



Rental Power QSB7 series engine

150 kVA – 200 kVA 50 Hz
135 kW – 180 kW 60 Hz



Description

This Cummins® commercial generator set is a fully integrated power generation system, providing optimum performance, reliability, and versatility for Prime Power.

Cummins rugged heavy-duty engine -

Rugged 4-cycle industrial diesel delivers reliable power, low emissions and fast response to load changes.

Permanent Magnet Generator (PMG) - Offers enhanced motor starting and fault clearing short circuit capability.

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

Cooling system - Standard integral set-mounted radiator system, designed and tested for rated ambient temperatures.

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

Enclosures - Sound-attenuated with built in fork pockets and easy access to serviceable items including controls, cable entry and radiator.

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

Model	Standby rating		Prime rating		Emissions compliance	Controller	Datasheet
	50 Hz kVA (kW)	60 Hz kVA (kW)	50 Hz kVA (kW)	60 Hz kW (kVA)			
C150 D2R	165 (132)	150 (188)	150 (120)	135 (169)	EU SIIIA	1.2/3.3	EMERD-5930
C200 D2R	220 (176)	200 (250)	200 (160)	180 (225)	EU SIIIA	1.2/3.3	EMERD-5931

Generator set specifications

Governor regulation class	ISO 8528
Voltage regulation, no load to full load	± 1%
Random voltage variation	± 1%
Frequency regulation	Isochronous
Random frequency variation	± 0.5%
EMC compatibility	BS EN61000-6-4 / BS EN61000-6-2

Engine specifications

Design	4 cycle, in-line, turbocharged, charge air-cooled
Bore	107 mm
Stroke	124 mm
Displacement	6.7 L
Cylinder block	Cast iron, 6 cylinder
Battery capacity	75 AH
Battery charging alternator	100 Amps
Starting voltage	12 Volt, negative ground
Fuel system	Direct injection
Fuel filter	Spin on fuel filters with water separator
Air cleaner type	Dry replacement element
Lube oil filter type(s)	Spin on full flow filter
Standard cooling system	50 °C ambient radiator

Alternator specifications

Design	Brushless, single bearing, revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible disc
Insulation system	Class H
Standard temperature rise	Prime 125 °C temp rise @ 40 °C ambient Standby 163 °C temp rise @ 27 °C ambient
Exciter type	Self-excited or separately excited by PMG
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower fan
AC waveform total harmonic distortion (THDV)	No load < 1.5%. Non distorting balanced linear load <5%
Telephone influence factor (TIF)	< 50% per NEMA MG1-122/43
Telephone harmonic factor (THF)	< 2%

Available voltages

50 Hz Line – Neutral/Line - Line		60 Hz Line - Neutral/Line - Line	
• 255/440	• 115/200	• 277/480	• 139/240
• 240/416	• 110/190	• 266/460	• 133/230
• 230/400	• 127/220	• 255/440	• 127/220
• 220/380		• 240/416	• 120/208

Generator set features*

Engine

- Heavy duty air cleaner
- Water jacket heater 240 V – with connector plug
- Dual frequency
- Oil sump pump

Enclosure

- Sound attenuated canopy
- Earthing studs on each corner
- Power receptacle socket options
- Easy cleaning access to radiator
- Built-in lifting points and forklift pockets

Fuel tank

- Dual wall 110% fully contained design
- Bund alarm and bund pump
- Low fuel level warning or shutdown
- High fuel level warning

- Three way fuel valve with quick connects
- Fuel capacity: 1036 L – 110% bunded

Control panel

- PowerCommand 1.2 or 3.3
- Auto-start on panel
- Shutdown audible alarm
- Switchable earth fault shutdown
- Accessible neutral-earth link
- Circuit breaker door open switch
- Low coolant level shutdown

Circuit breaker

- 4 pole main circuit breaker
- Motorised 4 pole circuit breaker with 3.3 control
- Aux contacts and trip alarm
- Shunt trip – 12 V DC

Alternator

- Alternator heater – 240 V – with connector plug
- Exciter voltage regulator (PMG)

Warranty

- Base warranty options – 1 year unlimited hours or 3 years 3000 hours

Battery

- Optima Absorbed Glass Mat (AGM) RedTop battery
- Battery isolation switch standard
- Battery charger option
- Low battery voltage warning

*Note: Some options may not be available on all models - consult factory for availability.

PowerCommand 1.2 control system

The PowerCommand control system is an integrated microprocessor based generator set control system providing voltage regulation, engine protection, alternator protection, operator interface and isochronous governing. Refer to document S-1567 for more detailed information on the control.



