

|                       |                        |   |
|-----------------------|------------------------|---|
| Cummins<br>QSK 60 G12 | CGT Stamford<br>PI 734 | Generator Model: <b>BCC 1825P-60 T2</b> |
|                       |                        | Generator Model: <b>BCC 2000S-60 T2</b> |

|       |         |                                  |  |
|-------|---------|----------------------------------|--|
| 60 Hz | 3-Phase | Power Factor<br>Cos $\Phi$ = 0.8 | Emissions Certification<br>EPA/CARB Tier 2 |
|-------|---------|----------------------------------|--|

| RATINGS | PRIME POWER (PRP) |      | STANDBY POWER (LTP) |             |      |
|---------|-------------------|------|---------------------|-------------|------|
|         | BCC 1825P-60 T2   |      | BCC 2000S-60 T2     |             |      |
|         | kVA               | kWe  | kVA                 | kWe         | Amps |
| Voltage |                   |      |                     |             |      |
| 480/277 | 2281              | 1825 | 2500                | <b>2000</b> | 3007 |
| 440/254 | 2281              | 1825 | 2500                | <b>2000</b> | 3280 |
| 416/240 | 2281              | 1825 | 2500                | <b>2000</b> | 3470 |
| 240/138 | 2281              | 1825 | 2500                | <b>2000</b> | 6014 |
| 220/127 | 2281              | 1825 | 2500                | <b>2000</b> | 6561 |

**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.

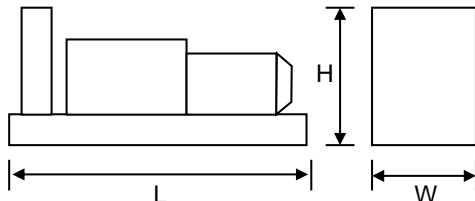
**Standard Reference Conditions:** air temperature 25°C (77°F), barometric pressure 100kPa [110m (361ft) altitude], 30% relative humidity.

**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) = 6200mm [245in]  
 Width (W) = 2540mm [100in]  
 Height (H) = 3240mm [130in]

Dry Weight (inc oil) = 14685kg [32366lb]  
 Operating Weight = 15000kg [33070lb]

| 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 |
| 119         | 102  | 107    | 110    | 11     | 112     | 111     | 111     | 115     |

