

Cummins QSK 60 G3	CGT Stamford PI 734	Generator Model:	BCC 1875P-50
		Generator Model:	BCC 2000S-50

50 Hz

3-Phase

 Power Factor
 $\text{Cos } \Phi = 0.8$

RATINGS	PRIME POWER (PRP)		STANDBY POWER (LTP)		
	BCC 1875P-50		BCC 2000S-50		
	kVA	kWe	kVA	kWe	Amps
415/240	1875	1500	2000	1600	2782
400/230	1875	1500	2000	1600	2887
380/220	1875	1500	2000	1600	3039

Definition of Ratings & Reference Conditions

Prime Power (PRP) is the nominal output continuously available, where the average load (variable) does not exceed 70% of the prime power rating during an operating period of 250 hours. The total operating time at 100% prime power must not exceed 500 hours per year. A 10% overload is available for a maximum of 1 hour in 12 hours of operation and must not exceed a total of 25 hours per year.

Standby Power (LTP) is the maximum output available (at variable load), for up to 200 hours per year. The average load (variable) must not exceed 80% of the standby power rating, with less than 25 hours per year at the full standby rating. No overload is available. The genset must not operate, at standby rating, in parallel with the public utility under any circumstances.

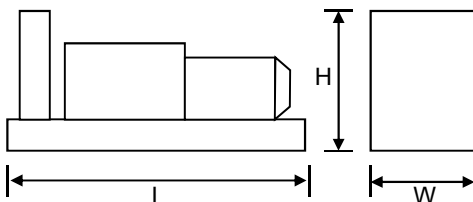
Standard Reference Conditions: air temperature 25°C (77°F), barometric pressure 100kPa [110m (361ft) altitude], 30% relative humidity.

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
- Industrial silencer(s) supplied loose
- Auto Start control system with digital instrumentation
- Main line circuit breaker
- Factory Test Certificate
- Operation & Maintenance Manual
- Wide range of optional extra features available


Overall Dimensions & Weights - Open Set

Length (L) = 5540mm
 Width (W) = 1875mm
 Height (H) = 2720mm

Dry Weight (inc oil) = 13400kg
 Operating Weight = 13800kg

Overall dBA	Typical Open Generator Sound Pressure Level at 1m, Free Field (dB)							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
111	100	103	105	105	105	104	101	103

All specifications and design are subject to change without notice

ENGINE & COOLING SYSTEM
CUMMINS QSK 60 G3

	SI Units	PRIME	STANDBY	
Performance	Engine Speed	r/min 1500		
	Gross Power	1615	1790	
	Fan Power	19	19	
	Net Power	1596	1771	
	Emissions Certification	—		
	Altitude Capability	m	1500	1500
General	Cylinders / Type	16 cyl / 60° Vee / 4-stroke		
	Aspiration / Charge Cooling	Turbocharged / JWAC		
	Governing / Engine Management	Electronic Governor / ECU		
	Bore / Stroke	mm 159 / 190		
	Cubic Capacity	litres 60.2		
	BMEP	kPa	2140	2372
Fuel	Fuel Consumption at 100% Power	litres/h	370.0	414.0
	Fuel Consumption at 75% Power	litres/h	276.0	308.4
	Fuel Consumption at 50% Power	litres/h	193.0	216.1
	Total fuel flow	litres/h	1515	
	Standard Fuel Tank Capacity	litres	TBA	
	Air	Engine Air Flow	m ³ /s	2.1
Maximum Air Intake Restriction (used filter)		kPa	6.23	
Exhaust	Exhaust Gas Flow	m ³ /s	4.865	5.345
	Exhaust Gas Temperature	°C	450	480
	Maximum Exhaust Back Pressure	kPa	6.8	
	Typical Exhaust Pipe Diameter	mm	350	
Cooling	Radiator Cooling Air Flow	m ³ /s	23	
	Max Restriction to Cooling Air Flow	Pa	275	
	Max Radiator Air-On Temperature	°C	45	
	Maximum Coolant Temperature	°C	104	
	Coolant Capacity - Engine Only	litres	157	
	Total Coolant Capacity	litres	315	
Oil	Total Oil Capacity incl Filters	litres	280	
	Typical Oil Pressure at Rated Speed	kPa	414	
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.98	
Thermal	Heat Rejection to Engine Cooling Water	kW	755	845
	Heat Rejection to Charge Cooler	kW	n/a	
	Heat Radiated From Engine (Typical)	kW	150	165
Elec	Electrical System Voltage	V	24	
	Battery Type		4 (Series-Parallel) 624	
	Battery Capacity SAE CCA	A	2020	

ALTERNATOR
CGT STAMFORD PI 734

	SI Units	PRIME	STANDBY	
General Data	Manufacturer	Cummins Generator Technologies - STAMFORD		
	Model (may vary with voltage)	PI 734 E or F	PI 734 E	
	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%		

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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 MODBus 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 7510 & BC 7520** control systems provide the same features as BC 7310 & BC 7320 respectively, plus :

- BC 7510 - Set-to-Set Synchronisation
- BC 7520 - Single Set-to-Mains Supply Synchronisation with integrated mains monitoring

For Multi Set-to-Mains synchronisation, each set requires BC 7510 with the addition of one mains monitoring panel **BC 7560** (not illustrated). See the Synchronisation Guidelines for further details.

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