

# **High-Pressure Natural 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	
Natural Gas HHV (2)	30.7 – 47.5 MJ/m³ (825 – 1,275 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 7,200 MJ/hr 9,600 MJ/hr 12,000 MJ/hr (2,280,000 BTU/hr) (6,840,000 BTU/hr) (9,120,000 BTU/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	329°C (625°F)	280°C (535°F)			

## Dimensions & Weight<sup>(3)(4)</sup>

		C65	C200S	C600S	C800S	C1000S
5	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)
Standa	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)
℧	Weight - DM Model	1,121 kg (2,471 lb)	5,850 kg (12,900 lb)	13,350 kg (29,400 lb)	16,900 kg (37,300 lb)	20,650 kg (45,500 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)
	Weight - DM Model	1,364 kg (3,000 lb)	6,700 kg (14,700 lb)	15,800 kg (34,900 lb)	20,200 kg (44,500 lb)	24,750 kg (54,500 lb)

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

	C65	C200S	C600S	C800S	C1000S
Hot Water Heat Recovery	132 kW	300 kW	0.9 MW	1.2 MW	1.5 MW
	(0.45 MMBtu/hr)	(1.0 MMBtu/hr)	(3.1 MMBtu/hr)	(4.1 MMBtu/hr)	(5.1 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



- Nominal full power performance at ISO conditions: 15°C (59°F), 14.696 psia, 60% RH.
  Suitable for use with fuel blends containing up to 30 percent hydrogen gas by volume.
  Approximate dimensions and weights. Dimensions do not include service clearances. DM refers to Dual Mode models and GC refers to Grid Connect models.
- All values for models configured for high pressure natural gas with standard emissions. Configurations available for low pressure natural gas and reduced carbon monoxide (CO) emissions. 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).



