

# Quiet Connect™ Series RS80



## Features and benefits

**Robust product design and testing** - The generator is designed to operate under extreme environmental conditions including cold weather starts at as low as -40 °F. The generator is tested and certified per the latest EPA, UL and IBC Seismic standards and is capable of meeting NFPA110 requirements when equipped with the necessary accessories and properly installed.

**Flexible exercise mode** - The innovative, flexible exercise mode enables the generator to exercise at a time, frequency and duration that suits the customer's preference - as little as 2 minutes every 6 months - reducing unnecessary fuel consumption, emissions and noise.

**Advanced enclosure design** - The aesthetically appealing enclosure incorporates special designs that deliver the quietest generator of its kind. Aluminum material plus durable powder coat paint provides the best anti-corrosion performance. The generator set enclosure has been evaluated to withstand 180 MPH wind loads in accordance with ASCE7-10. The design has hinged doors to provide easy access for service and maintenance.

**Self diagnostics and easy service** - The generator is equipped with Cummins PowerCommand® electronic control to provide industry-leading self diagnostic capabilities. In addition, critical components of the generator are designed to ensure service and preventive maintenance can be completed in a short period of time.

## Weight, size and sound level

**Weight:** 2782 lbs (1262 kg)

**Size:** Length 118.7 in (3016 mm), width 40.0 in (1016 mm), height 58.3 in (1480 mm)

**Sound:** 70.5 dB(A) at 23 ft (7 m) with sound level 2 enclosure

Series	Model	Phase	Voltage (V)	Frequency (Hz)	Rated amps <sup>1</sup> (NG/LPV fuel)	Circuit breaker (Amps)
RS80	C80N6	1	120/240	60	333/333	125-400
		3	120/208	60	278/278	125-400
		3	120/240	60	241/241	70-250
		3	277/480	60	120/120	150

<sup>1</sup> Derating guidelines: Engine power available up to 1829 m (6000 ft) at ambient temperatures up to 40 °C (104 °F). Above these elevations derate at 4% per 305m (1000 ft) and 2% per 10 °C above 40 °C (104 °F).

## Product features

### Engine

- Natural gas/propane 1800 rpm engine
- Engine air cleaner – normal duty
- Electronic governor, isochronous
- Engine starter, 12 VDC motor
- Shutdown – low oil pressure
- Extension – oil drain
- Engine oil – included

### Fuel system

- Single fuel – natural gas or propane vapor, field selectable

### Alternator

- 60 Hz, 1 phase, 4 lead, or 3 phase, 12 lead, 120 °C temperature rise at 40 °C ambient
- Exciter/voltage regulator – torque match

### Control

- PowerCommand 1.1
- Display language – English
- Control mounting, left facing

### Electrical

- Single circuit breaker, UL certified, right-side mounted
- Battery charging alternator, normal duty
- Battery charger – 6 Amp, regulated

### Cooling

- Generator set cooling capability – 50 °C
- Shutdown – low coolant level
- Engine coolant – 50/50 mixture
- Extension – coolant drain

### Enclosure

- Aluminum enclosure Sound Level 1 with muffler installed, sandstone color
- Wind rating – 180 MPH

### Code compliance

- UL 2200
- EPA emissions, stationary emergency, 40CFR60
- IBC Seismic
- NFPA110 capable

### Generator set application

- Coolant heater
- Crank case vent heater
- Battery rack
- Flexible fuel line
- Literature (English) – operator's manual, installation manual

