# Technical Data

Jan 2017

| | | |
|---|---|---|
| MTU<br>16V 2000 G65 TD (FO) | CGT Stamford<br>HCI 634 | Generator Model: **G1100SMU5** |

| 50 Hz | 3-Phase | Power Factor<br>Cos Φ = 0.8 | Emissions<br>Non-Certified |
|---|---|---|---|

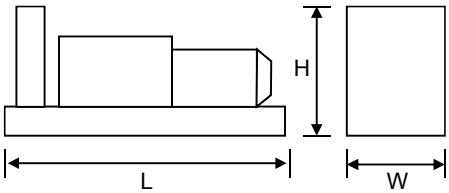
| RATINGS | PRIME POWER (PRP) | | STANDBY POWER (ESP) | | |
|---|---|---|---|---|---|
| | G1100SMU5 | | | | |
| Voltage | **kVA** | kWe | kVA | kWe | Amps |
| 415/240 | **1010** | 808 | 1100 | 880 | 1530 |
| 400/230 | **1010** | 808 | 1100 | 880 | 1588 |
| 380/220 | **1010** | 808 | 1100 | 880 | 1671 |

## Definition of Ratings & Reference Conditions

**Prime Power (PRP)** is the nominal output continuously available, where the average load (variable) does not exceed 75% of the prime power rating. 10% overload is available for a maximum of 1 hour in 12 hours of operation.
**Standby Power (ESP)** is the maximum output available, for up to 500 hours per year, where the average load does not exceed 85% of the standby power rating. No overload is available.
**Standard Reference Conditions:** air inlet temperature 25°C (77°F), barometric pressure 100kPa, [100m (328ft) altitude], 30% relative humidity.
**Note:** The above ratings may be subject to derate at different operating conditions. Please see the Derate Guidelines on the Broadcrown website.
All power ratings and reference conditions in accordance with ISO 8528-1 and ISO 3046-1.


## Key Features:

- Efficient water cooled diesel engine.
- Single bearing CGT Stamford alternator
- Radiator with pressure cap and drain point
- Fully guarded engine-driven fan
- Fully welded steel baseframe with lifting / jacking points
- Various fuel system options
- Heavy duty rubber anti-vibration mountings
- 24V starter batteries and connecting cables
- Separate engine-driven battery charging alternator
- Spin on oil and fuel filters and dry type air filter element
- Auto Start control system with digital instrumentation
- Factory Test Certificate
- Operation & Maintenance Manual
- Wide range of optional extra features available




## Overall Dimensions & Weights - Open Set

Length (L) = 4754mm
Width (W) = 1910mm
Height (H) = 2200mm

Dry Weight (inc oil) = 7116kg
Operating Weight = 7427kg

| | Typical Open Generator Sound Pressure Level at 1m, Free Field (dB) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Overall dBA | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | 8000 Hz |
| TBA | TBA | TBA | TBA | TBA | TBA | TBA | TBA | TBA |