All specifications and design are subject to change without notice

**ENGINE & COOLING SYSTEM**
**CUMMINS QSK60 G12**

|             | SI Units                                     | [US Units]                   | PRIME     | STANDBY               |                         |
|-------------|--|------------------------------|-----------|-----------------------|-------------------------|
| Performance | Engine Speed                                 | r/min                        | [rpm]     | 1800                  |                         |
|             | Gross Power                                  | kWm                          | [bhp]     | 1975 [2648]           | 2180 [2923]             |
|             | Fan Power                                    | kWm                          | [bhp]     | 25 [33.5]             | 58 [77.8]               |
|             | Net Power                                    | kWm                          | [bhp]     | 1950 [2615]           | 2122 [2846]             |
|             | Emissions Certification                      | EPA Tier 2                   |           |                       |                         |
|             | Altitude Capability                          | m                            | [ft.]     | 900 [4000]            | 900 [4000]              |
| General     | Cylinders / Type                             | 16 cyl / 60° Vee / 4-stroke  |           |                       |                         |
|             | Aspiration / Charge Cooling                  | Turbocharged / 2 Pump 2 Loop |           |                       |                         |
|             | Governing / Engine Management                | TBA                          |           |                       |                         |
|             | Bore / Stroke                                | mm                           | [in.]     | 159/190 [4.19 / 4.33] |                         |
|             | Cubic Capacity                               | litres                       | [cu.in.]  | 60.2 [179]            |                         |
|             | BMEP   | kPa                          | [psi]     | 2181 [316]            | 2408 [349]              |
| Fuel        | Fuel Consumption at 100% Power               | litres/h                     | [gal/h]   | 496 [131]             | 548 [145]               |
|             | Fuel Consumption at 75% Power                | litres/h                     | [gal/h]   | 385 [102]             | 424 [112]               |
|             | Fuel Consumption at 50% Power                | litres/h                     | [gal/h]   | 277 [73]              | 321 [85]                |
|             | Total fuel flow                              | litres/h                     | [gal/h]   | 1052 [278]            |                         |
|             | Standard Fuel Tank Capacity                  | litres                       | [gal]     | TBA [TBA]             |                         |
| Air         | Engine Air Flow                              | m³/s                         | [cfm]     | 3.06 [6486]           | 3.22 [6827]             |
|             | Maximum Air Intake Restriction (used filter) | kPa                          | [inWG]    | 6.23 [25]             |                         |
| Exhaust     | Exhaust Gas Flow                             | m³/s                         | [cfm]     | 6.86 [14533]          | 7.4 [15644]             |
|             | Exhaust Gas Temperature                      | °C                           | [°F]      | 419 [786]             | 440 [824]               |
|             | Maximum Exhaust Back Pressure                | kPa                          | [inWG]    | 6.8 [27]              |                         |
|             | Typical Exhaust Pipe Diameter                | mm                           | [in.]     | 450 [18]              |                         |
| Cooling     | Radiator Cooling Air Flow                    | m³/s                         | [cfm]     | TBA [TBA]             |                         |
|             | Max Restriction to Cooling Air Flow          | Pa                           | [inWG]    | TBA [TBA]             |                         |
|             | Max Radiator Air-On Temperature              | °C                           | [°F]      | 25 [77]               |                         |
|             | Maximum Coolant Temperature                  | °C                           | [°F]      | 104 [219]             |                         |
|             | Coolant Capacity - Engine Only               | litres                       | [gal]     | 159 [42]              |                         |
|             | Total Coolant Capacity                       | litres                       | [gal]     | TBA [TBA]             |                         |
| Oil         | Total Oil Capacity incl Filters              | litres                       | [gal]     | 280 [74]              |                         |
|             | Typical Oil Pressure at Rated Speed          | kPa                          | [psi]     | 483 [70]              |                         |
|             | Typical Oil Consumption (>250hrs Operation)  | litres/h                     | [pt/h]    | 1.31 [2.76]           |                         |
| Thermal     | Heat Rejection to Engine Cooling Water       | kW                           | [btu/min] | 821 [46731]           | 872 [49634]             |
|             | Heat Rejection to Charge Cooler              | kW                           | [btu/min] | TBA [TBA]             | TBA [TBA]               |
|             | Heat Radiated From Engine (Typical)          | kW                           | [btu/min] | 200 [11384]           | 221 [12579]             |
| 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                      | [US Units]                                | PRIME | STANDBY  |         |
|--------------|-------------------------------|---|-------|----------|---------|
| General Data | Manufacturer                  | Cummins Generator Technologies - STAMFORD |       |          |         |
|              | Model (may vary with voltage) | PI 734 F                                  |       | PI 734 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                    | Self Excited                              |       |          |         |
|              | Insulation System             | Class H                                   |       |          |         |
|              | AVR Type                      | MX 321                                    |       |          |         |
|              | Voltage Regulation            | ±0.5%                                     |       |          |         |

All specifications and design are subject to change without notice

STANDARD CONTROL SYSTEM

BC 7210 Digital Auto Start

The standard control system for Export products is **BC 7210** (photo), based on the Deep Sea Electronics DSE7210 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

**BC 7310 & BC 7320** control systems (just the DSE modules shown here) provide complete power monitoring and protection facilities. Compared to BC 7210, 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 and full SAE J1939 CANBus implementation. In fact, all generating sets driven by engines with onboard ECU/CANBus come with this system as standard.

The BC 7320 provides full AMF functionality with integrated mains monitoring and generator/mains contactor control.



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 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.

All designs and specifications subject to change without notice