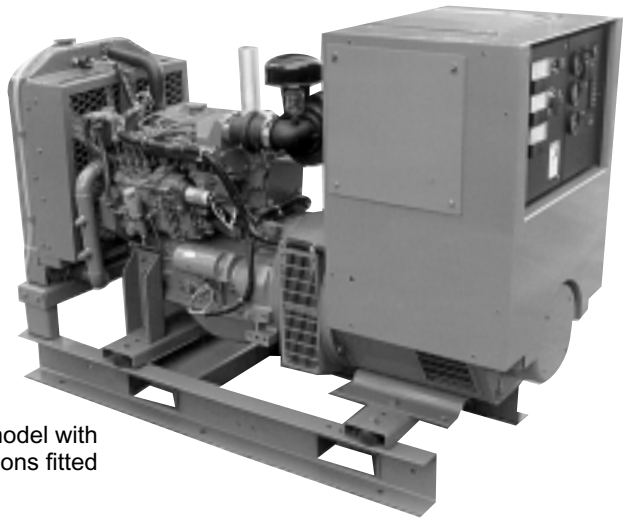
Petbow

Diesel Powered Generating Sets 26 kW - 44 kW 50 Hz B3 Series Engines



Typical model with options fitted

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
- Designed for power generation

Cooling System
- 50°C cooling package

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

Ratings
All kW Power ratings based on a 40°C ambient temperature reference

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

PCL 'Power Control' System
- CE compliant
- Full AC instrumentation
- Emergency stop button
- Safety shutdowns
- Key or Remote starting
- Engine gauges
- Over and under speed protection

Quality Assurance
Registered Firm Certificate Number FM509 in accordance with: BS EN ISO 9001

Quality Assurance Schedule 3420/1

One Source — Alternator — Controls — Generating Set — Engine — One Name

Cummins Power Generation, Cummins Engines and Newage Alternators are all part of the same group

50 Hz Ratings				
Model Prime	**Prime kW** (kVA)	**Model Standby**	**Standby kW** (kVA)	**Engine Model**
26 DGGC	**26** (32.5)	**30 DGGC**	**30** (37.5)	**B3.3G1**
40 DGHC	**40** (50)	**44 DGHC**	**44** (55)	**B3.3G2**

Specifications

Generator Set Performance

Voltage Regulation
Maintains voltage output to within ±1.5%.
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
In accordance with ISO 8528 performance class G2. Isochronous when electronic governor is fitted.

Random Frequency Variation
Will not exceed ±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 1.8%. Three-phase balanced load in the order of 5.0%.

Telephone Influence Factor (TIF)
TIF better than 50.
THF to BS 4999 Part 40 better than 2%.

Alternator Temperature Rise
Class H insulation. Temperature rise up to 125°C permitted.

Radio Interference
In compliance with BS 800 and VDE levels G and N.

Engine

Cummins B3.3G1 and B3.3G2 in-line direct injection 4-cylinder diesel engines.

Type
Water cooled, four cycle, naturally aspirated turbo charged and after cooled.

Construction
Two valves per cylinder, forged steel crankshaft and connecting rods, cast iron block.

Starting
12 volt negative earth. Battery charging alternator 37 amp on engine. Cranking current 550 amps at 0°C.

Fuel System
12 volt fail safe actuator. Spin-on paper element fuel filters with Zexel (Bosch) fuel pump injection system with integral mechanical governor. Dual flexible fuel lines and connectors.

Filters
Air cleaner with dry element and restriction indicator. Spin-on full flow lube oil filter.

Cooling
50°C radiator as standard . Stone guard. Oil cooler.

Alternator

Type
Brushless single bearing, revolving field, 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 BS 5625 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 type SX460 self-exciting, self-regulating.
Output windings with 2/3 pitch for improved harmonics and paralleling ability.
Close coupled engine/alternator for perfect alignment.

