

John Deere 4045 HFU82	CGT Stamford UCI 244 G	Generator Model: <b>BCRJD 80-50/60 E3A</b>
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50/60 Hz	3-Phase	Power Factor Cos $\Phi$ = 0.8	Emissions EU Stage IIIA Certified
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50Hz RATINGS	PRIME POWER (PRP)		STANDBY POWER (LTP)		
Voltage	kVA	kWe	kVA	kWe	Amps
400/230	80	64	88	70	127
60Hz RATINGS	PRIME POWER (PRP)		STANDBY POWER (LTP)		
Voltage	kVA	kWe	kVA	kWe	Amps
480/277	85	68	93	74	112

**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. 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 70% of the standby power rating. No overload is available.

**Standard Reference Conditions:** air inlet 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.

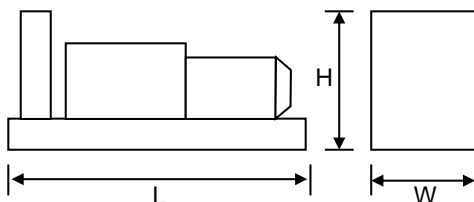
All power ratings and reference conditions in accordance with ISO 8528-1 and ISO 3046-1.



*Illustration may inc options*

**Key Features:**

- Water cooled dual speed John Deere diesel engine
- EC NRMM Directive - Stage IIIA emissions certified engine
- Heavy duty rubber captive anti-vibration mountings
- Single bearing CGT Stamford alternator
- Electronic speed governor
- Fuel water separating filters - Racor
- Three way fuel valve - single lever operation
- Integral 235 litre bunded fuel tank with filler cap and gauge
- Heavy duty zinc-treated central lift canopy c/w fork pockets
- Large door access for ease of maintenance
- Integral Industrial silencer
- Deep sea Auto-start / Load-Share controller
- 4 pole Main line circuit breaker
- Heavy duty optima red batteries 12v
- Battery isolator


**Overall Dimensions & Weights**

Length (L) = 3035mm  
 Width (W) = 1200mm  
 Height (H) = 1800mm

Dry Weight (inc oil) = 2032kg  
 Operating Weight = 2252kg

Overall LwA dBA	Typical Sound Pressure Level at 75% of Prime Power dBA			
	1m	5m	7m	10m
93	75	67	65	61

All specifications and design are subject to change without notice

**ENGINE & COOLING SYSTEM**
**JOHN DEERE 4045 HFU82 - 50Hz**

	SI Units	PRIME	STANDBY	
Performance	Engine Speed	r/min	1500	
	Gross Power	kWm	75	
	Fan Power	kWm	2	
	Net Power	kWm	73	
	Emissions Certification		Emissions Stage IIIA Compliant	
	Altitude Capability	m	3000	3000
General	Cylinders / Type		4 cyl / inline / 4-stroke	
	Aspiration / Charge Cooling		Turbo charged	
	Governing / Engine Management		Electronic Governor	
	Bore / Stroke	mm	106 / 127	
	Cubic Capacity	litres	4.5	
	BMEP	kPa	6009	6651
Fuel	Fuel Consumption at 100% Power	litres/h	17.9	19.6
	Fuel Consumption at 75% Power	litres/h	13.9	15.3
	Fuel Consumption at 50% Power	litres/h	10.3	11.3
	Total fuel flow	litres/h	TBA	
	Standard Fuel Tank Capacity	litres	225	
Air	Engine Air Flow	m <sup>3</sup> /s	0.101	0.101
	Maximum Air Intake Restriction (used filter)	kPa	6.25	
Exhaust	Exhaust Gas Flow	m <sup>3</sup> /s	0.25	0.25
	Exhaust Gas Temperature	°C	507	507
	Maximum Exhaust Back Pressure	kPa	7.5	
	Typical Exhaust Pipe Diameter	mm	100	
Cooling	Radiator Cooling Air Flow	m <sup>3</sup> /s	TBA	
	Max Restriction to Cooling Air Flow	Pa	TBA	
	Max Radiator Air-On Temperature	°C	TBA	
	Maximum Coolant Temperature	°C	110	
	Coolant Capacity - Engine Only	litres	8.5	
	Total Coolant Capacity	litres	TBA	
Oil	Total Oil Capacity incl Filters	litres	TBA	
	Typical Oil Pressure at Rated Speed	kPa	273.3	
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.05	
Thermal	Heat Rejection to Engine Cooling Water	kW	TBA	TBA
	Heat Rejection to Charge Cooler	kW	TBA	TBA
	Heat Radiated From Engine (Typical)	kW	TBA	TBA
Elec	Electrical System Voltage	V	12	
	Battery Type		1 X Optima (Red Top) 50Ah	
	Battery Capacity SAE CCA	A	815A	

