

Diesel Powered Generating Sets C11 D5



Standard Genset Features Generator Set Performance Generator Set Options

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
 PCC1300 with display unit
 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 8 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%.
Frequency Regulation
 Isochronous under varying loads from no
 load to 100% full load when electronic
 governor is fitted.
 Random Frequency Variation
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.

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
 Bellows and fixing kit for Industrial silencer
 Bellows 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 -240V
 Battery Charger 240V,3A
 Electronic Governing
 Automatic Transfer Switches
 Packing - Export Box

Engine Specification

Kubota D1703-BG
 In-line 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 625 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
 Stone guard. 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.

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

Model name	kVA		kWe	
	ESP	PRP	ESP	PRP
C11 D5	11	10	8.8	8

Technical Data

Model	C11 D5	Speed	1500 rpm
Set output	380-440 V 50 Hz	Alternator voltage regulation	±1.0%
Prime Rating	8 kWe 10 kVA	Alternator insulation class	H
Standby Rating	8.8 kWe 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	75 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*	0.34 m3/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	0.7 sq m
Battery capacity	60 A/hr	Minimum discharge opening	0.5 sq m
Gross Engine output – Prime	12.7 kWm	Pusher fan head (duct allowance)*	10 mm Wg*
Gross Engine output – Standby	14.88 kWm	Heat radiated by eng (Prime)	N/A

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)

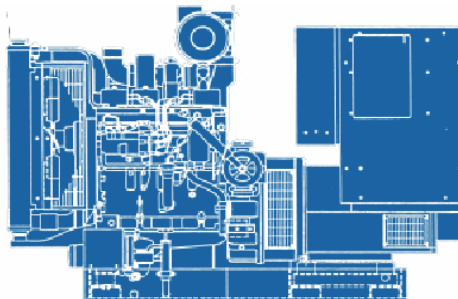
The Standby Power Rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, utility parallel or negotiated outage operation capability is available at this rating.

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

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