

Cummins KTA 50 G3	Newage Stamford PI 734	Generator Model:	<b>BCC 1100P-60</b>
		Generator Model:	<b>BCC 1275S-60</b>

60 Hz	3-Phase	Power Factor Cos $\Phi$ = 0.8
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RATINGS	PRIME POWER (PRP)		STANDBY POWER (LTP)		
	BCC 1100P-60		BCC 1275S-60		
	kVA	kWe	kVA	kWe	Amps
Voltage					
480/277	1375	1100	1594	<b>1275</b>	1917
440/254	1375	1100	1588	<b>1270</b>	2084
416/240	1375	1100	1600	<b>1280</b>	2221
240/138	1375	1100	1594	<b>1275</b>	3835
220/127	1375	1100	1588	<b>1270</b>	4167

**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.

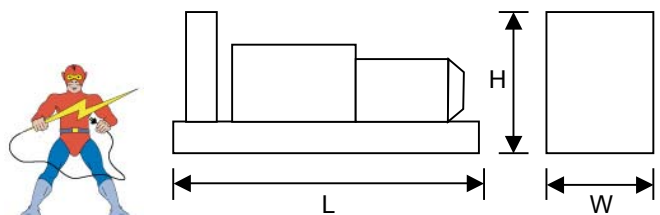
**Note:** The above ratings may be subject to derate at different operating conditions. Please see the Derate Guidelines on the Broadcrown website.

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) = 5200mm [205in]
Width (W) = 1790mm [71in]
Height (H) = 2340mm [93in]
Dry Weight (inc oil) = 9740kg [21470lb]
Operating Weight = 10200kg [22490lb]

	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
113	100	103	106	107	107	106	103	105

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**ENGINE & COOLING SYSTEM**
**CUMMINS KTA 50 G3**

	SI Units	[US Units]	PRIME	STANDBY	
Performance	Engine Speed	r/min	[rpm]	1800	
	Gross Power	kWm	[bhp]	1220 [1636]	1380 [1851]
	Fan Power	kWm	[bhp]	31 [41.6]	31 [41.6]
	Net Power	kWm	[bhp]	1189 [1594]	1349 [1809]
	Emissions Certification			-	
	Altitude Capability	m	[ft.]	1100 [4000]	1340 [4000]
General	Cylinders / Type			16 cyl / 60° Vee / 4-stroke	
	Aspiration / Charge Cooling			Turbocharged / JWAC	
	Governing / Engine Management			Electronic Governor / ECU	
	Bore / Stroke	mm	[in.]	159 / 159 [4.19 / 4.33]	
	Cubic Capacity	litres	[cu.in.]	50.3 [179]	
	BMEP	kPa	[psi]	1610 [233]	1821 [264]
Fuel	Fuel Consumption at 100% Power	litres/h	[gal/h]	291.0 [76.9]	330.0 [87.2]
	Fuel Consumption at 75% Power	litres/h	[gal/h]	222.0 [58.6]	251.5 [66.4]
	Fuel Consumption at 50% Power	litres/h	[gal/h]	157.0 [41.5]	175.2 [46.3]
	Total fuel flow	litres/h	[gal/h]	625 [165]	
	Standard Fuel Tank Capacity	litres	[gal]	200 [53]	
Air	Engine Air Flow	m <sup>3</sup> /s	[cfm]	1.746 [3700]	1.840 [3899]
	Maximum Air Intake Restriction (used filter)	kPa	[inWG]	6.23 [25]	
Exhaust	Exhaust Gas Flow	m <sup>3</sup> /s	[cfm]	3.964 [8399]	4.295 [9101]
	Exhaust Gas Temperature	°C	[°F]	460 [860]	475 [887]
	Maximum Exhaust Back Pressure	kPa	[inWG]	6.8 [27]	
	Typical Exhaust Pipe Diameter	mm	[in.]	350 [14]	
Cooling	Radiator Cooling Air Flow	m <sup>3</sup> /s	[cfm]	27.6 [58481]	
	Max Restriction to Cooling Air Flow	Pa	[inWG]	190 [0.8]	
	Max Radiator Air-On Temperature	°C	[°F]	55 [131]	
	Maximum Coolant Temperature	°C	[°F]	104 [219]	
	Coolant Capacity - Engine Only	litres	[gal]	161 [42.5]	
	Total Coolant Capacity	litres	[gal]	312 [82.4]	
Oil	Total Oil Capacity incl Filters	litres	[gal]	177 [46.8]	
	Typical Oil Pressure at Rated Speed	kPa	[psi]	414 [60]	
	Typical Oil Consumption (>250hrs Operation)	litres/h	[pt/h]	0.78 [1.64]	
Thermal	Heat Rejection to Engine Cooling Water	kW	[btu/min]	775 [44113]	900 [51228]
	Heat Rejection to Charge Cooler	kW	[btu/min]	n/a	
	Heat Radiated From Engine (Typical)	kW	[btu/min]	150 [8538]	176 [10018]
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	[US Units]	PRIME	STANDBY	
General Data	Manufacturer			NEWAGE STAMFORD	
	Model (may vary with voltage)			PI 734 A	PI 734 A or B
	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%	

## STANDARD CONTROL SYSTEM

## BC 5110 Digital Auto Start

The standard control system for this model 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 and Amps
- 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.



The panel is constructed in 1.5mm steel, powder coated to RAL9001 for a high quality, durable finish.

## CONTROL SYSTEM OPTIONS

**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.

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