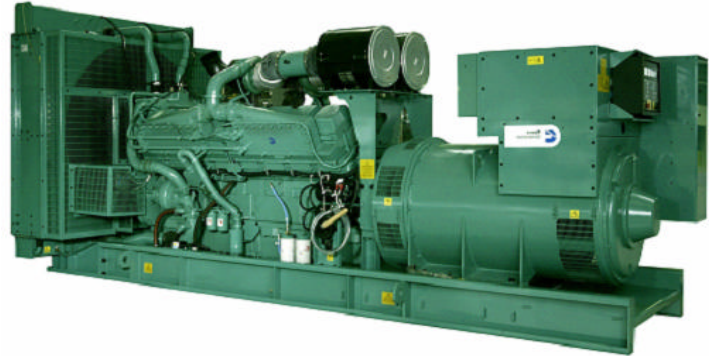


**Power
Generation**

Diesel Powered Generating Sets 800 kW - 1120 kW 50 Hz KTA50 Series Engines



Standard Genset Features

Single Source Responsibility

- Design, manufacturer and test of all components and accessories are made by Cummins Power Generation and Cummins companies

International Integrity

- Assurance and strength of a worldwide, world class corporation

Global Backing

- 24-hour spares and services support – in 72 countries

Single Source Warranty

- Complete genset covered by Cummins Power Generation comprehensive warranty

Packaged Self-Contained Units

- Units with built in antivibration systems with provision for base fuel tank and other accessories

Cummins Engine

- Heavy duty 4 cycle water cooled engine
Electronic governor control

Alternator

- Brushless Group made machine
- Close voltage regulation
- Rotor and exciter impregnated with oil and acid resisting resin
- 6 lead reconnectable
- Exceptional short circuit capability
- Low waveform distortion with non linear loads
- Permanent magnet exciter fitted as standard

Ratings

All kW Power ratings based on a 27°C ambient temperature reference.

Chasis

Built-in anti-vibration system
Bonded rubber units fitted as standard eliminates need for rubber mats or spring mountings

Cooling System

- 40°C cooling package (50°C option)

Ready Filled

- Every set comes filled with lube oil and anti-freeze

PCC PowerCommand®

Control System

- PCC2100 Controller with bar graph as standard
- Microprocessor control
- Integrates governor and voltage regulation systems
- Superior alternator and genset protection system
- Accurate battery monitoring system
- Totally reliable and proven system



50 Hz Ratings			
Model Prime	Prime kW (kVA)	Standby kW (kVA)	Engine Model
C1100 D5E	800 (100)	1120 (1400)	KTA50G7

A Single Source for all Power System Solutions

Specifications

Generator Set Performance

Voltage Regulation

Maintains voltage output to within $\pm 0.5\%$.
At any power factor between 0.8 lagging and unity.

At any variations from No load to Full load.
At any variations from Cold to Hot.
At speed droop variations up to 4.5%.

Frequency Regulation

Isochronous under varying loads from no load to 100% full load.

Random Frequency Variation

Will not exceed $\pm 0.25\%$ of its mean value for constant loads – no load to full load.

Waveform

Total harmonic distortion open circuit voltage waveform in the order of 1.5%. Three-phase balanced load in the order of 5.0%.

Telephone Influence Factor

TIF better than 50.
THF to BS4999 Part 40 better than 2%.

Alternator Temperature Rise

Class H insulation. Temperature rise up to 125°C permitted for prime ratings.

Radio Interference

In compliance with BS800 and VDE levels G and N.

Engine

Cummins KTA50GS8

sixteen-cylinder vee formation, direct injection, four-cycle diesel engines.

Type

Water cooled, turbocharged and aftercooled.

Construction

Four valves per cylinder, forged steel crankshaft and connecting rods, cast iron block, with replaceable wet liners.

Starting

24 volt negative earth, battery charging 35amp alternator. Cranking current 1800 amps Amps at 0°C.