Major features include:

- Power management – Control function provides battery monitoring and testing features and smart starting control system.
- Digital voltage regulation – Single phase full wave SCR type regulator.
- Communications interface – Control comes standard with PCCNet and Modbus[®] interface.
- Regulation compliant – Prototype tested: CE, UL, and CSA compliant.
- Service - InPower™ PC-based service tool available for detailed diagnostics, setup, data logging and fault simulation.
- Easily upgradeable – PowerCommand controls are designed with common control interfaces.
- Reliable design – The control system is designed for reliable operation in harsh environment.

Operator panel features

- 128 x 128 pixels graphic LED backlight LCD
- Auto, manual, start, stop, fault reset and lamp test/panel lamp switches.
- Alpha-numeric display with pushbuttons.
- LED lamps indicating genset running, remote start, not in auto, common shutdown, common warning, manual run mode, auto mode and stop mode.
- Multiple language support.

Alternator data

- Line-to-Neutral and Line-to-Line AC volts
- 3-phase AC current
- Frequency
- kVA (three phase and total)

Engine data

- DC voltage
- Engine speed
- Lube oil pressure
- Coolant temperature

Other data

- Genset model data
- Start attempts, starts, running hours, kVA hours
- Fault history and control hours time stamp for up to 10 events
- Data logging and fault simulation (requires InPower).

Standard control functions

Digital governing

- Integrated digital electronic isochronous governor
- Temperature dynamic governing
- Configurable inputs: Control includes (4) input signals from customer

Digital voltage regulation

- Integrated digital electronic voltage regulator
- Line to line voltage sensing
- Configurable torque matching

Engine protection

- Battery voltage monitoring and protection
- Overspeed shutdown
- Low oil pressure warning and shutdown
- High/low coolant temperature warning or shutdown
- Low coolant level warning or shutdown
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Cranking lockout
- Sensor failure indication
- Low fuel level warning or shutdown (optional)
- Fuel-in-rupture-basin warning or shutdown (optional)
- Full authority electronic engine protection
- Battle short to allow some shutdown faults to be Bypassed

Control functions

- Time delay start and cool down
- Cycle cranking
- Configurable inputs (4) and outputs (2)
- Remote emergency stop

PowerCommand 3.3 control system with Masterless Load Demand (MLD)

The PowerCommand control system is an integrated microprocessor based generator set control system providing voltage regulation, engine protection, alternator protection, operator interface



and isochronous governing. Masterless Load Demand-capable generators are equipped with an additional s-CAN network connection that allows sharing of information amongst paralleled generator sets. MLD has been designed for hassle-free installation, commission and operation.

- AmpSentry™ – Includes integral AmpSentry protection, which provides a full range of alternator protection functions that are matched to the alternator provided.
- Power management – Control function provides battery monitoring and testing features and smart starting control system.
- Advanced control methodology – Three phase sensing, full wave rectified voltage regulation, with a PWM output for stable operation with all load types.
- Communications interface – Control comes standard with PCCNet and Modbus interface.
- Regulation compliant – Prototype tested: UL, CSA and CE compliant.
- Service - InPower™ PC-based service tool available for detailed diagnostics, setup, data logging and fault simulation.
- Reliable design – The control system is designed for reliable operation in harsh environments.
- Multi-language support

Emergency Standby Power (ESP):

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 Power (LTP):

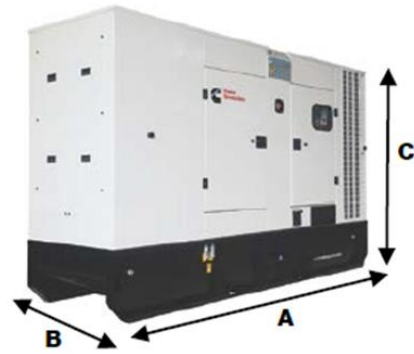
Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.

Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) 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) Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.



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	Dim 'A' (m)	Dim 'B' (m)	Dim 'C' (m)	Set weight dry* (kg)	Set weight wet* (kg)
C150 D2R	3.9	1.1	2.2	2922	2948
C200 D2R	3.9	1.1	2.2	3018	3044

* Note: Weights represent a set with standard features. See outline drawings for weights of other configurations.

Codes and standards

	This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.	2000/14/EC	All enclosed products are designed to meet or exceed EU noise legislation 2000/14/EC step 2006.
	This generator set is available with CE certification.	ISO 8528	This generator set has been designed to comply with ISO 8528 regulation

For more information contact your local Cummins distributor or visit power.cummins.com

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