

Cummins KTA 50 G8	Newage Stamford PI 734	Generator Model:	BCC 1400P-50
		Generator Model:	BCC 1660S-50

50 Hz	3-Phase	Power Factor Cos Φ = 0.8
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RATINGS	PRIME POWER (PRP)		STANDBY POWER (LTP)		
	BCC 1400P-50		BCC 1660S-50		
Voltage	kVA	kWe	kVA	kWe	Amps
415/240	1400	1120	1660	1328	2309
400/230	1400	1120	1660	1328	2309
380/220	1400	1120	1660	1328	2309

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.

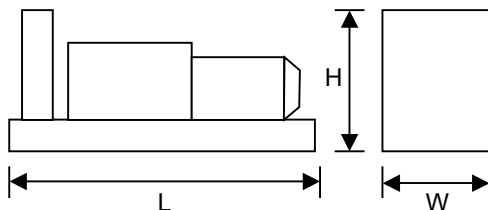
Note: The above ratings may be subject to derate at different operating conditions. Please see the Derate Guidelines on the Broadcrown website.

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



Overall Dimensions & Weights - Open Set

Length (L) = 5620mm
Width (W) = 2045mm
Height (H) = 2440mm

Dry Weight (inc oil) = 10470kg
Operating Weight = 11010kg

	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
111	100	103	105	105	105	104	101	103

ENGINE & COOLING SYSTEM
CUMMINS KTA 50 G8

	SI Units	PRIME	STANDBY	
Performance	Engine Speed	r/min	1500	
	Gross Power	kWm	1200	1429
	Fan Power	kWm	18.0	18.0
	Net Power	kWm	1182	1411
	Emissions Certification			
	Altitude Capability	m	1850	1850
General	Cylinders / Type	16 cyl / 60° Vee / 4-stroke		
	Aspiration / Charge Cooling	Turbocharged / Two Pump Two Loop		
	Governing / Engine Management	Electronic Governor / ECU		
	Bore / Stroke	mm	159 / 159	
	Cubic Capacity	litres	50.3	
	BMEP	kPa	1901	2263
Fuel	Fuel Consumption at 100% Power	litres/h	289	345
	Fuel Consumption at 75% Power	litres/h	222	265
	Fuel Consumption at 50% Power	litres/h	155	185
	Total fuel flow	litres/h	570	
	Standard Fuel Tank Capacity	litres	200	
Air	Engine Air Flow	m ³ /s	1.50	1.66
	Maximum Air Intake Restriction (used filter)	kPa	6.23	
Exhaust	Exhaust Gas Flow	m ³ /s	3.85	4.35
	Exhaust Gas Temperature	°C	485	510
	Maximum Exhaust Back Pressure	kPa	6.8	
	Typical Exhaust Pipe Diameter	mm	350	
Cooling	Radiator Cooling Air Flow	m ³ /s	18.5	
	Max Restriction to Cooling Air Flow	Pa	220	
	Max Radiator Air-On Temperature	°C	45	
	Maximum Coolant Temperature	°C	104	
	Coolant Capacity - Engine Only	litres	174	
	Total Coolant Capacity	litres	462	
Oil	Total Oil Capacity incl Filters	litres	204	
	Typical Oil Pressure at Rated Speed	kPa	414	414
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.79	
Thermal	Heat Rejection to Engine Cooling Water	kW	545	615
	Heat Rejection to Charge Cooler	kW	195	275
	Heat Radiated From Engine (Typical)	kW	175	210
Elec	Electrical System Voltage	V	24	
	Battery Type		4 (Series-Parallel) 623	
	Battery Capacity SAE CCA	A	1730	

ALTERNATOR
NEWAGE STAMFORD PI 734

	SI Units	PRIME	STANDBY	
General Data	Manufacturer	NEWAGE STAMFORD		
	Model (may vary with voltage)	PI 734 B or C	PI 734 C or D	
	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%		

STANDARD CONTROL SYSTEM - EXPORT PRODUCTS

BC 5110 Digital Auto Start

The standard control system for Export products is **BC 5110** (photo), based on the Deep Sea Electronics DSE5110 Digital Auto Start controller.

This provides for the manual and automatic remote start of the generator with a LCD digital display of :

- Coolant Temperature, with integral high temperature protection
- Oil Pressure, with integral low pressure protection
- Volts, Amps and Frequency
- Engine operating hours
- Battery volts

Also featuring :

- Automatic cool-down timer function
- Emergency Stop button
- Ample auxillary inputs/outputs for optional features
- Optional - battery charger and door mounted illuminated switch.



CONTROL SYSTEM OPTIONS - EXPORT PRODUCTS

BC 5310 & BC 5320 control systems (just the DSE modules shown here) provide complete power monitoring and protection facilities. Compared to BC 5110, addition features include :

- Pre-alarms for Low Oil Pressure and High Coolant Temperature
- Digital display of kW, kVA and Power Factor
- Under/Over Volts protection
- Over Current Protection
- Full RS485 Telemetry implementation

The BC 5320 provides full AMF functionality with integrated mains monitoring and generator/mains contactor control.



The **BC 5510 & BC 5520** control systems provide the same features as BC 5310 & BC 5320 respectively, plus :

- BC 5510 - Set-to-Set Synchronisation
- BC 5520 - Single Set-to-Mains Supply Synchronisation with integrated mains monitoring

For Multi Set-to-Mains synchronisation, each set requires BC 5510 with the addition of one mains monitoring panel **BC 5560** (not illustrated). See the Synchronisation Guidelines for further details.

CONTROL SYSTEM OPTIONS - X-RANGE

The X-Range of control systems has been developed to suit larger generating sets (>500kVA) for the UK and Projects market.

The entry level is **Remote Start** and provides for the manual and automatic remote start of the generator with LCD digital display all operating parameters including :

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

The **Automatic Main Fail** variant add full AMF functionality with integrated mains monitoring and generator/mains breaker control.

The **Generator Parallel** system makes provision for set-to-set synchronisation, whilst the Mains Parallel version allows single set-to-mains synchronisation with integrated AMF functionality.

By means of the **Multi-Set Mains Parallel** system (not illustrated) a number of sets can be synchronised with each other and the mains supply.

