

Technical Data

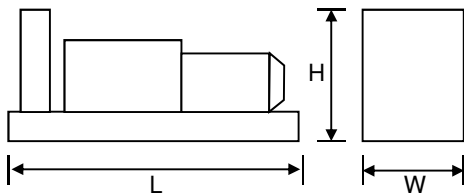
Cummins QST30 G4	CGT Stamford HCI 634 J	Generator Model: 3 : 5 % 2
---------------------	---------------------------	--------------------------------------

50/60 Hz	3-Phase	Power Factor Cos Φ = 0.8	Emissions Non-Certified
----------	---------	----------------------------------	----------------------------

50Hz RATINGS	PRIME POWER (PRP)		STANDBY POWER (ESP)		
Voltage	kVA	kWe	kVA	kWe	Amps
400/230	1000	800	1100	880	1443
60Hz RATINGS	PRIME POWER (PRP)		STANDBY POWER (ESP)		
Voltage	kVA	kWe	kVA	kWe	Amps
480/277	1150	920	1150	920	1509

Definition of Ratings & Reference Conditions
<p>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.</p> <p>Standby Power (ESP) 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.</p> <p>Standard Reference Conditions: air inlet temperature 25°C (77°F), barometric pressure 100kPa, [110m (361ft) altitude], 30% relative humidity.</p> <p>Note: The above ratings may be subject to derate at different operating conditions. Please see the Derate Guidelines on the Broadcrown website.</p> <p>All power ratings and reference conditions in accordance with ISO 8528-1 and ISO 3046-1.</p>

Key Features:
<ul style="list-style-type: none"> • Water cooled dual speed Cummins diesel engine • 50/60Hz • Heavy duty rubber captive anti-vibration mountings • Single bearing CGT Stamford alternator • Electronic speed governor • Duplex Racor Fuel water separating filters • Three way fuel valve - single lever operation • 1250 litre bunded fuel tank with external fill point & gauge • Fully bunded ISO standard container(CSC Plated) • Integral box type Industrial spark arrestor silencer • Separate cooling compartment • Dual Frequency variable speed electrical cooling fan • Deep sea Auto-start / Load-Share controller • 4 pole motorised circuit breaker with bus-bar chamber • Heavy duty batteries 24v • Battery isolator



Overall Dimensions & Weights
Length (L) = 6058mm
Width (W) = 2458mm
Height (H) = 2590mm
Dry Weight (inc oil) = 14000kg est
Operating Weight = 16000kg est

	Typical Sound Pressure Level at 75% of Prime Power dBA			
Overall LwA dBA	1m	5m	7m	10m
96	85	77	75	71

All specifications and design are subject to change without notice

ENGINE & COOLING SYSTEM
CUMMINS QST30 G4 - 50Hz

	SI Units	PRIME	STANDBY	
Performance	Engine Speed	r/min	1500	
	Gross Power	kWm	880	970
	Fan Power	kWm	17	17
	Net Power	kWm	863	953
	Emissions Certification		N/A	
	Altitude Capability	m	1800	1800
General	Cylinders / Type	12 cyl / 50° Vee / 4-stroke		
	Aspiration / Charge Cooling	Turbocharged / 2 Pump 2 Loop		
	Governing / Engine Management	Electronic Governor / ECU		
	Bore / Stroke	mm	140 / 165	
	Cubic Capacity	litres	30.48	
	BMEP	kPa	2310	2544
Fuel	Fuel Consumption at 100% Power	litres/h	202.0	224.0
	Fuel Consumption at 75% Power	litres/h	151.0	166.0
	Fuel Consumption at 50% Power	litres/h	102.0	112.0
	Total fuel flow	litres/h	550	
	Standard Fuel Tank Capacity	litres	1250	
Air	Engine Air Flow	m ³ /s	0.945	1.005
	Maximum Air Intake Restriction (used filter)	kPa	6.23	
Exhaust	Exhaust Gas Flow	m ³ /s	2.75	2.98
	Exhaust Gas Temperature	°C	565	575
	Maximum Exhaust Back Pressure	kPa	6.8	
	Typical Exhaust Pipe Diameter	mm	300	
Cooling	Radiator Cooling Air Flow	m ³ /s	19.0	
	Max Restriction to Cooling Air Flow	Pa	120	
	Max Radiator Air-On Temperature	°C	40	
	Maximum Coolant Temperature	°C	104	
	Coolant Capacity - Engine Only	litres	91	
	Total Coolant Capacity	litres	213	
Oil	Total Oil Capacity incl Filters	litres	154	
	Typical Oil Pressure at Rated Speed	kPa	348	
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.53	
Thermal	Heat Rejection to Engine Cooling Water	kW	320	335
	Heat Rejection to Charge Cooler	kW	145	170
	Heat Radiated From Engine (Typical)	kW	105	115
Elec	Electrical System Voltage	V	24	
	Battery Type		2 x 624	
	Battery Capacity SAE CCA	A	1010	

ALTERNATOR
CGT STAMFORD HCI 634 J

	SI Units	PRIME	STANDBY	
General Data	Manufacturer	Cummins Generator Technologies - STAMFORD		
	Model (may vary with voltage)	HCI 634 J	HCI 634 J	
	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		Self Excited	
	Insulation System		Class H	
	AVR Type		AS 440	
	Voltage Regulation		± 1.0%	

