

Diesel Generator set Kubota series engine

11kVA - 15kVA 50Hz

11kW - 15kW 60Hz



> Specification sheet

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Description



This generator set is designed in facilities certified to ISO9001 and manufactured in facilities certified to ISO9001 or ISO9002.

This Cummins® Power Generation commercial generator set is a fully integrated power generation system, providing optimum performance, reliability, and versatility for stationary standby, prime power, and continuous duty applications.

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

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 G and N.

Features

Kubota Heavy Duty Engine - Rugged 3 cylinder industrial diesel delivers reliable power, low emissions and fast response to load changes.

Alternator - Low reactance 2/3 pitch windings; low waveform distortion with non-linear loads, fault clearing short-circuits capability, and class H insulation.

Control system - The PowerCommand® electronic control is standard equipment and provides total genset system integration, including auto remote start/stop, alarm and status message display.

Cooling System - Standard integral set-mounted radiator system, designed and tested for rated ambient temperatures, simplifies facility design requirements for rejected heat.

Enclosures - Optional weather-protective and sound-attenuated enclosures are available.

Warranty - Backed by a comprehensive warranty and worldwide distributor network.

Model	Standby Rating		Prime Rating	
	50Hz kVA (kW)	60Hz kW (kVA)	50Hz kVA (kW)	60Hz kW (kVA)
C11 D5	11 (8.8)	N/A	10 (8)	N/A
C15 D5	15 (12)	N/A	13 (10.4)	N/A
C11 D6	N/A	11 (13.75)	N/A	10 (12.5)
C15 D6	N/A	15 (18.75)	N/A	13 (16.25)

Generator Set Specifications

Governor Regulation Class	ISO8528
Voltage Regulation, No Load to Full Load	±1%
Random Voltage Variation	±1%
Frequency Regulation	Droop
Random Frequency Variation	±0.25%
Radio Frequency Emissions Compliance	In compliance with BS800 and VDE levels G and N

Engine Specifications

Design	4 Cycle, in-line, naturally aspirated
Bore	87mm
Stroke	92.4mm
Displacement	100
Cylinder Block	Cast iron, 3 cylinder
Battery Capacity	60 A/hr
Battery Charging Alternator	45 Amps
Starting Voltage	12 volt, negative ground
Fuel System	Direct Injection
Fuel Filter	Spin-on fuel filters with water separator
Air Cleaner Type	Dry replaceable element
Lube Oil Filter Type(s)	Spin on full flow filter
Standard Cooling System	50°C (122°F) ambient radiator

Alternator Specifications

Design	Brushless single bearing
Stator	2/3 pitch
Rotor	Single bearing, flexible disc
Insulation System	Class H
Standard Temperature Rise	163°C - 125°C Standby/Prime
Exciter Type	Self excited
Phase Rotation	A(U), B(V), C(W)
Alternator Cooling	Direct drive centrifugal blower fan
AC Waveform Total Harmonic Distortion	No load < 1.5%. Non distorting balanced linear load <5%
Telephone Influence Factor (TIF)	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	<2%

Available Voltages

50Hz Line – Neutral / Line - Line	60Hz Line – Neutral / Line - Line
<ul style="list-style-type: none"> • 240/416 • 230/400 • 220/380 	<ul style="list-style-type: none"> • 277/480 • 220/380 • 139/240

Generator Set Options

Engine

- Heavy Duty air filter
- Water jacket heater 220/240 v

Cooling

- Antifreeze 50/50 (Ethylene glycol)

Enclosure

- Sound attenuated enclosure

Alternator

- Alternator heater
- Exciter voltage regulator (PMG)

Control Panel

- 4 pole Main Circuit Breaker
- PCC1301

Silencer

- Critical silencer
- Residential silencer

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Control System - PCC0300



The PowerCommand™ 0300 Control is a microprocessor-based generator set monitoring, and control system. The control provides a simple operator interface to the generator set, manual and remote start / stop control, shutdown fault indication and an LCD hours counter.

