

Specification sheet



Rental Power 800 kW



Description

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

The package utilizes custom designed switchgear to meet severe customer requirements. This switchgear provides reconnectable voltage via a link board design, automatic start/stop control and easy connection to existing installations.

Features

Cummins diesel engines

- Rugged 4-cycle industrial diesel delivers reliable power and fast response to load changes.
- Equipped with heavy duty air cleaners, bypass-type oil filters and dual-element fuel/water separator filtration system with 4-way valve.
- Includes jacket water heaters for more reliable operation in emergency standby applications.

Control system

- The most advanced, reliable, and capable generator set control system available in the market today.
- Integrated generator set providing 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.

Stamford alternators

- Designed and built by Cummins Generator Technologies.
- Voltage - 480/208 VAC standard (600 VAC optional).
- Alternators designed for improved motor starting.
- Permanent magnet excitation for improved performance in cyclic and non-linear load applications.

Rental package enclosure

- Designed for serviceability access.
- Optimized fuel capacity.
- Fluid containment design for greater environmental protection.
- Sound attenuated to minimize impact on local environment.
- Vertical cooling air and engine exhaust path to minimize sound level adjacent to the container.
- Equipped with 24 VDC lighting.
- Unit has paralleling capabilities at 480 and 600 VAC only.
- Utility grade breaker.
- Shore power 100 amp service breaker panel – single phase 120/240 VAC: (1) 30 amp breaker – 240 VAC (26.75 amp = 6420 watts for the heater). (1) 15 amp breaker – 120 VAC (GFIs), (1) 15 amp breaker – 120 VAC (battery charger).

Options

Cold weather package (includes):

- Additional diesel fired block heater
- Battery heating pad
- Floor insulation
- Actuated louver control
- Transport Canada UN31A certified fuel tank

| Model | Voltages (V) | Standby rating | | Prime rating | | Engine model | Alternator model | Generator* Specification Sheet (Ref) |
|-----------|--------------|----------------|----------------|----------------|----------------|--------------|------------------|--------------------------------------|
| | | 60 Hz kW (kVA) | 50 Hz kW (kVA) | 60 Hz kW (kVA) | 50 Hz kW (kVA) | | | |
| C800D6 RG | 208/480 | 800 (1000) | | 725 (906) | | QSK23-G7 | HCI634H | S-1551 |
| | 600 | 800 (1000) | | 725 (906) | | QSK23-G5 | HCI634J | S-1551 |

* Not all reference data is applicable.

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Generator set specifications

| | |
|--|--|
| Governor regulation class | ISO8528 Part 1 Class G3 |
| Voltage regulation, no load to full load | ±0.5% |
| Random voltage variation | ±0.5% |
| Frequency regulation | Isochronous |
| Random frequency variation | ±0.25% |
| Radio frequency interference | IEC 801.2, through IEC 801.5, MIL STD 461C, Part 9 |

Engine specifications

| | |
|-----------------------------|---|
| Engine model | QSK23-G7 |
| Engine data sheet | DS-50047 |
| EPA Nonroad | TPEM (Tier 2) |
| Design | 4 cycle, in-line, turbocharged and low temperature after-cooled |
| Bore | 170 mm (6.69 in.) |
| Stroke | 170 mm (6.69 in.) |
| Displacement | 23.15 L (1413 in ³) |
| Cylinder block | Cast iron, in-line, 6 cylinder |
| Battery capacity | 8D (qty: 4) 1250 CCA @ 0 °F and 1500 CCA @ 32 °F |
| Battery charging alternator | 24 volt 35 amp Delco Remy |
| Starting voltage | 24 volt, negative ground |
| Fuel system | Direct injection: number 2 diesel fuel |
| Fuel filter | Spin on fuel filters with water separator. Additional Fleetguard Industrial Pro pre-filters |
| Air cleaner type | 2-stage dry replaceable element with dust ejectors (qty: 2) |
| Lube oil filter type(s) | Dual venture spin-on, combination full flow and bypass filters |
| Oil capacity | 102 L (108 qty) |
| Standard cooling system | 122 °F (50 °C) |

Alternator specifications

| | |
|---------------------------------------|---|
| Alternator data sheet | ADS-310 (208/480 VAC), ADS-311 (600 VAC optional) |
| Design | Brushless, 4 pole, revolving field) |
| Stator | Double layer lap 2/3 pitch |
| Rotor | Single bearing, flexible disc |
| Insulation system | Class H per NEMA MG1-1.65 (208/480 VAC), Class H per NEMA MG1-1.65 (600 VAC optional) |
| Standard temperature rise | 125/40 °C Standby (208/480 VAC), 125/40 °C Standby (600 VAC optional) |
| Exciter type | PMG (Permanent Magnet Generator) |
| Phase rotation | A (U), B (V), C (W) |
| Alternator cooling | Direct drive centrifugal fan |
| AC waveform total harmonic distortion | < 5% no load to full linear load, < 3% for any single harmonic |
| Telephone influence factor (TIF) | < 50 per NEMA MG1-22.43 |
| Telephone harmonic factor (THF) | < 3 |

Power capability specifications

| | Standby rating | | | |
|-----------------|---------------------|---------------------|---------------------|---------------------|
| | 240 V, 1 phase amps | 208 V, 3 phase amps | 480 V, 3 phase amps | 600 V, 3 phase amps |
| C800D6RG | | 2776 | 1203 | 962 |

Electrical power panel specifications

| Model voltage | 120 V duplex receptacles | 240 V twist | Load lug connection (stud diameter) | Load lug circuit breakers |
|---------------------|--------------------------|-------------|-------------------------------------|---------------------------|
| 120/480 Volt | 2 (20 amp) | | 1/2 | 3000 amps |
| 600 Volt | 2 (20 amp) | | 1/2 | 1000 amps |

Site derating factors

Standby application: The engine may be operated at 1800 rpm up to 3730 ft (1137 m) and 104 °F (40 °C) without power deration. For sustained operation above the conditions, derate by 4.4% per 1000 ft (305 m) and 10% per 18 °F (10 °C).

Control System

PowerCommand® control with AmpSentry™ protection

- Integrated automatic voltage regulator and engine speed governor
- AmpSentry protection guards the electrical integrity of the alternator and power system from the effects of overcurrent, over/under voltage, under frequency and overload conditions
- Control components designed to withstand the vibration levels typical in generator sets

Standard control description

- Analog % of current meter (amps)
- Analog AC frequency meter
- Analog AC voltage meter
- Analog % of load meter (kW)
- Cycle cranking control
- Digital display panel
- Emergency stop switch
- Idle mode control
- Menu switch
- Panel backlighting
- Remote starting, 12 volt, 2 wire
- Reset switch
- Run-off-auto switch
- Sealed front panel, gasketed door
- Self-diagnostics
- Voltmeter/ammeter phase selector switch

Standard performance data warnings

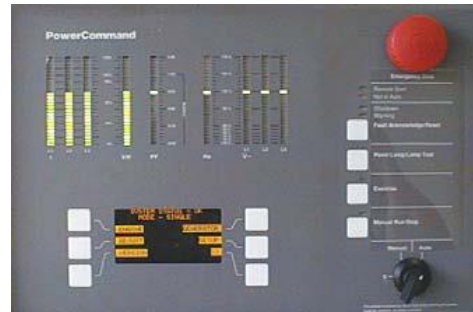
- High coolant temperature
- High DC voltage
- Low coolant temperature
- Low DC voltage
- Low oil pressure
- Over current
- Overload load shed contacts
- Up to four customer fault inputs
- Weak battery
- Overflow
- Overspeed
- Short circuit
- Underfrequency

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
- Overload load shed contacts
- Up to four customer fault inputs
- Weak battery
- Overflow

Shutdowns

- Emergency stop
- Fail to crank
- High AC voltage
- High coolant temperature
- Low coolant level
- Low AC voltage
- Low oil pressure
- Overcurrent
- Overspeed
- Short circuit
- Underfrequency



Optional features shows

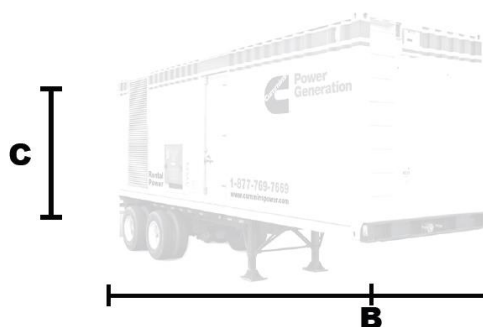
Ratings definitions

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 ISO 3046, AS 2789, DIN 6271 and BS 5514). 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 ISO 8528 and Overload Power in accordance with ISO 3046, AS 2789, DIN 6271, and BS 5514).



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) |
|--------------|---------------------|---------------------|---------------------|-----------------------------|------------------------------|-------------------------------|
| C800D6RG | 9119 (359) | 2438 (96) | 2896 (114) | 15311 (33760) | 20797 (45858) | 6450 (1704) |
| With chassis | 9119 (359) | 2438 (96) | 4064 (160) | 18340 (40440) | 23827 (52538) | 6450 (1704) |

Note: Optional cold weather package adds 54 kg (120 lbs).
Optional Transport Canada fuel tank capacity 1300 gal.

Fuel consumption

| 60 Hz Ratings, kW (kVA) | | Standby | | | | Prime | | | |
|-------------------------|--|------------|-------|-------|-------|-----------|-------|-------|-------|
| | | 800 (1000) | | | | 725 (906) | | | |
| Load | | ¼ | ½ | ¾ | Full | ¼ | ½ | ¾ | Full |
| US Gal/hr | | 17 | 29 | 41 | 53 | 15.5 | 27.5 | 38 | 48 |
| L/hr | | 64.4 | 109.8 | 155.2 | 200.6 | 58.7 | 104.1 | 143.8 | 181.7 |

Specifications

| Model | kW rating | | Sound level at full load dB(A) @ 7 M | Tier rating | Hours of operation (75% load) | |
|----------|-----------|-------|---|----------------|---------------------------------|-------|
| | Standby | Prime | | | Standby | Prime |
| C800D6RG | 800 | 725 | 80 | TPEM (Tier II) | 41 | 44 |
| | | | | | With Transport Canada fuel tank | |
| | | | | | 31 | 34 |





Accessories

| | Part Number |
|-------------------------|-------------|
| 30 ft. Air Ride Chassis | 0410-1379 |
| Fueling Ladder | 0410-1372 |
| Access Ladder | 0410-1371 |
| Folding Ladder | 0410-1362 |

* One access ladder provided with purchase of unit.

Certifications

Below certifications are for generator sets only

| | | | |
|---|---|--|--|
|  | <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 Generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies.</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> | <p>U.S. EPA</p> | <p>Engine previously certified to U.S EPA Nonroad Source Emissions Standards, 40 CFR 89, Tier 2. The engine used in this generator with the EPA Transition Program for Equipment Manufacturers (TPEM); this provision has specific limitations (see 40 CFR, 1039.625).</p> |
|  | <p>All low voltage models are CSA certified to product class 4215-01.</p> | | |

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

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