broadcrown®

Technical Data

July 2013

MTU 12V 1600 G10	CGT Stamford HCI 534	Generator Model:	BCMU 500P-60 T2
		Generator Model:	BCMU 550S-60 T2

60 Hz	3-Phase	Power Factor Cos Φ = 0.8	Emissions EPA Tier 2 Compliant

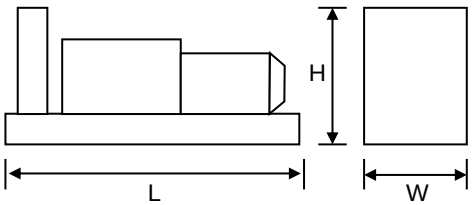
RATINGS	PRIME POWER (PRP)		STANDBY POWER (LTP)		
	BCMU 500P-60 T2		**BCMU 550S-60 T2**		
Voltage	kVA	kWe	kVA	**kWe**	Amps
440/254	625	500	688	**550**	903
220/127	625	500	688	**550**	1655
254/127	625	500	688	**550**	1806

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 (LTP) 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) = 3923mm *[155in]*
Width (W) = 1468mm *[58in]*
Height (H) = 1965mm *[77in]*

Dry Weight (inc oil) = 3925kg *[8653lb]*
Operating Weight = 4170kg *[9193lb]*

	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

All designs and specifications subject to change without notice

Broadcrown Ltd, Airfield Industrial Estate, Hixon, Stafford, Staffs ST18 0PF, England
tel: +44 (0) 1889 272200, fax: +44 (0) 1889 272220, email: info@broadcrown.co.uk **www.broadcrown.com**

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BCMU 550S-60 T2

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ENGINE & COOLING SYSTEM — MTU 12V 1600 G20

		SI Units	[US Units]	PRIME	STANDBY
Performance	Engine Speed	r/min	[rpm]	1800	
	Gross Power	kWm	[bhp]	561 [752]	613 [822]
	Fan Power	kWm	[bhp]	23 [30.8]	23 [30.8]
	Net Power	kWm	[bhp]	538 [721]	590 [791]
	Emissions Certification			T2	
	Altitude Capability	m	[ft.]	100 [1312]	100 [1312]
General	Cylinders / Type			10 cyl / Vee form / 4-stroke	
	Aspiration / Charge Cooling			Turbocharged / Air to Air	
	Governing / Engine Management			"ADEC" Electronic Governor/ECU/CANBus	
	Bore / Stroke	mm	[in.]	122 / 150 [5.12 / 5.9]	
	Cubic Capacity	litres	[cu.in.]	21 [1457.25]	
	BMEP	kPa	[psi]	1565 [227]	1710 [248]
Fuel	Fuel Consumption at 100% Power	litres/h	[gal/h]	132.2 [34.9]	140.1 [37.0]
	Fuel Consumption at 75% Power	litres/h	[gal/h]	101.6 [26.8]	105.6 [27.9]
	Fuel Consumption at 50% Power	litres/h	[gal/h]	70.4 [18.6]	75.1 [19.8]
	Total fuel flow	litres/h	[gal/h]	402 [106]	
	Standard Fuel Tank Capacity	litres	[gal]	TBA TBA	
Air	Engine Air Flow	m³/s	[cfm]	0.8 [1653]	0.87 [1843]
	Maximum Air Intake Restriction (used filter)	kPa	[inWG]	6.25 [25]	
Exhaust	Exhaust Gas Flow	m³/s	[cfm]	1.9 [4026]	2.90 [6145]
	Exhaust Gas Temperature	°C	[°F]	401 [754]	414 [777]
	Maximum Exhaust Back Pressure	kPa	[inWG]	7.5 [60]	
	Typical Exhaust Pipe Diameter	mm	[in.]	250 [10]	
Cooling	Radiator Cooling Air Flow	m³/s	[cfm]	TBA	
	Max Restriction to Cooling Air Flow	Pa	[inWG]	TBA	
	Max Radiator Air-On Temperature	°C	[°F]	TBA	
	Maximum Coolant Temperature	°C	[°F]	105 [221]	
	Coolant Capacity - Engine Only	litres	[gal]	8.5 [2.2]	
	Total Coolant Capacity	litres	[gal]	25 [7]	
Oil	Total Oil Capacity incl Filters	litres	[gal]	12 [3.2]	
	Typical Oil Pressure at Rated Speed	kPa	[psi]	450 [65]	
	Typical Oil Consumption (>250hrs Operation)	litres/h	[pt/h]	0.68 [0.72]	
Thermal	Heat Rejection to Engine Cooling Water	kW	[btu/min]	242 [13775]	242 [13775]
	Heat Rejection to Charge Cooler	kW	[btu/min]	124 [7058]	150 [8538]
	Heat Radiated From Engine (Typical)	kW	[btu/min]	25 [1423]	25 [1423]
Elec	Electrical System Voltage		V	24	
	Battery Type			TBA	
	Battery Capacity SAE CCA		A	TBA	

ALTERNATOR — CGT STAMFORD HCI 534

		SI Units	[US Units]	PRIME	STANDBY
General Data	Manufacturer			Cummins Generator Technologies - STAMFORD	
	Model (may vary with voltage)			HCI 534 F	HCI 534 F
	Operating Temperature	°C	[°F]	40 [104]	27 [81]
	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%	

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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 CANBus implementation for the 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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