**ALTERNATOR**
**CGT STAMFORD UCI 244 G**

	SI Units	PRIME	STANDBY	
General Data	Manufacturer	Cummins Generator Technologies - STAMFORD		
	Model (may vary with voltage)	UCI 244 G	UCI 244 G	
	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 $\Phi$ = 0.8	
	Excitation		Self Excited	
	Insulation System		Class H	
	AVR Type		AS 440	
	Voltage Regulation		± 1.0%	

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**ENGINE & COOLING SYSTEM**
**JOHN DEERE 4045 HFU82 - 60Hz**

	SI Units	PRIME	STANDBY	
Performance	Engine Speed	r/min	1800	
	Gross Power	kWm	78	85
	Fan Power	kWm	3.4	3.4
	Net Power	kWm	75	82
	Emissions Certification		Emissions Stage IIIA Compliant	
	Altitude Capability	m	3000	3000
General	Cylinders / Type		4 cyl / inline / 4-stroke	
	Aspiration / Charge Cooling		Turbo charged	
	Governing / Engine Management		Electronic Governor	
	Bore / Stroke	mm	106 / 127	
	Cubic Capacity	litres	4.5	
	BMEP	kPa	5208	5675
Fuel	Fuel Consumption at 100% Power	litres/h	18.2	20.0
	Fuel Consumption at 75% Power	litres/h	15.0	16.5
	Fuel Consumption at 50% Power	litres/h	10.7	11.8
	Total fuel flow	litres/h	TBA	
	Standard Fuel Tank Capacity	litres	225	
Air	Engine Air Flow	m <sup>3</sup> /s	0.12	0.12
	Maximum Air Intake Restriction (used filter)	kPa	6.25	
Exhaust	Exhaust Gas Flow	m <sup>3</sup> /s	0.29	0.29
	Exhaust Gas Temperature	°C	441	441
	Maximum Exhaust Back Pressure	kPa	7.5	
	Typical Exhaust Pipe Diameter	mm	100	
Cooling	Radiator Cooling Air Flow	m <sup>3</sup> /s	TBA	
	Max Restriction to Cooling Air Flow	Pa	TBA	
	Max Radiator Air-On Temperature	°C	TBA	
	Maximum Coolant Temperature	°C	110	
	Coolant Capacity - Engine Only	litres	8.5	
	Total Coolant Capacity	litres	TBA	
Oil	Total Oil Capacity incl Filters	litres	TBA	
	Typical Oil Pressure at Rated Speed	kPa	298.1	
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.05	
Thermal	Heat Rejection to Engine Cooling Water	kW	TBA	TBA
	Heat Rejection to Charge Cooler	kW	TBA	TBA
	Heat Radiated From Engine (Typical)	kW	TBA	TBA
Elec	Electrical System Voltage	V	12	
	Battery Type		1 X SAE 80Ah	
	Battery Capacity SAE CCA	A	622	

**ALTERNATOR**
**CGT STAMFORD UCI 244 G**

	SI Units	PRIME	STANDBY	
General Data	Manufacturer	Cummins Generator Technologies - STAMFORD		
	Model (may vary with voltage)	UCI 244 G	UCI 244 G	
	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 $\Phi$ = 0.8	
	Excitation		Self Excited	
	Insulation System		Class H	
	AVR Type		AS 440	
	Voltage Regulation		± 1.0%	

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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
- Ample auxiliary inputs/outputs for optional features

**OPTIONAL CONTROL SYSTEM****BC 8610 Digital Synchronisation**

BC 8610 control systems provide the same features as BC 7310, 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 7510 with the addition of one mains monitoring panel BC 8660 (not illustrated). See the Synchronisation Guidelines for further details.



