

# **Landfill Gas**

## Microturbine Data Sheet

## Achieve ultra-low emissions and reliable electrical generation.





Modular design allows for easy, low-cost installation

One moving part – minimal maintenance and downtime



Patented air bearings – no lubricating oil or coolant

Proven technology with tens of millions of operating hours

### Electrical Performance(1)

	C65	C200S	C600S	C800S	C1000S	
Electrical Power Output	65 kW	200 kW	600 kW	800 kW	1000 kW	
Voltage	400/480 VAC					
Electrical Service	3-Phase, 4 Wire Wye					
Frequency	50/60 Hz					
Electrical Efficency LHV	28% 33%					

# Fuel/Engine Characteristics(1)

	C65	C200S	C600S	C800S	C1000S
Landfill Gas HHV <sup>(2)</sup>	13.0 - 22.4 MJ/m³ (350 - 600 BTU/scf)				
Inlet Pressure	517 - 551 kPa gauge (75 - 80 psig)				
Fuel Flow HHV	919 MJ/hr (871,000 BTU/hr)	2,400 MJ/hr (2,280,000 BTU/hr)	7,200 MJ/hr (6,840,000 BTU/hr)	9,600 MJ/hr (9,120,000 BTU/hr)	12,000 MJ/hr (11,400,000 BTU/hr)
Net Heat Rate LHV	12.9 MJ/kWh (12,200 BTU/kWh)	10.9 MJ/kWh (10,300 BTU/kWh)			

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### Exhaust Characteristics(1)

	C65	C200S	C600S	C800S	C1000S
NOx Emissions @ 15% O <sub>2</sub>	< 9 ppmvd (18 mg/m³)				
Exhaust Mass Flow	0.49 kg/s (1.08 lbm/s)	1.3 kg/s (2.9 lbm/s)	4.0 kg/s (8.8 lbm/s)	5.3 kg/s (11.7 lbm/s)	6.7 kg/s (14.7 lbm/s)
Exhaust Gas Temperature	t Gas Temperature 329°C (625°F) 280°C (535°F)				

## Dimensions & Weight(3)

		C65	C200S	C600S	C800S	C1000S
Standard	WxDxH	0.76 x 1.95 x 2.08 m (30 x 77 x 82 in)	3.0 x 2.5 x 3.0 m (117 x 100 x 119 in)	3.0 x 5.8 x 3.0 m (117 x 230 x 119 in)	3.0 x 7.5 x 3.0 m (117 x 295 x 119 in)	3.0 x 9.1 x 3.0 m (117 x 360 x 119 in)
	Weight - GC Model	758 kg (1,671 lb)	5,200 kg (11,400 lb)	11,250 kg (24,800 lb)	14,100 kg (31,100 lb)	17,100 kg (37,700 lb)
ICHP	WxDxH	0.76 x 2.20 x 2.53 m (30 x 87 x 100 in)	3.0 x 2.5 x 4.0 m (117 x 100 x 157 in)	3.0 x 5.8 x 4.0 m (117 x 230 x 157 in)	3.0 x 7.5 x 4.0 m (117 x 295 x 157 in)	3.0 x 9.1 x 4.0 m (117 x 360 x 157 in)
	Weight - GC Model	998 kg (2,200 lb)	6,000 kg (13,200 lb)	13,700 kg (30,000 lb)	17,400 kg (38,300 lb)	21,200 kg (46,800 lb)

# ICHP Heat Recovery(4)

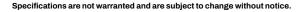
	C65	C200S	C600S	C800S	C1000S
Hot Water Heat Recovery	132 kW	215 kW	645 kW	860 kW	1.1 MW
	(0.45 MMBtu/hr)	(0.7 MMBtu/hr)	(2.2 MMBtu/hr)	(2.9 MMBtu/hr)	(3.7 MMBtu/hr)

### Certifications

- Grid interconnections standards: UL 1741-SA (C65), UL 1741-SB (C200S C1000S), VDE, BDEW, CEI 0-16, AS4777
- UL 2200
- CE Certified



<sup>(4)</sup> Nominal heat recovery is based on a water inlet temperature of 60°C (140°F) and a flow rate of 2.5 L/s (40 GPM) for the C65. For C200S to C1000S models, values are based on a water inlet temperature of 38°C (100°F) and a flow rate of 6.3 L/s (100 GPM) per Heat Recovery Module (HRM). For C65, fuel must contain less than 5 ppmV Hydrogen Sulfide.





<sup>(1)</sup> Nominal full power performance at ISO conditions:  $15^{\circ}$ C ( $59^{\circ}$ F), 14.696 psia, 60% RH.

<sup>(2)</sup> Limited to a maximum of 5,000 ppV of H<sub>2</sub>S.

<sup>(3)</sup> Approximate dimensions and weights. Dimensions do not include service clearances. DM refers to Dual Mode models and GC refers to Grid Connect models.