JCB POWER PRODUCTS

# G1100SMU5

Jan 2017

## ENGINE & COOLING SYSTEM — MTU 16V 2000 G65 TD (FO)

| | | SI Units | PRIME | STANDBY |
|---|---|---|---|---|
| Performance | Engine Speed | r/min | 1500 | |
| | Gross Power | kWm | 890 | 979 |
| | Fan Power | kWm | 27 | 27 |
| | Net Power | kWm | 863 | 952 |
| | Emissions Certification | | — | |
| | Altitude Capability | m | 400 | 400 |
| General | Cylinders / Type | | 16 cyl / Vee form / 4-stroke | |
| | Aspiration / Charge Cooling | | Turbocharged / Air to Air | |
| | Governing / Engine Management | | "ADEC" Electronic Governor/ECU/CANBus | |
| | Bore / Stroke | mm | 130 / 150 | |
| | Cubic Capacity | litres | 31.84 | |
| | BMEP | kPa | 2235 | 2459 |
| Fuel | Fuel Consumption at 100% Power | litres/h | 206.6 | 229.5 |
| | Fuel Consumption at 75% Power | litres/h | 153.4 | 167.9 |
| | Fuel Consumption at 50% Power | litres/h | 104.9 | 113.6 |
| | Total fuel flow | litres/h | 600 | |
| | Standard Fuel Tank Capacity | litres | N/A | |
| Air | Engine Air Flow | m³/s | 1.1 | 1.2 |
| | Maximum Air Intake Restriction (used filter) | kPa | 5 | |
| Exhaust | Exhaust Gas Flow | m³/s | 2.95 | 3.3 |
| | Exhaust Gas Temperature | °C | 530 | 535 |
| | Maximum Exhaust Back Pressure | kPa | 8.5 | |
| | Typical Exhaust Pipe Diameter | mm | 300 | |
| Cooling | Radiator Cooling Air Flow | m³/s | 19 | |
| | Max Restriction to Cooling Air Flow | Pa | 250 | |
| | Max Radiator Air-On Temperature | °C | 45 | |
| | Maximum Coolant Temperature | °C | 102 | |
| | Coolant Capacity - Engine Only | litres | 110 | |
| | Total Coolant Capacity | litres | TBA | |
| Oil | Total Oil Capacity incl Filters | litres | 102 | |
| | Typical Oil Pressure at Rated Speed | kPa | 550 | |
| | Typical Oil Consumption (>250hrs Operation) | litres/h | 0.55 | |
| Thermal | Heat Rejection to Engine Cooling Water | kW | 400 | 420 |
| | Heat Rejection to Charge Cooler | kW | 170 | 200 |
| | Heat Radiated From Engine (Typical) | kW | 45 | 45 |
| Elec | Electrical System Voltage | V | 24 | |
| | Battery Type | | TBA | |
| | Battery Capacity SAE CCA | A | TBA | |

## ALTERNATOR — CGT STAMFORD HCI 634

| | | SI Units | PRIME | STANDBY |
|---|---|---|---|---|
| General Data | Manufacturer | | Cummins Generator Technologies - STAMFORD | |
| | Model (may vary with voltage) | | HCI 634 J | HCI 634 J |
| | Operating Temperature | °C | 40 | 27 |
| | Coupling / No. of Bearings | | Direct / Single Bearing | |
| | Phase / Poles / Winding Type | | 3-Phase / 4-Pole / Winding 311 | |
| | Power Factor | | Cos Φ = 0.8 | |
| | Excitation | | Separately excited by PMG | |
| | Insulation System | | Class H | |
| | AVR Type | | MX 321 | |
| | Voltage Regulation | | ± 0.5% | |

G1100SMU5

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## STANDARD CONTROL SYSTEM — BC 7310 Digital Auto Start

The standard control system for this model is **BC 7310** (photo), based on the Deep Sea Electronics DSE7310 Digital Auto Start controller.


This provides for the manual and automatic remote start of the generator, together with full control and protection of the engine via the ECU. LCD digital display of :

- Coolant temperature with high temperature alarm and shutdown
- Oil pressure with low pressure alarm and shutdown
- Oil temperature, engine operating hours, battery charge volts and amps
- Volts, with Under/Over Volts protection
- Amps, with Over Current protection
- Frequency, kW, kVA, Power Factor

Also featuring :

- Full RS485 Telemetry implementation
- Automatic cool-down timer function
- Emergency Stop button
- Ample auxiliary inputs/outputs for optional features
- Optional (shown) - battery charger and door mounted illuminated switch.

## CONTROL SYSTEM OPTIONS

The **BC 7320** control system (just the DSE7320 module is shown here) has an identical feature set to the BC 7310 but with the addition of full AMF functionality with integrated mains monitoring.



Finally, **BC 8610** & **BC 8620** control systems provide the same features as BC 7310 & BC 7320 respectively, plus :

- BC 8610 - Set-to-Set Synchronisation
- BC 8620 - Single Set-to-Mains Supply Synchronisation with integrated mains monitoring

For Multi Set-to-Mains synchronisation, each set requires BC 8610 with the addition of one mains monitoring panel **BC 8660** (not illustrated).
See the Synchronisation Guidelines for further details.