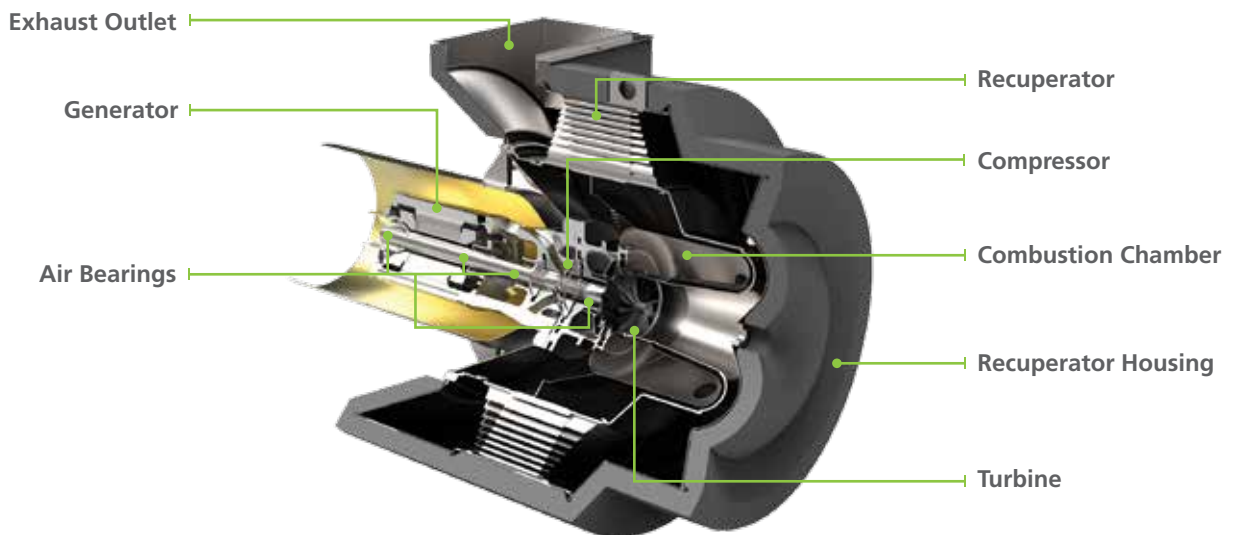
## ICHP Heat Recovery<sup>(5)</sup>

|                         |                       |
|-------------------------|-----------------------|
| Hot Water Heat Recovery | 1.5 MW (5.1 MMBtu/hr) |
|-------------------------|-----------------------|

## Certifications

- UL 2200 Listed
- CE Certified
- Certified to the following grid interconnection standards: UL 1741, VDE, BDEW and CEI 0-16
- Compliant to California Rule 21

## C200 Engine Components



(1) Nominal full power performance at ISO conditions: 15°C (59°F), 14.696 psia, 60% RH

(2) Approximate dimensions and weights

(3) Height dimensions are to the roofline. Exhaust outlet extends at least 236 mm (9.3 in) above the roofline

(4) Clearance requirements may increase due to local code considerations

(5) Total heat recovery using 5 Heat Recovery Modules (HRM). Inlet temperature of 38°C (100°F) and flow rate of 6.3 l/s (100 gpm) per HRM.

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