



# Rental Product Specifications QSB7 series engine



## Description

This Cummins® 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.

## Features

**Cummins heavy-duty engine** - Rugged 4-cycle industrial diesel engine delivers reliable power, low emissions and fast response to load changes.

**Optional 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, simplifies facility design requirements for rejected heat.

**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.

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

## Rental Genset features-

- Genset lifting from chassis
- Exclusive heavy duty drag bar on both sides of chassis
- External fuel filling and fuel Indicator
- Battery Isolator
- Single Point lifting from enclosure
- Fuel system with 3 way valve

Genset Model	Engine Model	Standby rating		Prime rating		Standard Controller	Emissions	Data sheet
		50 Hz kVA (kWe)	60 Hz kWe (kVA)	50 Hz kVA (kWe)	60 Hz kWe (kVA)			
C200D2R	QSB7G5	220 (176)	200 (250)	200 (160)	180 (225)	PC1.2	EU SIIIA	D-6570

## Generator set specifications

Governor regulation class	ISO 8528 G3
Voltage regulation, no load to full load	± 1%
Random voltage variation	± 1%
Frequency regulation	Isochronous
Random frequency variation	± 0.25%
EMS compatibility	In compliance with VDE levels G and N

## Engine specifications

Design	4 cycle, in-line, turbocharged
Bore	107 mm
Stroke	124 mm
Displacement	6.69 liter (408.0 in <sup>3</sup> )
Cylinder block	Cast iron, 6 cylinder
Battery capacity	100 Ah
Battery charging alternator	70 amps
Starting voltage	12 volt, negative ground
Fuel system	Direct injection
Fuel filter	Strata pore fuel filter
Air cleaner type	Heavy duty air cleaner
Lube oil filter type(s)	Strata pore lube oil filter
Standard cooling system	122 °F (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	Standby 125-163 °C
Exciter type	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 < 3%
Telephone Influence Factor (TIF)	< 50% per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	< 2%

## Available voltages

50 Hz Line-Neutral/Line-Line		60 Hz line-Neutral/Line-Line	
• 110/190	• 127/220	• 120/208	• 240/416
• 115/200	• 230/400	• 127/220	• 254/440
• 120/208	• 240/415	• 132/230	• 266/460
		• 139/240	• 277/480
		• 220/380*	

\*Derate may be applicable at this voltage. Please consult factory for details.

## Generator set options

### Engine

- Water jacket heater 220/240V

### Cooling

- Antifreeze 50/50 (Ethylene glycol)

### Enclosure

- Silent power canopy

### Base frame

- 12hrs. dual wall fuel tank
- 24hrs. single wall fuel tank
- 24hrs. dual wall fuel tank

### Alternator

- Alternator heater
- Exciter voltage regulator (PMG)

### Control panel

- PowerCommand 1.2
- PowerCommand 3.3
- PowerCommand 3.3 with MLD
- Manual 3 or 4 pole main circuit breaker
- Motorised 3 or 4 pole circuit breaker

### Control Panel

- DeepSea Controller model 8620 MKII
- ComAp Controller model IG3-200
- DEIF Controller model AGC150

### Other Accessories

- Quick connector Powersafe box with Mating connector
- Quick connector Powersafe box without mating connector

- Quick connector Individual panel connector with mating connector.
- Quick connector Individual panel connector without mating connector.

### Warranty

- 1 year unlimited prime application warranty

### Silencer

- 32 dB attenuation for Enclosed set

### Genset Lifting Arrangement

- Enclosure lifting Provision
- Chassis lifting Provision

### Battery Isolator

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

## Control system

**PowerCommand 1.2** - The PowerCommand control system is a microprocessor-based generator set monitoring, metering and control system designed to meet the demands of today's engine driven generator sets. The integration of all control functions into a single control system provides enhanced reliability and performance compared to conventional generator set control systems. These control systems have been designed and tested to meet the harsh environment in which gensets are typically applied.

### Description

The PowerCommand generator set control is suitable for use on a wide range of generator sets in non-parallel applications. The PowerCommand control is compatible with shunt or PMG excitation style. It is suitable for use with connectable or non reconnectable generators, and it can be configured for any frequency, voltage and power connection from 120-600 VAC Line-to-Line.

Power for this control system is derived from the generator set starting batteries. The control functions over a voltage range from 8 VDC to 30 VDC.

### Major features

- 128 x 128 pixels graphic LED backlight LCD.
- Digital voltage regulation. Single phase full wave SCR type regulator compatible with either shunt or PMG systems. Digital engine speed governing (where applicable).
- Generator set monitoring and protection.
- Advanced over-current protection.
- Modbus® interface for interconnecting to customer equipment.
- 12 and 24 VDC battery operation.
- Warranty and service. Backed by a comprehensive warranty and worldwide distributor service network.

### Base control functions

#### HDMI capability

**Operator adjustments** – The HMI includes provisions for many set up and adjustment functions.

**Data logs** – Includes engine run time, controller on time, number of start attempts.

**Fault history** – Provides a record of the most recent fault conditions with control hours' time stamp. Up to 5 events are stored in the control non-volatile memory.

#### Alternator data

- Voltage (single or three phase Line-to-Line and Line-to-Neutral).
- Current (single or three phase).
- KVA (three phase and total).
- Frequency.

