

Diesel Powered Generating Sets C11 D5



Standard Genset Features

Kubota water cooled Diesel engine,
Oil and fuel filter fitted, water separator,
Lube-oil drain valve fitted
Electric starter & Charge alternator 12 v D.C.
Mechanical governor
Normal duty air filter
Single bearing alternator, class H/H , IP23
Standard voltage 400/230 volts 50 Hz
Exciter/Voltage reg - Torque Match as std
PCC0300
4 pole MCB
Welded steel base frame with A/V mounting,
Fork lift pockets in baseframe
Single skin metal fuel tank
Tank capacity of min 20 hours operation at
70% standby load
Loose 9 dB(A) silencer
Set mounted starting battery
Engine Tractor Blue & Alternator Munsell Jade Green
Radiator and Guarding black
Packing under shrunk plastic film
Operation & Maintenance manual
Standard set of labels

Generator Set Performance

Voltage Regulation
Maintains voltage output to within $\pm 1.0\%$.
At any power factor between 0.8 and 1.0
At any variations from No load to Full load.
At any variations from Cold to Hot.
At speed droop variations up to 4.5%.

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 1.8%. 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.

Radio Interference
In compliance with BS 800 and VDE levels

Generator Set Options

Mechanical Options
Compliance - CE Certification (Guarding)

Fuel sytem options
Low Fuel Level Shutdown

Exhaust Options
Exhaust Silencer - Industrial (9 dB), In-Line
Exhaust Silencer - Residential (25 dB), In-Line
Flexible and fixing kit for Industrial silencer
Flexible and fixing kit for Residential silencer

Warranty
Warranty - 5 Year Extended Standby Appln
Warranty - 2 Year Extended Prime Appln

Voltage Connections

277/480V, 3 Phase
254/440V, 3 Phase
240/416V, 3 Phase
230/400V, 3 Phase
220/380V, 3 Phase
115/200V, 3 Phase
110/190V, 3 Phase
220-240V, 1 Phase

Miscellaneous Options

Coolant heater -240/120V
Battery Charger 110-277V, 3A
Electronic Governing
Automatic Transfer Switches
Packing - Export Box

Compliance Standards

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

Engine Specification

Kubota D1703-BG
In-line In-direct injection
3-cylinder diesel engine.
Type
Water cooled, four cycle, naturally aspirated

Construction

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

Starting

12 volt negative earth. Battery charging
alternator 45 amp on engine. Cranking
current 240 amps at 0°C.

Fuel System

12 volt fail safe actuator. Spin-on paper
element fuel filters with Bosch fuel
pump injection system with integral
mechanical governor. Dual flexible fuel lines
and connectors. Standard fuel water
separator.

Filters

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

Cooling

50°C radiator as std

Oil cooler. Drain Tap

Alternator Specification

Type
Brushless single bearing, revolving field,
pole, drip proof, screen protected.
Class H Insulation, IP23 Protection
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
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.

Output windings with 2/3 pitch for improved
harmonics and paralleling ability.
Close coupled engine/alternator for perfect
alignment.

Model name	kVA		kWe	
	ESP	PRP	ESP	PRP
C11 D5	11	10	9	8

TECHNICAL DATA

Model	C11 D5	Speed	1500 rpm
Set output	380 440 V 50 Hz	Alternator voltage regulation	±1.0%
Prime Rating	8 kW _e 10 kVA	Alternator insulation class	H
Standby Rating	8.8 kW _e 11 kVA	Fuel consumption (Prime)	2.7 l/hr
Engine Make	Kubota	Fuel consumption (Standby)	3.2 l/hr
Engine Model	D1703-BG	Lubrication system oil capacity	7.0 Litres
Cylinders	Three	Base fuel tank capacity – open set	88 Litres
Engine build	In-line	Coolant capacity	4.75 Litres
Standard Governor/Class	Mechanical	Exhaust temp – prime	350°C
Aspiration and cooling	Naturally Aspirated	Exhaust gas flow – prime	37.5 l/s
Bore and stroke	87mm x 92.4mm	Exhaust gas back pressure max	53 mm Hg
Compression Ratio	23:1	Air flow – radiator*	0.46 m ³ /s
Cubic capacity	1.65 Litres	Air intake – engine (Prime)	17.83 Litre/s
Starting/Min °C	Glow plugs/-15°C	Minimum air opening to room	0.3 sq m
Battery capacity	60 A/hr	Minimum discharge opening	0.2 sq m
Gross Engine output – Prime	12.7 kW _m	Pusher fan head (duct allowance)*	10 mm Wg*
Gross Engine output – Standby	14.88 kW _m	Heat radiated by eng (Prime)	1.08

PRIME POWER (PRP)

Prime power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO8528-1.

A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation, in accordance with ISO 3046-1.

STANDBY POWER RATING (ESP)

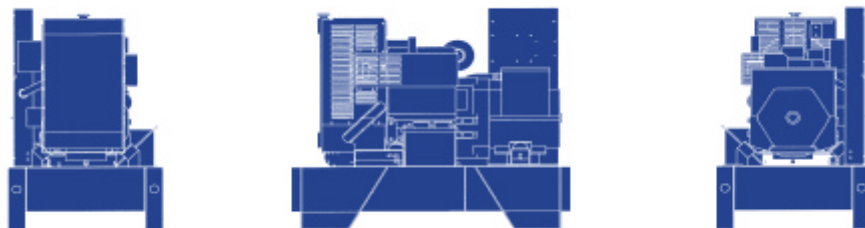
The Standby Power Rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, utility parallel or negotiated outage operation capability is available at this rating.

In installations served by unreliable utility sources (where outages last longer or occur more frequently), where operation is likely to exceed 200 hours per year, the prime power rating should be applied.

The Standby Power rating is only applicable for emergency and standby applications where the generator set serves as the back up to the normal utility source.

All ratings are based on the following reference conditions:

- Ambient temperature – 27°C - Altitude above sea level – 150 metres - Relative humidity – 60%



Dimensions and Weights

Model	Engine	Length (mm)	Width (mm)	Height (mm)	Set weight wet (Kg)	Set weight dry (Kg)	Enclosed Weight Wet (Kg)
C11 D5	D1703-BG	1300	730	1130	376	361	638

Specifications may change without notice

Cummins Power Generation Limited

Manston Park, Columbus Avenue
 Manston, Ramsgate
 Kent CT12 5BF, UK
 Telephone: +44 (0)1843 255000
 Fax: +44 (0)1843 255902
 Email: cp@cummins.com
 www.cumminspower.com
 www.cummins.com

See your distributor for more information.

