# **Technical Data**

Jan 2017



MTU	CGT Stamford	Generator	G2750SMU5
20V 4000 G23 (FO)	LVSI 804	Model:	

50 Hz 3-Phase	Power Factor Cos $\Phi = 0.8$	Emissions Non-Certified	
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RATINGS	PRIME POWER (PRP)		STANDBY POWER (ESP)			
KATINOO	G2750SMU5					
Voltage	kVA	kWe	kVA	kWe	Amps	
415/240	2500	2000	2750	2200	3826	
400/230	2500	2000	2750	2200	3969	
380/220	2600	2080	2800	2240	4254	

### **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.

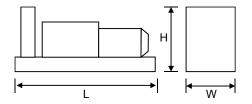
**Note:** The above ratings may be subject to derate at different operating conditions. Please see the Derate Guidelines on the Broadcrown website.

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) = 7039mm Width (W) = 3192mm Height (H) = 3090mm

Dry Weight (inc oil) = 20148kg Operating Weight = 21383kg

	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



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### **ENGINE & COOLING SYSTEM**

# MTU 20V 4000 G23 (FO)

		SI Units	PRIME	STANDBY	
	Engine Speed	r/min	150	00	
Performance	Gross Power	kWm	2200	2420	
nar	Fan Power	kWm	50	50	
for	Net Power	kWm	2150	2370	
Per	Emissions Certification		_	-	
	Altitude Capability	m	400	400	
	O Podess (T. s.)		00 - 1/1/- 6	· · · / A · l · · l ·	
	Cylinders / Type	20 cyl / Vee fo			
ਲ੍ਹ	Aspiration / Charge Cooling	Turbocharged / 2 pump 2 loop			
General	Governing / Engine Management	"ADEC" Electronic Governor/ECU/CANBus 170 / 210			
g.	Bore / Stroke	mm			
	Cubic Capacity	litres	95		
	BMEP	kPa	1846	2031	
	Fuel Consumption at 100% Power	litres/h	495.2	547.5	
	Fuel Consumption at 75% Power	litres/h	377.2	408.5	
Fuel	Fuel Consumption at 50% Power	litres/h	272.1	285.1	
ш.	Total fuel flow	litres/h	163	20	
	Standard Fuel Tank Capacity	litres	N/	Α	
	Facility All Flo	21-	2.4	0.0	
Air	Engine Air Flow	m³/s	2.4	2.6	
Ì	Maximum Air Intake Restriction (used filter)	kPa	5	)	
ايا	Exhaust Gas Flow	m³/s	6.5	7.1	
ans	Exhaust Gas Temperature	°C	580	600	
Exhaust	Maximum Exhaust Back Pressure	kPa	8.5		
ш :	Typical Exhaust Pipe Diameter	mm	400		
	Dadieter Casling Air Flour	m³/s	34	2	
	Radiator Cooling Air Flow	Pa	33		
و و	Max Restriction to Cooling Air Flow	°C	250		
Cooling	Max Radiator Air-On Temperature	°C	45		
ၓ	Maximum Coolant Temperature		104		
<b>l</b>	Coolant Capacity - Engine Only	litres	205		
	Total Coolant Capacity	litres	TBA		
	Total Oil Capacity incl Filters	litres	39	90	
ē	Typical Oil Pressure at Rated Speed	kPa	46	60	
	Typical Oil Consumption (>250hrs Operation)	litres/h	1.5	56	
_	Heat Rejection to Engine Cooling Water	kW	860	910	
l iii	Heat Rejection to Engine Cooling Water  Heat Rejection to Charge Cooler	kW	300	350	
Thermal	Heat Rejection to Charge Cooler  Heat Radiated From Engine (Typical)	kW	105	105	
H					
ر ا	Electrical System Voltage	V	24		
Elec	Battery Type		TB		
	Battery Capacity SAE CCA	Α	TB	BA .	

### ALTERNATOR

### CGT STAMFORD LVSI 804 S2

		SI Units	PRIME	STANDBY	
	Manufacturer		Cummins Generator Tec	hnologies - STAMFORD	
	Model (may vary with voltage)		LVSI 804 S2	LVSI 804 S2	
	Operating Temperature	°C	40	27	
Data	Coupling / No. of Bearings		Direct / Single Bearing		
	Phase / Poles / Winding Type		3-Phase / 4-Pole / Winding 311		
General	Power Factor		Cos Φ = 0.8		
Gel	Excitation		Separately excited by PMG		
	Insulation System		Class H		
	AVR Type		MA330		
	Voltage Regulation		± 0.5%		

All specifications and design are subject to change without notice



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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.

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