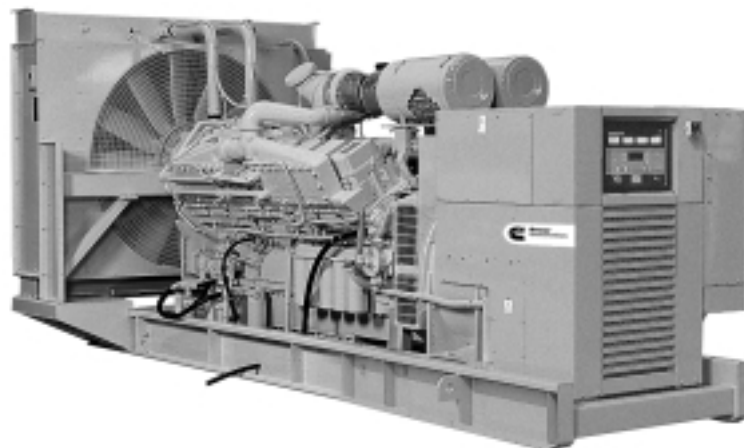




Diesel Powered Generating Sets 1005 kW - 1340 kW 50 Hz KTA50 Series Engines



Typical model with fitted options

Standard Genset Features

Single Source Responsibility

- Design, manufacture 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 service 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

Cooling System

- 40°C cooling package (50°C option)

Ready Filled

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

Alternator

- Brushless Group made machine
- Close voltage regulation
- Rotor and exciter impregnated with oil and acid resisting resin
- 12 lead reconnectable
- Exceptional short circuit capability
- Low waveform distortion with non linear loads
- Permanent magnet exciter with MX321 AVR fitted as standard

Ratings

All kW Power ratings based on a 40°C ambient temperature reference. No derating necessary up to 40°C

Chassis

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

PCC PowerCommand® Control System

- Microprocessor control
- Integrates governor and voltage regulation systems
- Superior alternator and genset protection systems
- Accurate battery monitoring system
- Totally reliable and proven system

Alternative PCL 'Power Control' System

- CE compliant
- Full AC instrumentation
- Emergency stop button
- Safety shutdowns
- Key or Remote starting



50 Hz Ratings					
Model Prime	Prime kW (kVA)	Model Standby	Standby kW (kVA)	Engine Model	TA-Luft Compliance
1005 DFLC	1005 (1256)	1120 DFLC	1120 (1400)	KTA50G3	—
1005 DFLG	1005 (1256)	1120 DFLG	1120 (1400)	KTA50G6	4.0 g/nm ³
1005 DFLH	1005 (1256)	1120 DFLH	1120 (1400)	KTA50G7	2.0 g/nm ³
1125 DFLE	1125 (1406)	1340 DFLE	1340 (1675)	KTA50G8	—

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.

Radio Interference

In compliance with BS800 and VDE levels G and N.

Engine

Cummins KTA50G3 and G8, 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 35 amp alternator. Cranking current 1800 amps Amps at 0°C.

Fuel System

24 volt fail safe actuator, dual spin-on paper element fuel filters, Cummins PT fuel 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 (NEMA 1) 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 with MX321 AVR fitted as standard.

Compliance Standards

To BS4999/5000 pt 99,
VDE 0530, UTE5100,
NEMA MG1-22, CEMA,
IEC 34, CSA A22.2,
AS1359, BSS5514,
ISO 3046 and ISO 8528

Chassis

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
- ☐ NiCad batteries
- ☐ Sump drain pump
- ☐ Oil and water drain taps
- ☐ CE Compliance (guarding)
- ☐ Exhaust temperature monitoring (PCC only)
- ☐ Tool kit
- ☐ Compliance to TA Luft

Cooling

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

Alternator

- ☐ Anti-Condensation heater
- ☐ Thermistors
- ☐ PMG Exciter and MX321 AVR
- ☐ 105°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

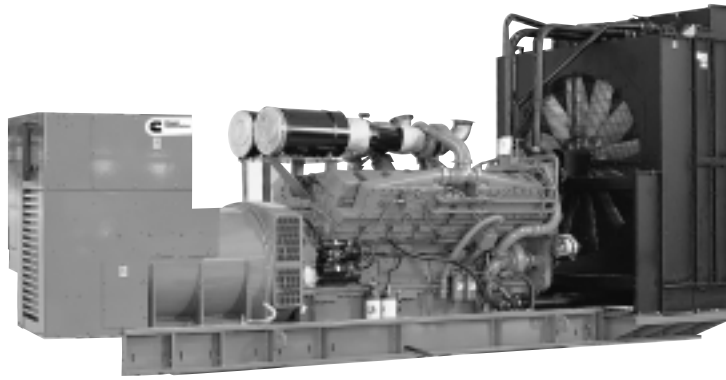
Generator Set

- ☐ Weather protective enclosures
- ☐ Silenced enclosures

Control Panel

- ☐ See separate list in Control Panel data sheet
- ☐ 3 or 4 pole circuit breaker
- ☐ Battery charger 5 amp or 10 amp
- ☐ CE Compliance PCL and PCC systems
- ☐ Cable entrance box

Technical Data



Model 1125 DFLE with 50°C radiator fitted.