Fuel System

24 volt fail safe actuator, dual spin-on paper element fuel filters, Cummins PTfuel injection systems with integral electronic governor. Dual flexible fuel lines with connectors. Standard fuel water separator.

Filters

Dry element air filters with restriction indicator and spin-on paper element full flow and by pass lube oil filters. Spin on corrosion resistor filter.

Cooling

High ambient 40°C radiator as standard with 50°C ambient as option. Oil cooler.

Alternator

Type

Brushless, single bearing, revolving field, 4-pole, drip proof, screen protected. Class H insulation.

Enclosed to IP22 (NEMA1) standard. IC 01 cooling system.

Fully interconnected damper winding.

AC exciter and rotating rectifier unit.

Epoxy coated stator winding.

Rotor and exciter impregnated with tropical grade insulating oil and acid resisting polyester resin. Dynamically balanced rotor to BS5625 grade 2.5.

Sealed for life bearings.

Layer wound mechanically wedged rotor.

Exciter

Triple dipped in moisture, oil and acid resisting polyester varnish and coated with anti-tracking varnish.

Sealed solid state automatic voltage regulator – self-exciting, self-regulating. Output windings with 2/3 pitch for improved harmonics and parallelling ability.

Close coupled engine/alternator for perfect alignment.

Permanent magnet exciter fitted as standard.

Compliance Standard

To BS4999/5000 pt 99,
VDE 0530, UTE5100,
NEMAMG1-22, CEMA,
IEC 34, CSAA22.2,
AS1359, BSS5514,
ISO 3046 and ISO 8528

Chasis

Fabricated and welded steel chassis

Built-in anti-vibration mountings

Optional sub-base fuel tank with eight hour capacity, dual flexible fuel lines, dial type fuel gauge and drain bung

Finish

Etch undercoated and finished in high gloss durable green

General

Complete set of operating and instruction manuals

Generator Set Options

Engine

- Heavy duty air cleaner
- Coolant heater and thermostat
- Lead acid batteries, cable and fitted tray
- Sump drain pump
- Oil and water drain taps
- CE Compliance (guarding)
- Exhaust temperature monitoring (PCC only)
- Tool kit
- Compliance to TALuft

Cooling

- 50°C ambient radiator
- Remote radiator cooling (built to order)
- Oil temperature indication

Alternator

- Anti-Condensation heater
- Thermistors
- 105/105/80°C rise alternator

Exhaust System

- Industrial type silencer
- Residential type silencer
- Length of flexible exhaust and bellows

Fuel System

- Sub-base tanks
- Hand fuel transfer pump
- Automatic fuel transfer pump
- Free-standing 450, 900 and 1350 litre
- fuel tanks with stand
- Fuel tank level switch
- High fuel level warning
- Low fuel level warning
- Low fuel level shutdown

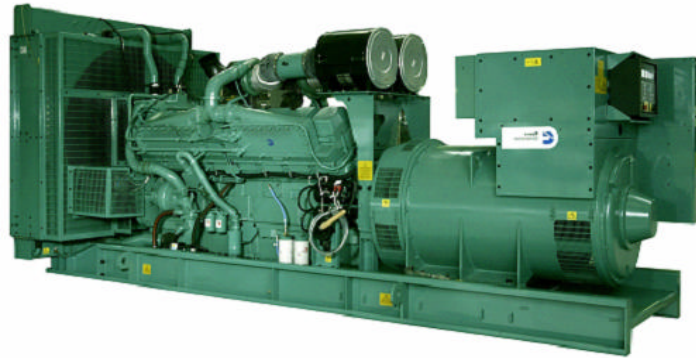
Generator Set

- Weather protective enclosures
- Silenced enclosures

Control Panel

- SeeseparatelistonControlPanelpages
- 3 or 4 pole circuit breaker up to 2500A
- Battery charger 5 amp or 10 amp
- CE Compliance PCLand PCC systems
- Cable entrance box
- PCCP3100 controller

