







# Digester Gas

## Microturbine Data Sheet

Achieve ultra-low emissions and reliable electrical generation.



-  Ultra-low emissions
-  One moving part – minimal maintenance and downtime
-  Patented air bearings – no lubricating oil or coolant
-  Modular design allows for easy, low-cost installation
-  Remote monitoring and diagnostic capabilities
-  Proven technology with tens of millions of operating hours

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

|                           | 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 Efficiency LHV | 28%                 |        |        |        | 33%     |

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

|                                 | C65   | C200S                             | C600S                             | C800S                             | C1000S                              |
|---------------------------------|---|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|
| Digester Gas HHV <sup>(2)</sup> | 20.5 - 32.6 MJ/m <sup>3</sup> (550 - 875 BTU/scf) |                                   |                                   |                                   |                                     |
| Inlet Pressure                  | 517 - 551 kPa gauge (75 - 80 psig)                |                                   |                                   |                                   |                                     |
| Fuel Flow HHV                   | 919 MJ/hr<br>(871,000 BTU/hr)                     | 2,400 MJ/hr<br>(2,280,000 BTU/hr) | 7,200 MJ/hr<br>(6,840,000 BTU/hr) | 9,600 MJ/hr<br>(9,120,000 BTU/hr) | 12,000 MJ/hr<br>(11,400,000 BTU/hr) |
| Net Heat Rate LHV               | 12.9 MJ/kWh<br>(12,200 BTU/kWh)                   | 10.9 MJ/kWh<br>(10,300 BTU/kWh)   |                                   |                                   |                                     |

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for a Cleaner Future**

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

|                                    | C65                               | C200S                   | C600S                   | C800S                    | C1000S                   |
|------------------------------------|-----------------------------------|-------------------------|-------------------------|--------------------------|--------------------------|
| NOx Emissions @ 15% O <sub>2</sub> | < 9 ppmvd (18 mg/m <sup>3</sup> ) |                         |                         |                          |                          |
| Exhaust Mass Flow                  | 0.49 kg/s<br>(1.08 lbm/s)         | 1.3 kg/s<br>(2.9 lbm/s) | 4.0 kg/s<br>(8.8 lbm/s) | 5.3 kg/s<br>(11.7 lbm/s) | 6.7 kg/s<br>(14.7 lbm/s) |
| Exhaust Gas Temperature            | 329°C (625°F)                     |                         | 280°C (535°F)           |                          |                          |

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

|          | C65               | C200S                                      | C600S                                     | C800S                                     | C1000S                                    |   |
|----------|-------------------|--|---|---|---|---|
| Standard | W x D x H         | 0.76 x 1.95 x 2.08 m<br>(30 x 77 x 82 in)  | 3.0 x 2.5 x 3.0 m<br>(117 x 100 x 119 in) | 3.0 x 5.8 x 3.0 m<br>(117 x 230 x 119 in) | 3.0 x 7.5 x 3.0 m<br>(117 x 295 x 119 in) | 3.0 x 9.1 x 3.0 m<br>(117 x 360 x 119 in) |
|          | Weight - GC Model | 758 kg<br>(1,671 lb)                       | 5,200 kg<br>(11,400 lb)                   | 11,250 kg<br>(24,800 lb)                  | 14,100 kg<br>(31,100 lb)                  | 17,100 kg<br>(37,700 lb)                  |
|          | Weight - DM Model | 1,121 kg<br>(2,471 lb)                     | 5,850 kg<br>(12,900 lb)                   | 13,350 kg<br>(29,400 lb)                  | 16,900 kg<br>(37,300 lb)                  | 20,650 kg<br>(45,500 lb)                  |
| ICHP     | W x D x H         | 0.76 x 2.20 x 2.53 m<br>(30 x 87 x 100 in) | 3.0 x 2.5 x 4.0 m<br>(117 x 100 x 157 in) | 3.0 x 5.8 x 4.0 m<br>(117 x 230 x 157 in) | 3.0 x 7.5 x 4.0 m<br>(117 x 295 x 157 in) | 3.0 x 9.1 x 4.0 m<br>(117 x 360 x 157 in) |
|          | Weight - GC Model | 998 kg<br>(2,200 lb)                       | 6,000 kg<br>(13,200 lb)                   | 13,700 kg<br>(30,000 lb)                  | 17,400 kg<br>(38,300 lb)                  | 21,200 kg<br>(46,800 lb)                  |
|          | Weight - DM Model | 1,364 kg<br>(3,000 lb)                     | 6,700 kg<br>(14,700 lb)                   | 15,800 kg<br>(34,900 lb)                  | 20,200 kg<br>(44,500 lb)                  | 24,750 kg<br>(54,500 lb)                  |

## ICHP Heat Recovery<sup>(4)</sup>

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



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

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

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

(4) 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.

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