Generating Sets – 50 Hz

Set output	380-440 V 50 Hz	380-440 V 50 Hz
Prime at 40°C ambient	1005 kWe 1256 kVA	1125 kWe 1406 kVA
New Model (Prime)	1005 DFLE	1125 DFLE
Standby at 40°C ambient	1120 kWe 1400 kVA	1340 kWe 1675 kVA
New Model (Standby)	1120 DFLE	1340 DFLE
Engine Make	Cummins	Cummins
Model	KTA50G3	KTA50G8
Cylinders	Sixteen	Sixteen
Engine build	60° Vee	60° Vee
Governor / Class	Electronic / A1	Electronic / A1
Aspiration and cooling	Turbo Aftercooled	Turbo Aftercooled
Bore and stroke	159 mm x 159 mm	159 mm x 159 mm
Compression ratio	13.9:1	14.9:1
Cubic capacity	50.3 Litres	50.3 Litres
Starting / Min °C	Unaided / 7°C	Unaided / 7°C
Battery capacity	254 A/hr	254 A/hr
Nett Engine output – Prime	1076 kWm	1168 kWm
Nett at flywheel – Standby	1206 kWm	1397 kWm
*Maximum load acceptance – single step (cold)	640 kWe	900 kWe
Speed	1500 rpm	1500 rpm
Alternator voltage regulation	±0.5%	±0.5%
Alternator insulation class	H	H
Single load step to NFPA 110	100%	100%
Fuel consumption (Prime) 100% load	254 l/hr	289 l/hr
Fuel consumption (Standby) 100% load	282 l/hr	345 l/hr
Lubrication oil capacity	177 Litres	204 Litres
Base fuel tank capacity – open set	2000 Litres	2000 Litres
Coolant capacity – radiator and engine	351 Litres	400 Litres
Exhaust temp – full load prime	518°C	482°C
Exhaust gas flow – full load prime	13590 m³/hr	13842 m³/hr
Exhaust gas back pressure max (standby)	51 mm Hg	51 mm Hg
Air flow – radiator (40°C ambient)†	21.6 m³/s	21.7 m³/s
Pusher fan head (duct allowance) 40°C†	13 mm Wg	13 mm Wg
Air intake – engine (prime)	5166 m³/hr	5400 m³/hr
Air flow – radiator (50°C ambient)†	27.1 m³/s	28.4 m³/s
Pusher fan head (duct allowance) 50°C†	13 mm Wg	15 mm Wg
Total heat radiated to ambient	176 kW	210 kW
Engine derating – altitude	RTF	RTF
Engine derating – temperature	RTF	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.

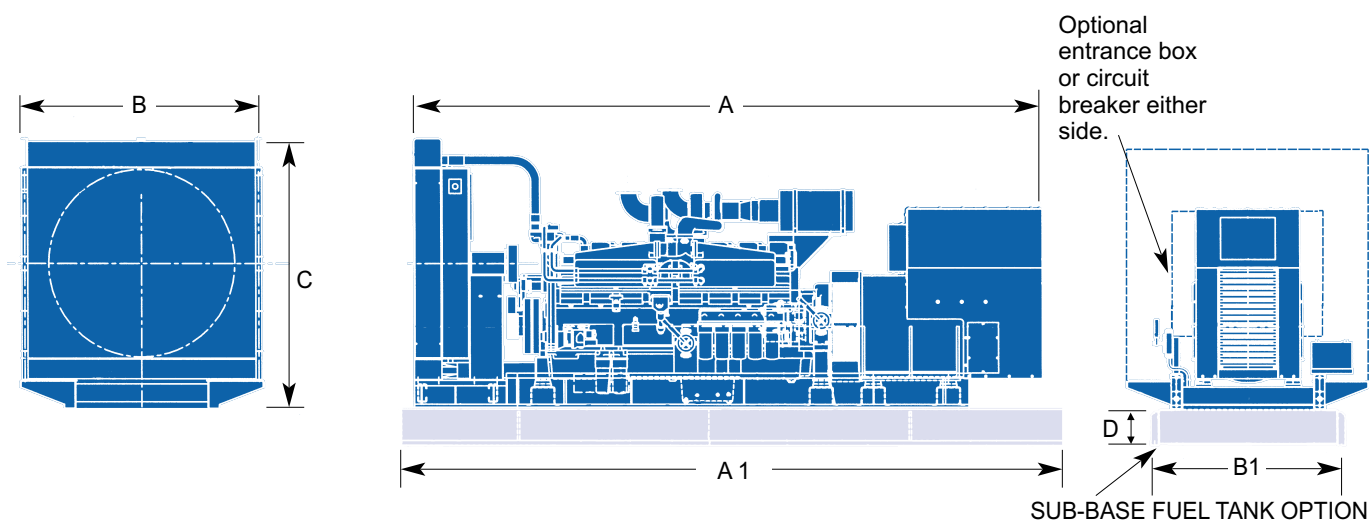
Standby: Continuous running at variable load for duration of an emergency.

†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				
DFLC	KTA50G3	5110	5150	1640	2000	2238	300	9800	10300	2690	1075
DFLG	KTA50G6	5110	5150	1640	2000	2238	300	9800	10300	2690	1075
DFLH	KTA50G7	5455	5690	1640	2033	2241	300	9943	10646	2755	1075
DFLE	KTA50G8	5866	5690	1640	2033	2333	300	11022	11700	2755	1075
DFLE	*KTA50G8	5880	5690	1640	2033	2771	300	11540	12100	2755	1075

*With 50°C 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.



**Power
Generation**

See your distributor for more information.

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