Technical Data



Set output	380-440 V 50 Hz
Prime at 27°C ambient	1000 kW 1250 kVA
New Model (Prime)	C100 D5A
Standby at 27°C ambient	1120 kW 1400 kVA
Engine Make	Cummins
Model	KTA50G7
Cylinders	Sixteen
Engine build	60°Vee
Governor / Class	Electronic / A1
Aspiration and cooling	Turbo Aftercooled
Bore and stroke	159 mm x 159 mm
Compression ratio	14.9:1
Cubic capacity	50.3 Litres
Starting / Min °C	Unaided / 7°C
Battery capacity	254 A/hr
Gross Engine output – Prime	1097 kWm
Gross at flywheel – Standby	1227 kWm
Maximum load acceptance – single step (cold)	640 kW
Speed	1500 rpm
Alternator voltage regulation	±0.5%
Alternator insulation class	H
Single load step to NFPA110	100%
Fuel consumption (Prime) 100% load	274 l/hr
Fuel consumption (Standby) 100% load	303 l/hr
Lubrication oil capacity	197 Litres
Base fuel tank capacity – open set	2000 Litres
Coolant capacity – radiator and engine	351 Litres
Exhaust temp – full load prime	472°C
Exhaust gas flow – full load prime	12910 m ³ /hr
Exhaust gas back pressure max (standby)	51 mm Hg
Air flow – radiator (40°C ambient)†	21.6 m ³ /s
Pusher fan head (duct allowance) 40°C†	13 mm Wg
Air intake – engine (prime)	5508 m ³ /hr
Air flow – radiator (50°C ambient)†	N/A
Pusher fan head (duct allowance) 50°C†	N/A
Total heat radiated to ambient	154 kW
Engine derating – altitude	RTF
Engine derating – temperature	RTF

*In accordance with ISO 8528, ISO 3046.

Prime: Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period.

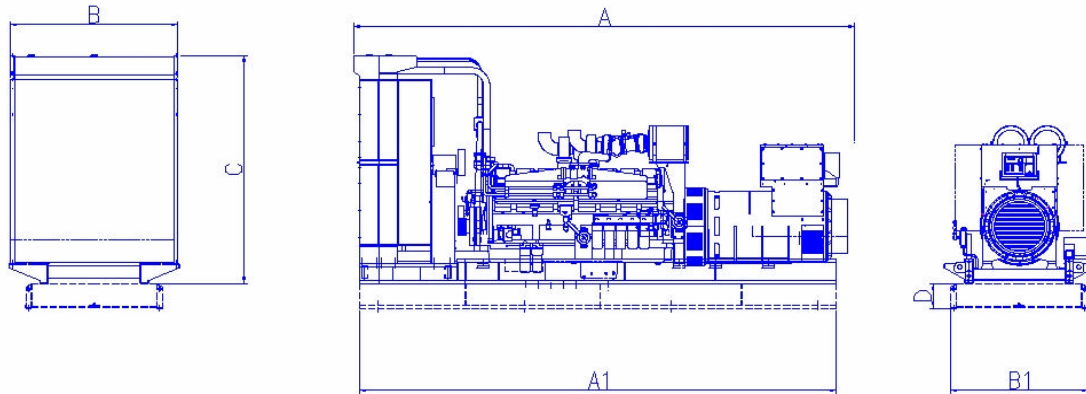
Standby: Continuous running at variable load for duration of an emergency.

†Subject to factory verification.

For TA-LUFT engine parameters refer to factory.

RTF = Refer To Factory

Dimensions and Weights - 50 Hz



Model	Engine	Dimensions and Weights (mm/kg)						Set Weight kg Dry	Set Weight kg Wet	Tank Weight kg (wet)	Tank Weight kg (dry)
		A	A1	B1	B	C	D				
C1100 D5A	KTA50G7	5455	5690	1640	2033	2241	300	9242	10421	RTF	RTF

*With ambient radiator

Set weights are **without** sub-base tank.

Dimensions and weights are for **guidance** only. Do not use for installation design. Ask for certified drawings on your specific application.

Specifications may change without notice.



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