### Warranty

- Base warranty – 2 year standby
- Extended warranties available

### Packaging

- Shipping pallet

## Generator set performance

**Governor regulation class:** ISO 8528 Part 1 Class G3

**Voltage regulation, no load to full load:**  $\pm 1.0\%$

**Random voltage variation:**  $\pm 1.0\%$

**Frequency regulation:** Isochronous

**Random frequency variation:**  $\pm 0.25\%$  @ 60 Hz

**Radio frequency emissions compliance:** FCC code

Title 47 part 15 Class B

## Engine

**Design:** Turbocharged and aftercooled

**Bore:** 102.1 mm (4.02 in)

**Stroke:** 119.9 mm (4.72 in)

**Displacement:** 5.9 liters (359 in<sup>3</sup>)

**Cylinder block:** Cast iron, in-line 6 cylinder

**Battery capacity:** 850 amps at ambient temperature of 0 °F to 32 °F (-18 °C to 0 °C)

**Battery charging alternator:** 52 amps

**Starting voltage:** 12 volt, negative ground

**Lube oil filter type(s):** Spin-on with relief valve

**Standard cooling system:** 50° C (122° F) ambient cooling system

**Rated speed:** 1800 rpm

## Fuel supply pressure

**Minimum fuel supply pressure:** 1.5 kPa (6.0 in H<sub>2</sub>O)

**Maximum fuel supply pressure:** 3.5 kPa (14.0 in H<sub>2</sub>O)

## Control system

The PowerCommand® electronic control is standard equipment and provides total generator set system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

## Sound attenuated enclosure

The aesthetically appealing enclosure incorporates special designs that deliver the quietest generator of its kind. Aluminum material plus durable powder coat paint provides the best anti-corrosion performance. The generator set enclosure has been evaluated to withstand 180 MPH wind loads in accordance with ASCE7-10. The design has hinged doors to provide easy access for service and maintenance.

## Average fuel consumption

### Fuel consumption – natural gas

Load:	1/4	1/2	3/4	Full
Ft <sup>3</sup> /hr:	455.3	678.7	877.0	1083.5
M <sup>3</sup> /hr:	12.9	19.2	24.8	30.7