All specifications and design are subject to change without notice

ENGINE & COOLING SYSTEM

CUMMINS QST30 G4 - 60Hz

	SI Units	PRIME	STANDBY	
Performance	Engine Speed	r/min	1800	
	Gross Power	kWm	1007	1112
	Fan Power	kWm	17	17
	Net Power	kWm	990	1095
	Emissions Certification		N/A	
	Altitude Capability	m	1800	1800
General	Cylinders / Type	12 cyl / 50° Vee / 4-stroke		
	Aspiration / Charge Cooling	Turbocharged / 2 Pump 2 Loop		
	Governing / Engine Management	Electronic Governor / ECU		
	Bore / Stroke	mm	140 / 165	
	Cubic Capacity	litres	30.48	
	BMEP	kPa	2199	2427
Fuel	Fuel Consumption at 100% Power	litres/h	240.0	267.0
	Fuel Consumption at 75% Power	litres/h	177.0	194.7
	Fuel Consumption at 50% Power	litres/h	119.0	130.0
	Total fuel flow	litres/h	570	
	Standard Fuel Tank Capacity	litres	1250	
Air	Engine Air Flow	m ³ /s	1.250	1.340
	Maximum Air Intake Restriction (used filter)	kPa	6.23	
Exhaust	Exhaust Gas Flow	m ³ /s	3.285	3.670
	Exhaust Gas Temperature	°C	495	525
	Maximum Exhaust Back Pressure	kPa	6.8	
	Typical Exhaust Pipe Diameter	mm	300	
Cooling	Radiator Cooling Air Flow	m ³ /s	19.0	
	Max Restriction to Cooling Air Flow	Pa	120	
	Max Radiator Air-On Temperature	°C	40	
	Maximum Coolant Temperature	°C	104	
	Coolant Capacity - Engine Only	litres	91	
	Total Coolant Capacity	litres	213	
Oil	Total Oil Capacity incl Filters	litres	154	
	Typical Oil Pressure at Rated Speed	kPa	345	
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.53	
Thermal	Heat Rejection to Engine Cooling Water	kW	340	365
	Heat Rejection to Charge Cooler	kW	215	270
	Heat Radiated From Engine (Typical)	kW	115	130
Elec	Electrical System Voltage	V	24	
	Battery Type		2 x 624	
	Battery Capacity SAE CCA	A	1010	

ALTERNATOR

CGT STAMFORD HCI 634 J

	SI Units	PRIME	STANDBY	
General Data	Manufacturer	Cummins Generator Technologies - STAMFORD		
	Model (may vary with voltage)	HCI 634 J	HCI 634 J	
	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	Self Excited		
	Insulation System	Class H		
	AVR Type	AS 440		
	Voltage Regulation	± 1.0%		

All specifications and design are subject to change without notice

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 8710 / 8721 Digital Synchronisation

BC 8710 / 8721 control systems provide the same features as BC 7310, plus :

- BC 8710 - Set-to-Set Synchronisation

For Multi Set-to-Mains synchronisation, each set requires BC 8610 with the addition of one mains monitoring panel BC 8660 (not illustrated). See the Synchronisation Guidelines for further details.

Colour remote display module

Comprehensive large screen graphs, charts metering, power display and engine status information in a clear image and text format.



All designs and specifications subject to change without notice

Engine :

- V12 four stroke turbocharged low temperature diesel engine
- Captive type, anti-vibration mountings.
- Heavy duty baseframe
- Crankcase Breather to atmosphere
- First fills of lube oil and coolant
- Suitable protection to exposed exhaust and turbo hot surfaces
- Lube oil drain valve with evacuation pump
- Vertical discharge exhaust with rain cap

Cooling :

- Aftercooled 2 pump / 2 loop
- Separate cooling compartment
- Electrically driven cooling fan
- low coolant level shutdown / alarm
- Coolant drain valve
- Easy coolant access

Alternator :

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

Fuel Systems :

- Fully bunded
- Built in, single skin, baffled fuel tank of adequate capacity, complete with external 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 valves for diversion to an external bulk tank.
- Dual stage fuel filter with water separation

Exhaust Systems :

- DNV approved residential spark arrestor silencer [integral]
- Exhaust system lagging blanket

Container :

- 20ft CSC plated container with fork pockets
- Bunded to include all liquids within the set to 110% containment.
- The complete set is acoustically lined to achieve noise reduction 85dBA @1m
- Rear end access double doors
- Side personnel & maintenance doors
- Low level steel door furniture
- Dual height control panel for trailer usage

Circuit Breaker Box :

- With door giving access to a set rated, terminal box, housing a 1600amp 4 pole motorised circuit breaker.
- Bus-bar chamber housing terminals for ease of connection
- Earthing terminal stud / bus bar
- Neutral to earth connection point
- Input socket for supply to battery charger and optional jacket water heater, (32A when fitted).
- Terminals for auto start signal cabling & load share.

Electrical :

- External emergency Stop button
- Interlock on cable entry panel
- Analogue Hour meter
- Heavy duty batteries
- 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

Fuel System :

- Low fuel level options
- Bund Alarm / Shutdown

Engine & Cooling :

- Air Shut off valve (refinery specification)
- Coolant heater
- Heavy duty air cleaner
- Crankcase breather recirculation system
- Extended oil lubrication tank

Exhaust :

- DNV Certified Spark Arrestor (refinery specification)

Alternator :

- Anti-condensation heater
- Quadrature droop kit
- Alternative AVR
- PMG Alternator

Control panel :

- Deep Sea 8710 Controller / 8721 display
- Adjustable / Key Switchable earth leakage
- Static 5 Amp Battery charger

Container :

- Customer colour Change