Compliance Standards

To BS4999/5000 pt 99,
VDE 0530, UTE5100,
NEMA MG1-22, CEMA,
IEC 34, CSA A22.2,
AS1359, BS 5514,
ISO 3046 and ISO 8528

Chassis

Fabricated and welded steel chassis
Built-in anti-vibration mountings
Integral fork lift pockets
Optional sub-base fuel tank with minimum eight hour capacity, dual flexible fuel lines, dial type fuel gauge and drain bung
Earthing cables. Lifting lugs

Finish
Etch undercoated and finished in high gloss durable green

General
Complete set of operating and instruction manuals

Generator Set Options

Engine
- o Heavy duty air cleaner
- o Coolant heater and thermostat
- o Fuel/water separator
- o Lead acid batteries, cable and fitted tray
- o NiCad batteries and cables
- o Sump drain pump
- o Oil and water drain taps
- o CE Compliance
- o Low coolant level switch
- o Tool kit

Cooling
- o Remote radiator cooling (built to order)
- o Oil temperature indication

Alternator
- o Anti-Condensation heater
- o Thermistors (built to order)
- o PMG Exciter and MX321 AVR
- o 105°C rise alternator

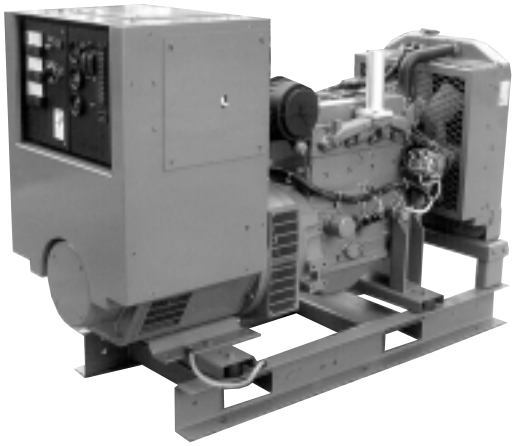
Exhaust System
- o Industrial type silencer
- o Residential type silencer
- o Length of flexible exhaust and bellows

Fuel System
- o Sub-base tank (single skin)
- o Sub-base tank (dual wall)
- o Manual fuel transfer pump
- o Automatic fuel transfer pump and switch
- o Free-standing 450, 900 and 1350 litre fuel tanks with stand
- o Options apply to base tanks or free-standing fuel tanks
- o High fuel level warning
- o Low fuel level warning
- o Low fuel level shutdown

Generator Set
- o Weather protective enclosures
- o Silenced enclosures
- o Export box packaging

Control Panel
- o See separate list on Control Panel page
- o 3 or 4 pole circuit breaker
- o Battery charger 5 amp or 10 amp
- o CE Compliance PCL system
- o Disconnect switch 3P or 4P
- o Auxiliary contacts
- o Shunt trip