The PowerCommand™ 0300 generator set control is suitable for use on a wide range of generator sets in non-paralleling applications.

The PowerCommand™ Control is compatible with alternators up to 305VAC line to neutral, and can be configured for 50Hz or 60Hz operation.

Power for the control is derived from the generator set starting batteries. The control functions over a voltage range from 8VDC to 35VDC.

Major Features

- 12 or 24 VDC Battery Operation.
- Engine Starting - Includes a steady state outputs to start the engine, fuel shut off (FSO) and glow plugs.
- Start disconnect is achieved by monitoring main alternator frequency.
- Remote Start capability – Interface to transfer switch
- Engine Protection – Overspeed, Low Oil Pressure, and High Engine Temperature

Control System

Includes all functions to locally or remotely start and stop, and protect the generator set.

Key switch – OFF and MANUAL/AUTO

OFF Mode - the generator set is shut down and cannot be started; as well as resets faults.

MANUAL/AUTO Mode - The manual start pushbutton and remote start input become enabled.

Manual Start Button – This button will initiate a genset start sequence in the MANUAL/AUTO mode.

LED Indicating Lamps – The control includes LED lamp indication for the following functions:

Fail to start

Overspeed, underspeed/sensor fail

Low oil pressure

High engine temperature

Battery charging alternator fail

Preheat (Glow plugs)

LCD Engine Hour Counter – The counter will increment whenever the engine is running

Operator Adjustments – The operator may select 50Hz or 60Hz nominal frequency operation.

Remote Start – In the MANUAL/AUTO mode the control accepts a start signal from remote devices

The control system includes solid state outputs for engine preheat, starter control, fuel solenoid control.

Base Engine Protection

Overspeed shutdown

Low oil pressure

High engine temperature shutdown

Underspeed temperature shutdown

Underspeed/sensor fail shutdown

Fail to start

Battery charging alternator fail warning

Options

Refer to the PowerCommand Controls Technical Bulletin for detailed information (TBA)

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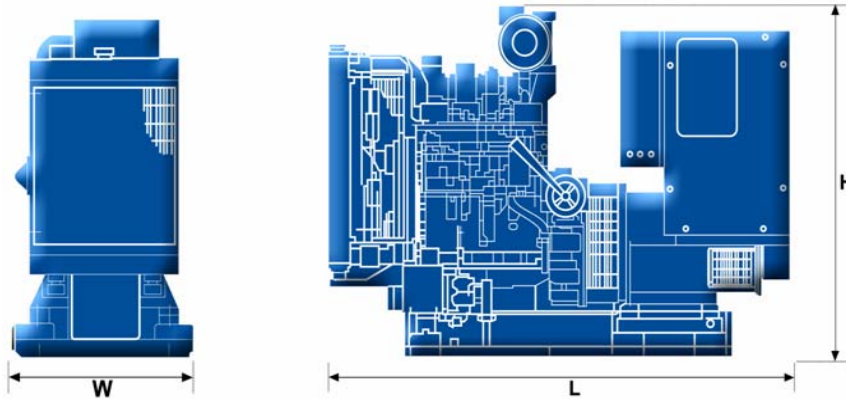
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Ratings Definitions

Standby: Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Limited Time Running: Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power is in accordance with ISO 8528.	Prime (Unlimited Running Time): Applicable for supplying power to varying electrical load for unlimited hours. Prime Power is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Base Load (Continuous): Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous power in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.
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This outline drawing is to provide representative configuration details for Model series only.
See respective model data sheet for specific model outline drawing number.

Do not use for installation design.

Model	Length (mm)	Width (mm)	Height (mm)	Set weight dry kg	Set weight wet kg
C11 D5	1300	730	1130	361	376
C15 D5	1300	730	1130	370	385
C11 D6	1300	730	1130	361	376
C15 D6	1300	730	1130	370	385

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