

# Rental Power

## 80 kW



> **Specification sheet**

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**Power  
Generation**

### Description

This Cummins Power Generation rental package is a fully integrated mobile power generation system, providing optimum performance, reliability and versatility for standby and prime power applications.

### Features

#### Cummins diesel engines

- U.S. EPA Tier III compliant
- Rugged 4-cycle industrial diesel engine with excellent transient performance
- Lightweight, compact and excellent fuel economy
- 2-stage spin on fuel filter w/pre-filter water separator with drain
- Equipped with heavy duty, 2-stage air cleaners with dust ejector

#### Control features

- The most advanced, reliable and capable generator set control system on the market today
- Controls provide precise frequency and voltage regulation, alarm and status message display in one easy to operate customer interface
- Remote monitoring and operation ready
- Auto shutdown at fault detection

#### Engine controls

- Oil Pressure and Water Temp Gauge
- Fuel Level Gauge & Battery Voltage Gauge
- Hour meter

#### Stamford alternators

- 12-lead reconnectable alternators fitted with voltage selection switch
- Permanent magnet excitation for improved performance in non-linear load applications

#### Rental package enclosure

- Heavy duty trailer package with pintle hitch and electric or hydraulic brakes
- Sound attenuated, white powder coated lockable enclosure
- 27 hour fuel tank (100% prime) with gauge
- Roof mounted, single point lift
- Cooling system rated for 122° F (50° C) ambient
- Complete engine fluid containment reservoir
- DOT approved trailer with light package, replaceable fenders and jack stand
- Voltage selector switch
- Shore power (120 VAC) - No breakers in shore power connection. Shore power loads are coolant heater (option) and battery charger (option). Connection: 15A/120V flanged male receptacle (5-20 flanged inlet).

Model	Voltages (V)	Standby rating		Prime rating		Engine model	Alternator model
		60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)		
C80D6RT	208/480	80 (100)		72 (90)		QSB5-G2	UCI224G
	480/600 switchable	80 (100)		72 (90)		QSB5-G2	UCI274C

## Engine specifications

Engine model	QSB5-G2
Alternator data sheet	UCI224G (208/480), UCI274C (480/600 switchable)
Engine data sheet	DS-92203
Tier rating	Tier III
Design	4 cycle, In-Line, turbocharged and charge air cooled
Bore	107 mm (4.21 in.)
Stroke	124 mm (4.88 in.)
Displacement	4.5 liters (272 in <sup>3</sup> )
Cylinder block	Cast iron, In-Line 4 cylinder
Battery capacity	1000 cca, GR31
Battery charging alternator	100 amps
Starting voltage	12 volt, negative ground
Fuel system	Direct injection: number 2-D per ASTM D975 diesel fuel
Fuel filter	2-stage spin on fuel filter with water separator
Air cleaner type	2-stage, dry replaceable element with dust ejector
Lube oil filter type(s)	Single spin-on, full flow
Standard cooling system	122° F (50° C) ambient radiator

## Alternator specifications

Design	Brushless, 4 pole, drip proof revolving field
Stator	2/3 pitch
Rotor	Single bearing flexible disc
Insulation system	Class H per NEMA MG1-1.65 (208/480 VAC) Class F per NEMA MG1-1.65 (480/600 VAC switchable optional)
Standard temperature rise	115/50° C prime (208/480 VAC) 95/50° C prime (480/600 VAC switchable)
Exciter type	PMG (Permanent Magnet Generator)
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower fan
AC waveform total harmonic distortion	< 1.5% no load, < 5% non-distorting balanced linear load
Telephone influence factor (TIF)	< 50 per NEMA MG1-22.43
Telephone harmonic factor (THF)	< 2%

## Power capability specifications (Assume power factor = 0.80 for 3 phase amps)

	Standby rating			
	240 V, 1 phase Amps	208 V, 3 phase Amps	480 V, 3 phase Amps	600 V, 3 phase Amps
<b>C80D6RT</b>	240	278	120	96

## Electrical power panel specifications

Model voltage	120 V duplex receptacles	240 V twist	Load lug connection (stud diameter)	Load lug circuit breakers
<b>120/480 Volt</b>	2 - 20 Amp	3 - 50 Amp	1/2 inch	225 Amp
<b>480/600 Volt switchable</b>	0	0	1/2 inch	150 Amp

## Site derating factors

The unit may be operated at 1800 rpm up to 3300 ft (1005 m) and 122° F (50° C) without power deration. For sustained operation above these conditions, derate by 3 % per 1650 ft (500 m), and 22% per 10° C (18° F).

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## Control system

### PowerCommand control

- Integrated automatic voltage regulator and engine speed governor
- Control components designed to withstand the vibration levels typical in generator sets

### Standard control description

- Analog AC frequency meter
- Analog AC voltage meter
- Cycle cranking control
- Digital display panel
- Idle mode control
- Menu switch
- Panel backlighting
- Remote starting, 12 V, 2 wire
- Reset switch
- Run-off-auto switch
- Sealed front panel, gasketed door
- Self diagnostics
- Voltmeter/ammeter phase selector switch

### Standard performance data warnings

- High coolant temperature
- High DC voltage
- Low coolant temperature
- Low DC voltage
- Low oil pressure
- Over current
- Weak battery
- Over speed
- Under frequency
- Intake manifold temperature OOR high/low
- Intake manifold temperature high
- Water in fuel OORH/OORL
- General engine fault
- Coolant level OOR high/low

### Standard protection functions

- Voltmeter/ammeter phase selector
- Warnings
- High coolant temperature
- High DC voltage
- Low coolant temperature
- Low DC voltage
- Low oil pressure
- Over current
- Weak battery

### Shutdowns

- Emergency stop local/remote
- Fail to crank
- High AC voltage
- High coolant temperature
- Low coolant level
- Low AC voltage
- Low oil pressure

- Over current
- Over speed
- Under frequency
- Intake manifold temperature high
- Fail to start/stop
- Over frequency
- Alternator reconnecting switch operated (breaker closed)

### Agency approvals

- NFPA110 for Levels 1 or 2 systems
- ISO 8528-4: 1993 Compliance, Controls and Switchgear
- CE Marking
- EN 50081-1, 2 Residential/Light Industrial Emissions or Industrial Emissions
- EN 50082-1.2
- ISO 7637-2, Level 2: DC supply surge test
- Mil Std 202C, Method 101 and ASTM B117: Salt Fog Test
- Designed and manufactured in ISO 9001 certified facilities. Suitable for use on generator sets that are UL 2200 Listed



### Standard generator electrical features

- Multiple voltage selector switch (480/277 VAC/3 phase or 240/139 VAC/3 phase or 240/120 VAC/1 phase)
- Potentiometer adjustable to 208/120 VAC/3 phase
- Single phase convenience receptacles
- Voltage adjustment potentiometer
- Distribution panel with L1, L2, L3 neutral and ground
- Main line shunt trip type circuit breaker
- Auto start-stop with remote contacts
- Over current sensing
- 3 available auxiliary connections

### Rental package options

- Heavy duty jack stand – center mounted
- Immersion style coolant heater
- Tank style coolant heater
- Low coolant shutdown system (standard on 300 kW)
- Phase selector switch on control panel
- Battery disconnect switch
- Cam lock distribution panel
- 110 Volt, 3.5 Amp Sens battery charger
- Base mount generator – no trailer
- 600 Volt/480 Volt switchable

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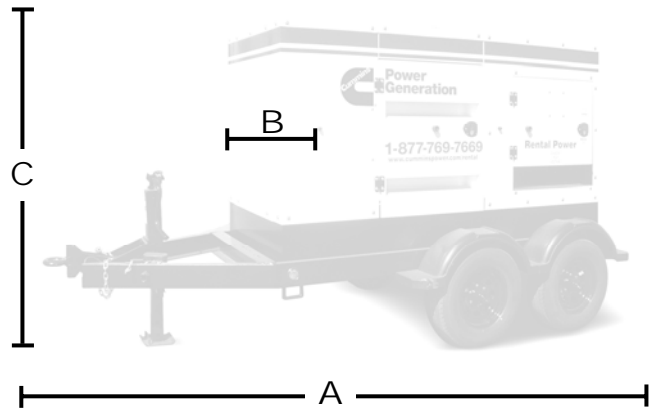
## Ratings definitions

### Standby:

Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271 and BS5514). Nominally rated.

### Prime (unlimited running time):

Applicable for supplying power in lieu of commercially purchased power. Prime power is the maximum power available at a variable load for an unlimited number of hours. A 10% overload capability is available for limited time. (Equivalent to Prime Power in accordance with ISO8528 and Overload Power in accordance with ISO3046, AS2789, DIN6271, and BS5514).



## Dimensions

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Weight w/o fuel kg (lbs)	Weight with fuel kg (lbs)	Fuel capacity liters (gal)
<b>C80D6RT</b>	<b>2794</b> (110)	<b>1194</b> (47)	<b>1626</b> (64)	<b>1918</b> (4219)	<b>2584</b> (5684)	<b>606</b> (160)
<b>With trailer</b>	<b>4343</b> (171)	<b>1905</b> (75)	<b>2083</b> (82)	<b>3184</b> (7018)	<b>3856</b> (8486)	<b>606</b> (160)

## Specifications

Model	KW rating		Sound level dB(A) @ 7 m	Tier rating Standby	Hours of operation (75% load)	
	Standby	Prime			Standby	Prime
<b>C80D6RT</b>	80	72	66	Tier III	31	32

## Fuel consumption

60 Hz Ratings, kW (kVA)	Load	Standby 60 (75)				Prime 55 (68)			
		¼	½	¾	Full	¼	½	¾	Full
	Gal/hr	2.2	4	5.5	6.8	2.1	3.3	5.0	6.0
	L/hr	8.3	15.1	20.8	25.7	7.9	12.5	18.9	22.7

## Trailer information

Model	Tire size	Tire type	Load range	Number of tires per trailer	Lug pattern	Wheel brand
<b>C80D6RT</b>	225/75-R15	Radial	D	4	6 on 5.5" bolt	Karrier

### Cummins Power Generation

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