Technical Data

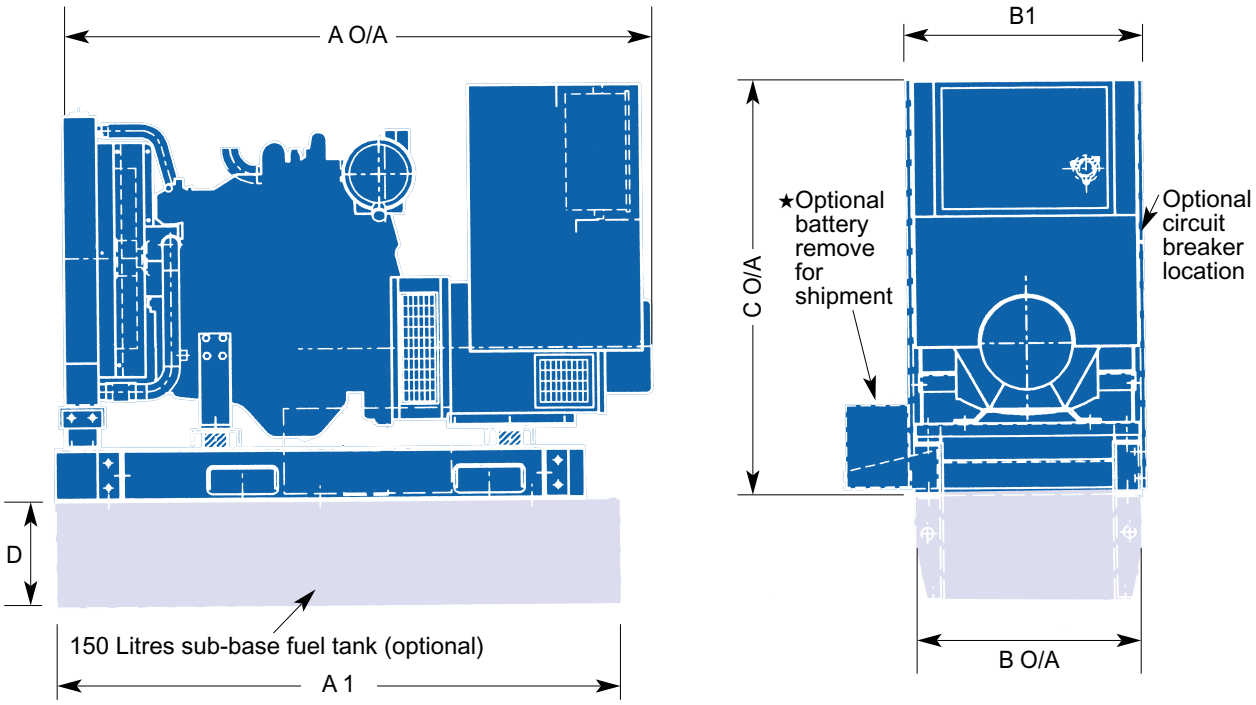


Generating Sets – 50 Hz

Set output	380-440 V 50 Hz	380-440 V 50 Hz
Prime at 40°C ambient	26 kWe 32.5 kVA	40 kWe 50 kVA
Model (Prime)	26 DGGC	40 DGHC
Standby at 40°C ambient	30 kWe 37.5 kVA	44 kWe 55 kVA
Model (Standby)	30 DGGC	44 DGHC
Engine Make	Cummins	Cummins
Model	B3.3G1	B3.3G2
Cylinders	Four	Four
Engine build	In-line	In-line
Governor/Class	Mechanical	Mechanical
Aspiration and cooling	Natural aspiration	Turbocharged
Bore and stroke	95 mm x 115 mm	95 mm x 115 mm
Compression ratio	18.2:1	17.0:1
Cubic capacity	3.26 Litres	3.26 Litres
Starting/Min °C	Unaided/–4°C	Unaided/–4°C
Battery capacity	126 A/hr	126 A/hr
Nett Engine output – Prime	31 kWm	45 kWm
Nett Engine output – Standby	34 kWm	49 kWm
Maximum load acceptance – single step	100%	100%
Speed	1500 rpm	1500 rpm
Alternator voltage regulation	±1.5%	±1.5%
Alternator insulation class	H	H
Single load step to NFPA110	100%	100%
Fuel consumption (Prime) 100% load	7.8 l/hr	11.86 l/hr
Fuel consumption (Standby) 100% load	9 l/hr	13.6 l/hr
Lubrication oil capacity	8 Litres	8 Litres
Base fuel tank capacity – open set	150 Litres	150 Litres
Coolant capacity – radiator and engine	11.5 Litres	14 Litres
Exhaust temp – full load prime	450°C	475°C
Exhaust gas flow – full load prime	445 m^3/hr	445 m^3/hr
Exhaust gas back pressure max	76 mm Hg	76 mm Hg
Air flow – radiator @ 12mm restriction*	6582 m^3/hr	4872 m^3/hr
Air intake – engine	125.7 m^3/hr	176.7 m^3/hr
Minimum air opening to room	0.63 m^2	0.63 m^2
Minimum discharge opening	0.47 m^2	0.47 m^2
Pusher fan head (duct allowance)	12 mm Wg	12 mm Wg
Total heat radiated to ambient	10.2 kW	11.6 kW
Derate factors	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.
Prime and standby ratings are outputs at 40°C (104°F) ambient temperature reference.
RTF = Refer to factory.
*Subject to factory verification.

Dimensions and Weights – 50 Hz



Model	Engine	Length A mm	A1 mm	Width B mm	B1 mm	Height C mm	D mm	Set weight kg wet	Set weight kg dry	Sub base Tank. Dry Weight kg	Sub base Tank. Wet Weight kg
DGGC	B3.3G1	1667	1600	645	635	1183	300	835	819	150	299
DGHC	B3.3G2	1760	1600	645	635	1183	300	890	871	150	299

NOTE 1:
★ Dry and Wet weights of sets do NOT include fuel tank or contents.

Set weights are **without** sub-base tank. Dimensions and weights are for **guidance** only.
Sub-base tank weights are for single skin tanks.
Do not use for installation design. Ask for certified drawings on your specific application.
Specifications may change without notice.

Petbow

Your local distributor: