

Residential generator

RS Series

20



Cummins Onan



Performance you rely on.™

Features and benefits

- Very quiet operation
- Aluminum weather resistant housing
- Fully automatic operation when used with a Cummins Onan automatic transfer panel
- Available for use with natural gas or LP vapor
- Attractive and discreet housing
- Electronic governor for precise frequency control
- Includes 120 V coolant heater
- Listed to UL 2200
- 12 lead re-connectable alternator
- 2 year warranty
- Low coolant shutdown

Weight, size and sound level

Weight: 1105 lb (501 kg)

Size: Footprint dimensions (for recommended installation): length 64.4 in (1635 mm), width 30 in (762 mm), height 46.7 in (1184.89 mm)

Overall dimensions: length 85.3 in (2166.68 mm), width 30 in (762 mm), height 46.7 in (1184.89 mm)

Sound: 66 dB(A) at 7m, at full load

Models and ratings

Series	Order model	Part Number	Fuel	Voltage	Rated kW	Rated amps	Circuit breaker
RS20	20GGMA-6110C	A035A633	NG	120/240 (factory setting)	20	167/83	100 A, 2 pole
RS20	20GGMA-6111C	A035A752	LP	120/240 (factory setting)	20	167/83	100 A, 2 pole

Site derating factors:

Natural gas	Engine power available up to 3000 ft (915 m) at ambient temperatures up to 104 °F (40 °C). Above 3000 ft (915 m) derate at 4% per 1000 ft (305 m), and 1.1% per 10 °F (2% per 10 °C) above 104 °F (40 °C)
Propane	Engine power available up to 3000 ft (915 m) at ambient temperatures up to 104 °F (40 °C). Above 3000 ft (915 m) derate at 4% per 1000 ft (305 m), and 1.1% per 10 °F (2% per 10 °C) above 104 °F (40 °C)

Standard features

Engine:

- Electronic ignition
- Electronic governor
- Full-pressure lubrication
- High-capacity oil sump, spin-on oil filter
- Solenoid shift starter
- 60 A, engine-driven battery charger

Control system:

- Automatic remote starting
- Controls generator set starting and shutdown
- Control components designed to withstand the vibration levels typical in generator sets
- Field circuit breaker
- High temperature, low oil pressure, low coolant level, overcrank and over speed shutdowns
- Running time meter
- 100 A UL Listed circuit breaker
- DC control fuse

Exhaust muffler:

- Enclosed exhaust silencer
- Low noise

Average fuel consumption:

Fuel consumption-natural gas

<u>Load:</u>	<u>1/4</u>	<u>1/2</u>	<u>3/4</u>	<u>Full</u>
Cfh:	156.3	203.7	251.1	298.4
m ³ /hr:	4.3	5.9	7.6	9.5

Fuel consumption-propane

<u>Load:</u>	<u>1/4</u>	<u>1/2</u>	<u>3/4</u>	<u>Full</u>
Cfh:	59.8	78.8	97.7	116.6
m ³ /hr:	1.7	2.7	2.8	3.3
Gal/hr	1.6	2.2	2.7	3.2

Conversion factor:

8.58 ft³ = 1 lb
0.535m³ = 1 kg
36.39 ft³ = 1 gal

Engine details

Engine: GM Industrial, spark-ignited

Design: In-line 4-cylinder, liquid-cooled

Compression ratio: 10.5 to 1

Displacement: 181 cu in (3.0 L)

Cooling system: 122° F (50 °C) ambient cooling system

Oil sump capacity: 4.5 qt (4.3 L) with filter

Operating speed: 1800 RPM

Gross engine power output, kWm (bhp): 23.8 (31.9)

Alternator details

Design: 12 lead re-connectable, brushless, revolving field, single bearing, 4-pole, drip-proof construction.

Insulation system: Class H per NEMA MG1-1.65 and BS2757.

Temperature rise: At rated load is less than 125 °C at standby rating, per NEMA MG1.22.40, IEEE 115 and IEC 34-1.

Exciter type: The excitation system derived is a self-excited (shunt) system with the voltage directly from the generator set output.

Alternator cooling: Direct drive centrifugal blower.

Rotor: Supported by a pre-lubricated maintenance-free ball bearing.

AC wave form total harmonic distortion: less than 5% total no load to full load, less than 3% for any single harmonic.

Generator set performance

Voltage: 1-phase: 120/240 V AC, 1.0 pf.

3-phase: 120/208, 120/240 (delta), 127/220, 139/240, 240/416, 254/440, 277/480

Governor regulation class: ISO 8528 Part 1 Class 63

Motor starting kVA (at 90% sustained voltage): 46

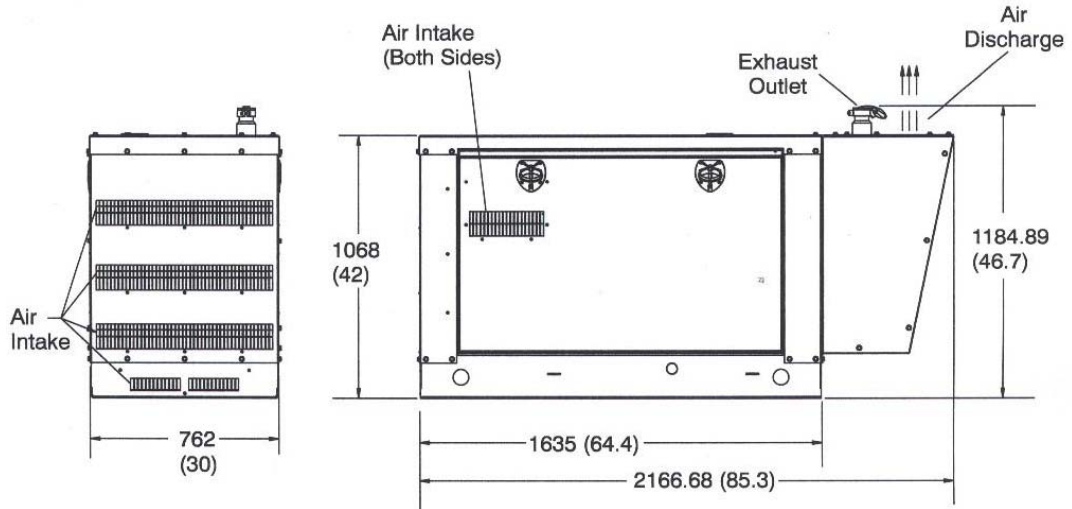
Voltage regulation: ±1%, no load to full load.

Frequency regulation: Isochronous, 0% no load to full load.

Random frequency variation: ±0.5% at 60 Hz.

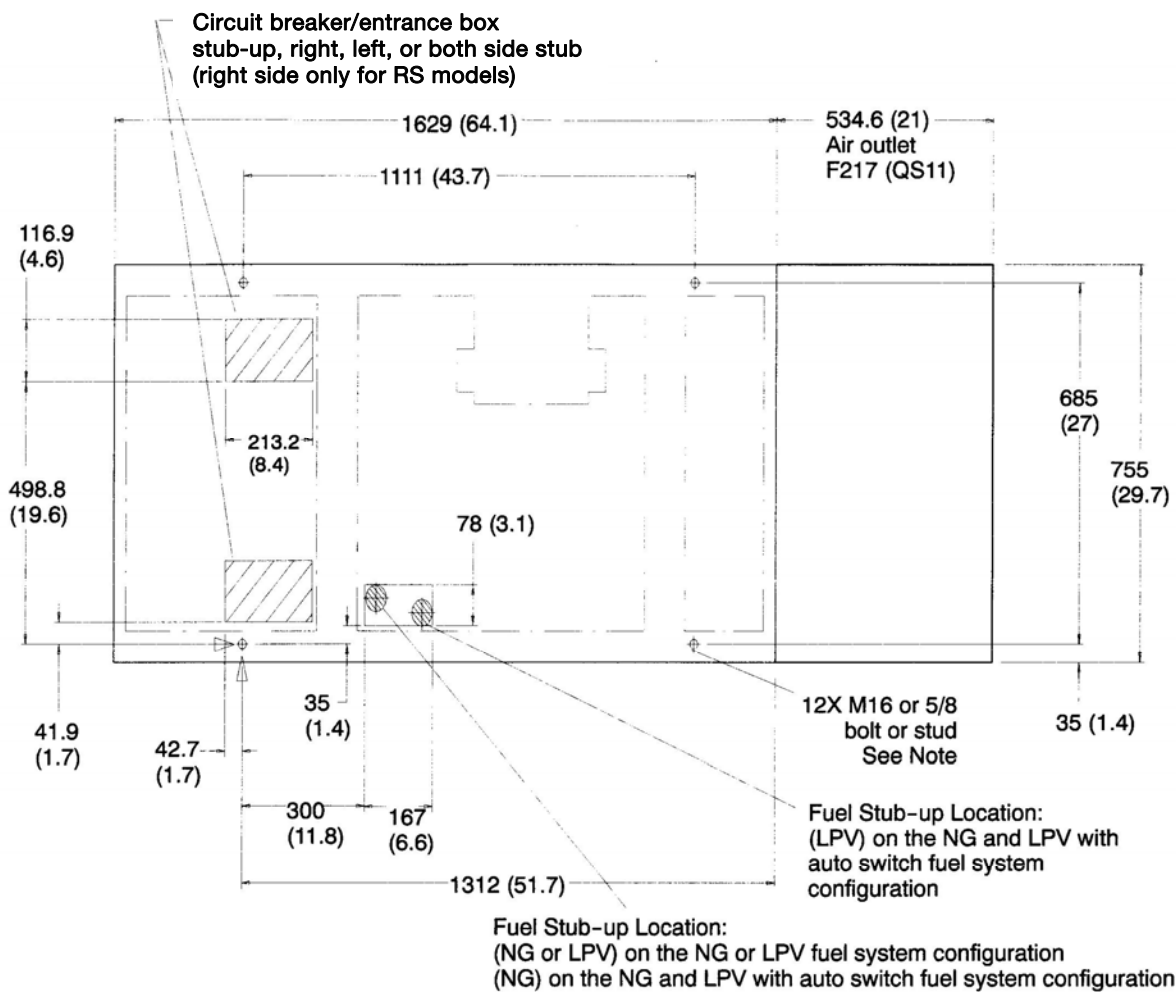
Operating temperature: -20 °F (-28.8 °C) to 122 °F (50 °C).

