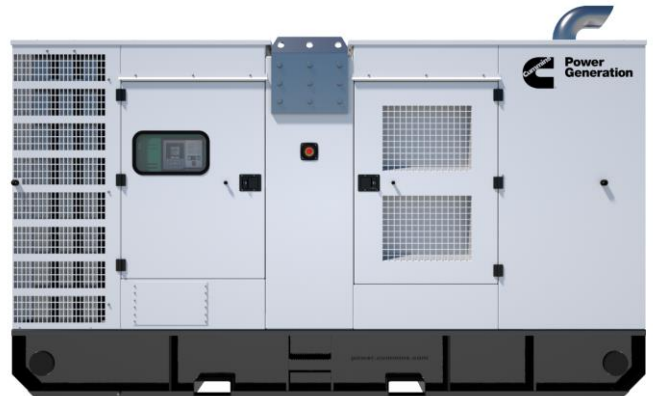




# Rental Product Specifications QSL9 series engine



## Description

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

## Rental Genset 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 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 the 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		Emissions compliance TA Luft/ EU Stage/EPA	Data sheets	
		50 Hz kVA (kWe)	60 Hz kWe (kVA)	50 Hz kVA (kWe)	60 Hz kWe (kVA)		50 Hz	60 Hz
C300D2R	QSL9-G5	330 (264)	300 (375)	300 (240)	275 (344)		D-6572	D-6572

## Generator set specifications

Governor regulation class	ISO8528 G3 for C300/330 D5/e, C275/300 D6/e ISO8528 G2 for C250/275 D5/e, C230/250 D6/e
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	114 mm (4.5 in.)
Stroke	145 mm (5.7 in.)
Displacement	8.8 liter (543 in <sup>3</sup> )
Cylinder block	Cast iron, 6 cylinder
Battery capacity	100 Ah
Battery charging alternator	70 amps
Starting voltage	24 volt, negative ground
Fuel system	Direct injection
Fuel filter	Spin on fuel filters with water separator, StrataPore™ technology, extended life
Air cleaner type	Heavy duty, dry replaceable element, OptiAir™ technology, 2-stage air filters
Lube oil filter type(s)	Spin on full flow filter, StrataPore technology, extended life
Standard cooling system	122 °F (50 °C) ambient radiator for QSL9-G5 powered sets

## 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	• 255/440	• 127/220
• 230/400	• 127/220	• 220/380*	• 120/208
• 220/380		• 240/416	• 115/200

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

## Generator set options

### Engine

- Water jacket heater 120 or 240 V

### Alternator

- Alternator heater
- Exciter voltage regulator (PMG)

### Circuit breaker

- 3 pole main circuit breaker std. scope, 4 pole as an option
- Motorised 3 or 4 pole circuit

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### breaker

- Aux contacts and trip alarm
- Shunt trip – 24 V dc

### Fuel tank

- Low fuel level warning or shutdown
- High fuel level warning
- Extended fuel tank capacity: 691 / 1200 liters
- 12 hrs. dual wall fuel tank

### Control Panel

- PowerCommand 3.3 – MLD
- AC output bargraph
- Shutdown audible alarm
- Earth fault shutdown
- DeepSea Controller model 8620 MKII
- ComAp Controller model IG3-200
- DEIF Controller model AGC150

## Generator set options (continued)

### 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

### Battery charger

- Set mounted
- Standalone

### Battery Isolator

\*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

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

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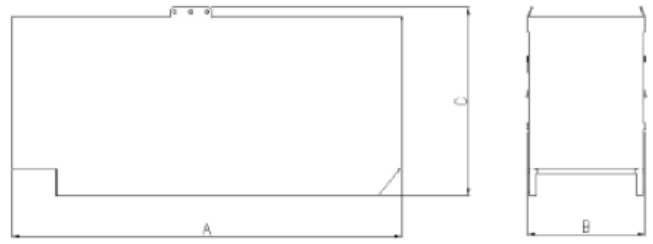
**Emergency Standby Power (ESP):**

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 Set



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
C300D2R	4261	1424	2762	4547	5276

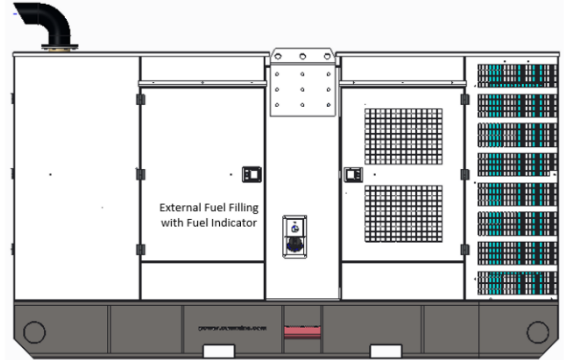
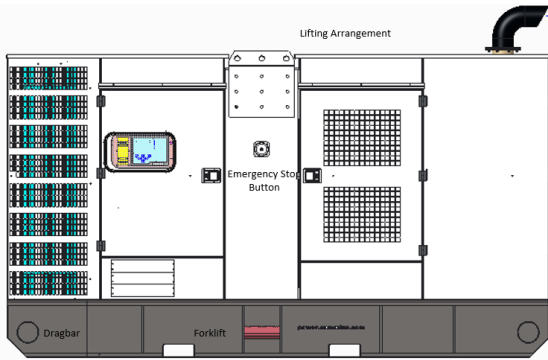
\* Note: Weights represent a set with standard features. See outline drawings for weights of other configurations.

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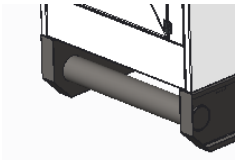
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# Rental Product Specifications



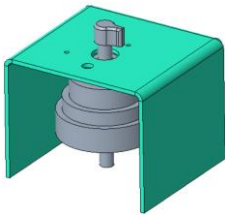
- Genset lifting from chassis- Four point chassis lifting arrangement ensures the safe & stable lifting of genset.



- Dragbar – Exclusive heavy duty bar 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

## 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><b>ISO 8528</b></p>	<p>This generator set has been designed to comply with ISO 8528 regulation.</p>
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**Warning:** Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

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

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