CR65 & CR65-ICHP MicroTurbine Renewable

Robust power system achieves ultra-low emissions and reliable electrical/thermal generation from waste gas.

- Years of renewable experience
- Ultra-low emissions
- Operates on landfill or digester gas
- 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
- Reliable: Tens of millions of run hours and counting

CR65 MicroTurbine

Electrical Performance[1]

Electrical Power Output	65 kW
Voltage	400 to 480 VAC
Electrical Service	3-Phase, 4 wire
Frequency	50/60 Hz
Maximum Output Current	100A, grid connect operation
Electrical Efficiency LHV	29%

CR65-ICHP MicroTurbine

Fuel/Engine Characteristics[1]

Digester/Landfill Gas HHV	13.0 MJ/m³ to 22.4 MJ/m³ (350 to 600 BTU/scf) 20.5 MJ/m³ to 32.6 MJ/m³ (550 to 875 BTU/scf)
H2S Content	<5,000 ppmv
Inlet Pressure	517-552 kPa gauge (75-80 psig)
Fuel Flow HHV	888 MJ/hr (842,000 BTU/hr)
Net Heat Rate LHV	12.4 MJ/KWh (11,800 BTU/kWh)

Exhaust Characteristics[1]

NOx Emissions @ 15% O_2[2]	9 ppmvd (18 mg/m³)
NOx/Electrical Output[2]	0.16 g/bhp-hr (0.46 lb/MWhe)
Exhaust Gas Flow	0.49 kg/s (1.08 lbm/s)
Exhaust Gas Temperature	309˚C (588˚F)

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

C65-ICHP Heat Recovery[3]

Integrated Heat Recovery Module Type	Stainless Steel Core
Hot Water Heat Recovery	74kW (251,000 BTU/hr)
Total System Efficiency LHV	62%

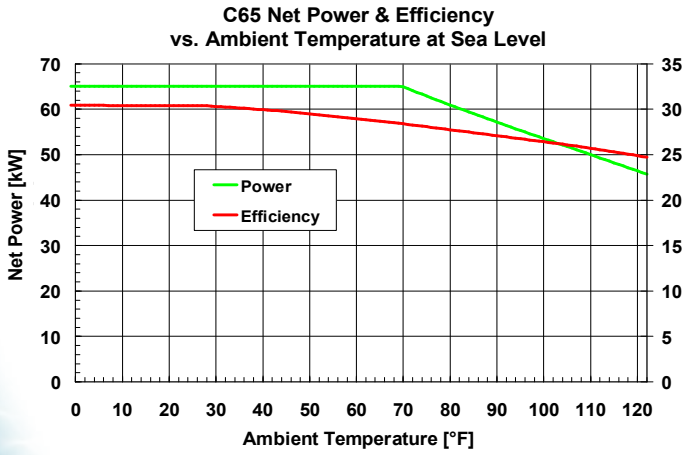
Dimensions & Weight[4]	CR65	CR65-ICHP
Width x Depth[5] x Height[6]	0.76 x 2.0 x 2.1 m (30 x 77 x 83 in)	0.76 x 2.2 x 2.4 m (30 x 87 x 94 in)
Weight	758 kg (1,671 lb)	1000 kg (2,200 lb)

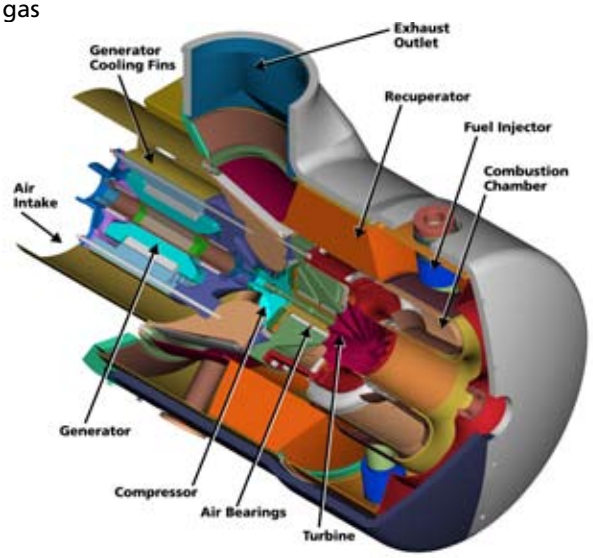
Minimum Clearance Requirements[7]	CR65	CR65-ICHP
Vertical Clearance	0.61 m (24 in)	0.61 m (24 in)
Horizontal Clearance		
Left & Right	0.76 m (30 in)	0.76 m (30 in)
Front	0.76 m (30 in)	0.76 m (30 in)
Rear	0.91 m (36 in)	0.76 m (30 in)

Sound Levels	CR65	CR65-ICHP
Acoustic Emissions at Full Load Power[8]		
Nominal at 10 m (33 ft)	70 dBA	65 dBA

Certifications

- Classified UL 2200 and UL 1741 for raw natural gas and biogas operation (UL file AU5040)
- Complies with IEEE 1547 and meets statewide utility interconnection requirements for California Rule 21 and the New York State Public Service Commission
- Models available with optional equipment for CE Marking
- Models available with optimal 2008 CARB certification for waste gas





(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) Heat recovery for water inlet temperature of 38˚C (100˚F) and flow rate of 2.5 l/s (40 GPM)
(4) Approximate dimensions and weights
(5) Depth includes 10 inch extension for the heat recovery module rain hood on ICHP versions
(6) Height dimensions are to the roof line. Exhaust outlet extends at least 7 inches above the roof line
(7) Clearance requirements may increase due to local code considerations
(8) The optional acoustic inlet hood kit can reduce acoustic emissions at the front of the MicroTurbine by up to 5 dBA

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

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