Basic dimensions



Note: This outline drawing is provided for general reference only and is not intended for design or installation. For more information see Operation and Installation manuals or obtain drawing 500-4511 or 500-4512 and wiring diagram from your distributor/dealer.

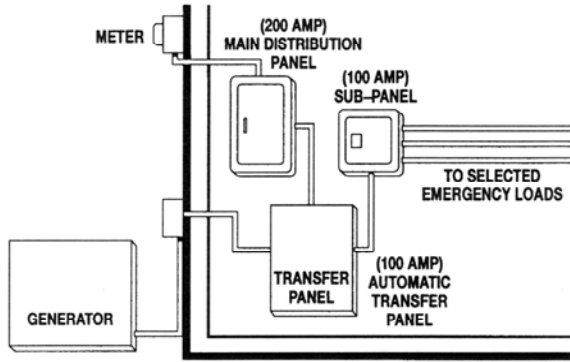
Installation drawing



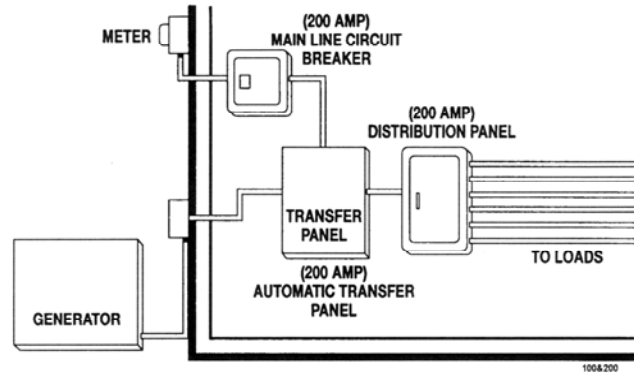
Note: Skid-base has a flange thickness of 3.42 mm (.135 inches)
 Allow extra length on hardware for unevenness of mounting surface.

mm (in)

Automatic transfer panel configurations



Dedicated emergency standby service system (100 A)



Full-service rating standby system (200 A)

Options and accessories

- Battery, 12 V, 325 cca (P/N 416-0774)
- Battery heater kit (P/N 333-0469)
- LCD Display Interface (P/N 0179-4861-05)
- Full line of complementing automatic transfer panels

Housing features

- Weather protective design, two easy service access doors - key-lockable
- Internal starting battery tray and tie down
- Heavy-duty aluminum housing

Testing and standards

- Listed to UL 2200
- This generator set was designed and manufactured in facilities certified to ISO 9001.
- CSA-certified for electrical equipment. Meets CSA C22.2.
- Engine certified to U.S. EPA SI Stationary Emission Regulation 40 CFR, Part 60



U.S. EPA

Warranty policy

The Cummins Onan RS 20 home standby system comes with a standard two year warranty. Additional two and five-year warranty options are available. See your certified distributor or dealer for details.

This product is EPA Emissions certified for emergency standby use only.

<p>IMPORTANT</p>
<p>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.</p>

<p>WARNING:</p>
<p>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.</p>

(See T-030 document for more information.)

After sale support

Largest distributor/dealer support network
Cummins Onan generator sets are supported by the largest and best trained worldwide certified distributor/dealer network in the industry. This network of knowledgeable Cummins Onan distributor/dealers will help you select and install the right generator set and accessories to meet the requirements of your specific application. This same network offers a complete selection of commonly used generator set maintenance parts, accessories, and products plus manuals and specification sheets. Plus, they can answer your questions regarding proper operation, maintenance schedules and more.

Manuals: Operation and installation manuals ship with the generator set. To obtain additional copies or other manuals for this model, see your Cummins Onan distributor/dealer and request the following manual numbers: Operation (961-0117), Installation (961-0615), Parts (961-0214), Service (961-0510).

To easily locate the nearest Cummins Onan distributor/dealer in your area, or for more information, contact us at 1-800-888-6626 (or 763-574-5000), or visit www.cumminsonan.com.

Contact your distributor/dealer for more information.

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