#### Engine data

- Starting battery voltage.
- Engine speed.
- Engine temperature.
- Engine oil pressure.
- Partial Full Authority Engine (FAE) data (where applicable).

**Service adjustments** – The HMI includes provisions for adjustment of generator set control functions. Adjustments are protected by a password. Functions include:

- Engine speed governor adjustments.
- Voltage regulation adjustments.
- Cycle cranking.
- Configurable fault set up.
- Configurable output set up.
- Meter calibration.
- Units of measurement.

### Protective functions

#### Protective functions include:

- Battle short mode.
- Configurable alarm and status inputs.
- Emergency stop.
- Hydro mechanical fuel system engine protection.
- Overspeed shutdown.
- Low lube oil pressure warning.
- High lube oil temperature warning/shutdown.
- High engine temperature warning/shutdown.
- Low coolant temperature warning.
- Sensor failure indication.
- Full authority electronic engine protection.
- General engine protection.
- Low and high battery voltage warning.
- Weak battery warning.
- Fail to start (overcrank) shutdown.
- Fail to crank.
- Cranking lockout.

#### Alternator protection

- High AC voltage shutdown (59).
- Low AC voltage shutdown (27).
- Overcurrent warning/shutdown.
- Under frequency shutdown (81 u).
- Over frequency shutdown/warning (81 o).
- Loss of sensing voltage shutdown.
- Field overload shutdown.

### Field control interface

#### Input signals to the base control include

- Remote start.
- Local and emergency stop.
- Configurable inputs: Control includes (4) input signals from customer.

#### Output signals from the control include

- Configurable relay outputs: Control includes (2) relay output contacts rated at 2 A.



PowerCommand 1.2 control operator / display panel

## Ratings definitions

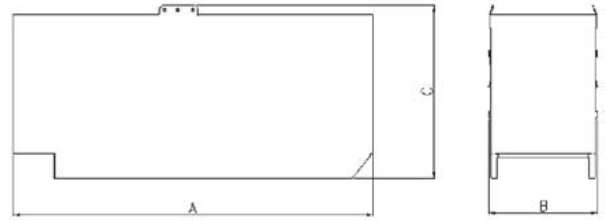
### Emergency Standby Power (ESP):

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.

### 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.

### ENCLOSED



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	Enclosed				
	Length "A" mm	Width "B" mm	Height "C" mm	Dry Wt.* kg	Wet Wt.* kg
<b>C200D2R</b>	4209	1130	2517	3173	3999

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

## Codes and standards

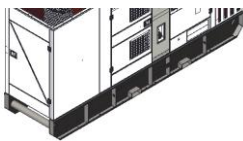
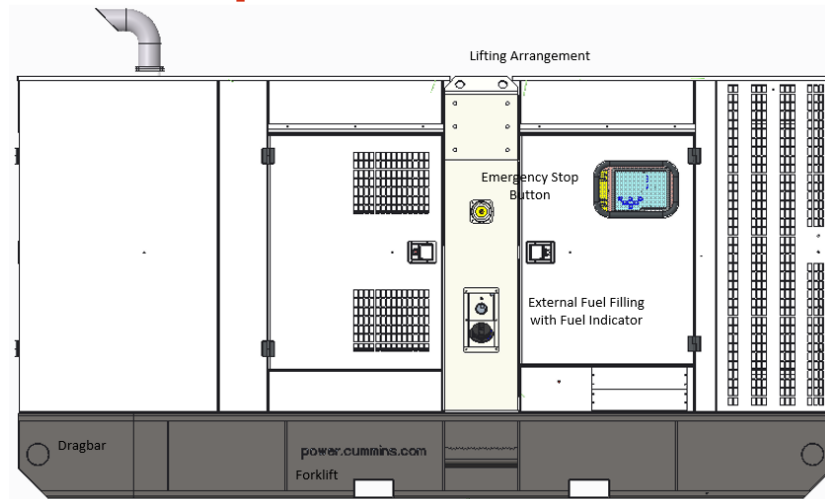
	<p>This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.</p>		<p>The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.</p>
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For more information contact your local Cummins distributor or visit [power.cummins.com](http://power.cummins.com)

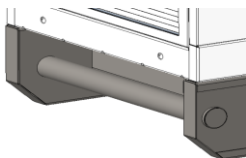
**Our energy working for you.™**



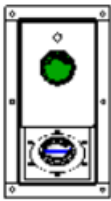
# Rental Product Specifications



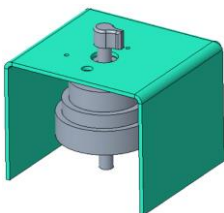
- Genset lifting from chassis- Four point chassis lifting arrangement ensures the safe & stable lifting of genset.



- Dragbar – Exclusive heavy duty dragbar on chassis front and back for auxiliary handling



- External fuel filling and fuel Indicator - Guarantees the safety of access to the equipment, having external access to the supply and visualization of the fuel volume in tank



- Battery Isolator- Genset Power system battery cut off switch, Ensuring greater protection and easy serviceability during maintenance

For more information contact your local Cummins distributor  
or visit [power.cummins.com](http://power.cummins.com)

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