### Conversion factor:

8.58 ft<sup>3</sup> = 1 lb

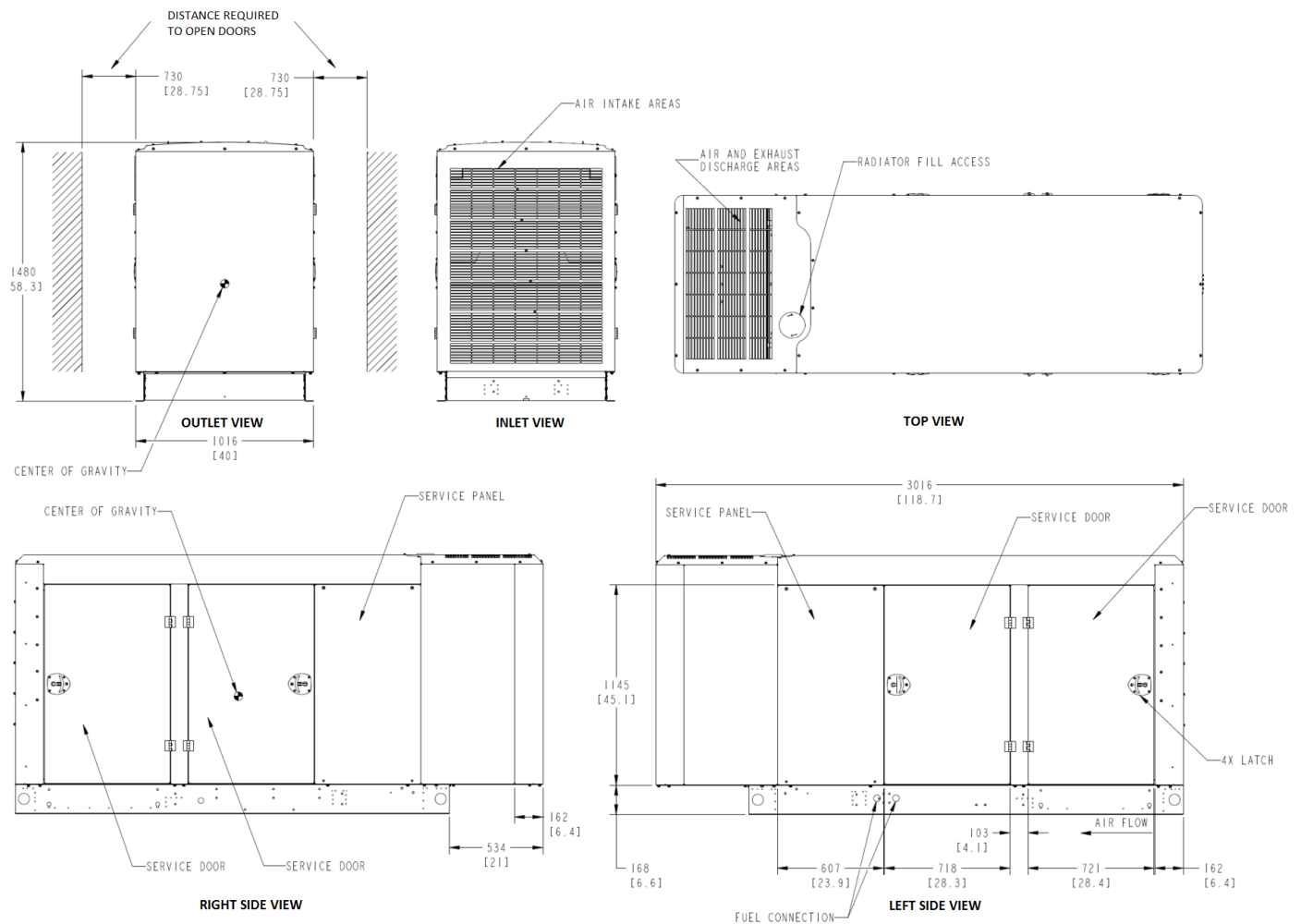
0.535m<sup>3</sup> = 1 kg

36.39 ft<sup>3</sup> = 1 gal

### Fuel consumption – LP vapor

Load:	1/4	1/2	3/4	Full
Ft <sup>3</sup> /hr:	181.9	263	339.8	420.8
M <sup>3</sup> /hr:	5.2	7.5	9.6	11.9
Gal/hr	5.00	7.23	9.34	11.56

## Basic dimensions



Note: This outline drawing is provided for general reference only and is not intended for use in design or installation. For more information, see Operators and Installation manuals or contact your distributor or dealer for assistance.

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## Accessories

- HMI211RS in-home display, including pre-configured 12" harness
- HMI211 remote display, including pre-configured 12" harness
- HMI220 remote display
- Auxiliary output relays (2)
- Auxiliary configurable signal inputs (8) and relay outputs (8)
- Annunciator – RS485
- Internet monitoring device – PowerCommand 500
- Battery chargers – stand-alone, 12V
- Enclosure Sound Level 1 to Sound Level 2 upgrade kit
- Enclosure paint touch up kit
- Base barrier – elevated generator set
- Alternator heater
- Maintenance and service kit



**WARNING:**

Standby rating based on: 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. See T030.

**WARNING:**

Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building electrical except through an approved device or after building main breaker is open.

## Transfer switch (sold separately)

- Automatic Transfer Switches available in various amperages.
- Service Entrance models are also available, which helps reduce the installation cost.
- All models UL listed to UL 1008 standard.
- Available for both Indoor and Outdoor applications.
- Compatibility with Cummins generator set helps reduce the installation time for the complete application.

## Warranty policy

The Cummins RS and RX liquid cooled generator set models come with a 2 year base warranty when used in EPA-Stationary Emergency application. The RA series Automatic Transfer Switches come with a 2 year base warranty. Extended warranty options are available. Please contact Cummins dealers/distributors for details.

## After sale support

Largest distributor/dealer support network  
Cummins Power Generation generator sets are supported by the largest and best trained worldwide certified distributor/dealer network in the industry. The network of knowledgeable and highly trained dealers will help you select the right generator for your application and advise you on associated accessories for your generator. The dealer network can also help answer any questions you may have regarding operation and maintenances requirements of the generators. This same network offers a complete selection of commonly used generator set maintenance parts, manuals and specification sheets.

Manuals: Operation and installation manuals ship with the generator set. To obtain additional copies or other manuals for this model, see your distributor/dealer. To easily locate the nearest certified distributor/dealer for Cummins generators in your area, or for more information, contact us at 1-800-344-0039 or visit [power.cummins.com](http://power.cummins.com).

Contact your distributor/dealer for more information.

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