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**Key Features - Standard****Engine :**

- Water Cooled turbocharged- direct Injection
- Engine driven radiator complete with fan guard and coolant drain valve designed to cool the engine at specified output, in air-on radiator temperatures up to 45°C
- Suitable protection to exposed exhaust and turbo hot surfaces
- Vertical discharge exhaust with rain cap
- Electronic governor

**Canopy :**

- The complete set is housed in a corrosion treated steel canopy, acoustically lined to achieve noise reduction to comply with EC directive 2000/14/EC of 03/01/2006, meeting levels, depending on the model, between 70 and 80dBA @1m
- Enclosure has lockable, (common key), side access doors with stays.
- Control panel viewing window
- Cable passage with gland plate fitting

**Alternator :**

- IP23
- Class H Insulation
- Voltage regulation to  $\pm 1\%$ , at any power factor, 0.8 lagging - unity

**Fuel Systems :**

- Fully banded
- Built in, single skin, baffled fuel tank of adequate capacity, complete with internal low level fuel filler and cap
- Cleaning access, high level vent and fuel contents gauge.
- Flexible fuel feed and return lines, passing through three way monobloc valves for diversion to an external bulk tank.
- Dual stage racor fuel filter with water separation

**Chassis :**

- Heavy duty fabricated steel chassis, incorporating bunding for all liquids within the set to 110% containment.
- Centre point lifting frame.
- Suitably sized, fork lift pockets
- Suitable anchorage points on baseframe
- Captive type, anti-vibration mountings.

**Circuit Breaker Box :**

- With door giving access to a set rated, terminal box, housing a 4 pole moulded case circuit breaker, cabled to the alternator and supplied with outgoing bus bar terminals for load connection.
- Earthing terminal stud / bus bar
- Neutral to earth connection point
- Input socket for supply to battery charger and optional jacket water heater, (when fitted).
- Terminals for auto start signal cabling.

**Electrical :**

- External emergency Stop button
- Interlock on cable entry panel
- 50/60Hz panel mounted switch
- Analogue Hour meter
- Battery Isolator

**General :**

- Works test in general compliance with ISO standards
- Set of operation & maintenance manuals
- Engine, alternator & radiator supplied in manufacturer colours
- Broadcrown Standard colour - Canopy (RAL9001), Cream
- Broadcrown Standard colour - Baseframe (RAL9005), Black
- First fills of lube oil and coolant

**Key Mechanical & Electrical Options****Fuel System :**

- Extended long range fuel tank in baseframe (24hr)
- Low fuel level options
- Bund Alarm / Shutdown

**Engine & Cooling :**

- Lub oil drain valve with evacuation pump
- Air Intake heater
- Coolant heater
- Heavy duty air cleaner
- Air Shut off valve (refinery specification)

**Electrical Options :**

- Integrated Distribution panel
  - 125 Amp 3ph IP67 outlet
  - 63 Amp 3ph IP44 outlet
  - 32 Amp 3ph IP44 outlet
  - 3x32 Amp 1ph IP44 outlet

**Alternator :**

- Anti-condensation heater
- Alternative AVR
- PMG Alternator

**Control panel :**

- Distribution panel (cee-form / powerlock options)
- Adjustable / Key Switchable earth leakage
- Static 5 Amp Battery charge
- 1PH / 3PH voltage selector switch

**Canopy :**

- Customer colour Change
- Galvanised Base frame
- Road tow trailer options
- Earth spike

Please refer to Broadcrown rental division for full details of these and other options.

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