

Residential generator RS Series 85000 and 100000



Cummins Onan



Performance you rely on.™

Features and benefits

- Extremely quiet operation
- Fully automatic operation when used with a Cummins Onan automatic transfer panel
- Available for use with natural gas or LP vapor
- Attractive and discreet sound attenuated housing
- Electronic governor for precise frequency control
- Includes 120 V coolant heater
- Listed to UL 2200
- Aluminum enclosure

Size and sound level

Size: Length 142 in (3614 mm), width 60 in (1520 mm), height 70 in (1789 mm)

Sound: Measured at 7 m, average at full load
GGHG: 72 dB(A)*
GGHH: 73 dB(A)*

Models and ratings

Order model	Fuel	Voltage	Rated kW	kVa	Rated amps	Circuit breaker	Enclosure
85GGHG-6122J	NG	120/240	85	85	708/354	400 A, 2 pole	Aluminum
85GGHG-6123J	LP	120/240	85	85	708/354	400 A, 2 pole	Aluminum
100GGHH-6124J	NG	120/240	100	100	834/417	500 A, 2 pole	Aluminum
100GGHH-6125J	LP	120/240	100	100	834/417	500 A, 2 pole	Aluminum

Note: See page 4 of this document for derating factors.

Standard features

Engine:

- Electronic ignition
- Electronic governor
- Full-pressure lubrication
- High-capacity oil sump, spin-on oil filter
- Solenoid shift starter
- 65 A, engine-driven battery charger
- 120 V coolant heater
- Oil drain extension

Control system:

- PCC 2100 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
- UL Listed circuit breaker
- DC control fuse

Exhaust muffler:

- Enclosed exhaust silencer
- Low noise

Average fuel consumption:

Load	GGHG Natural Gas			
	¼	½	¾	Full
ft ³ /hr	468.6	703.4	938.2	1173
m ³ /hr	13.3	19.9	26.6	33.2
Propane				
ft ³ /hr	183.2	268.7	354.2	439.7
m ³ /hr	5.2	7.6	10.0	12.4
Gal/hr	5.0	7.4	9.7	12.1
L/hr	19.1	28.0	36.8	45.7

Engine details

Engine: Ford, industrial, spark-ignited

Design: 10-cylinder V, liquid-cooled, turbocharged

Compression ratio: 9.0:1

Displacement: 415 cu in (6.8 L)

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

Oil Sump capacity, L (qt): 6.1 (6.5)

Operating speed: 1800 RPM

Gross engine power, kWm (bhp):

Model	Natural Gas	Propane
GGHG	131.3 (176.0)	122.3 (164.0)
GGHH	131.3 (176.0)	122.3 (164.0)

Genset weight:

Model	Enclosure	Weight lbs (kg)
GGHG	Aluminum	2925 (1327)
GGHH	Aluminum	2973 (1349)

Load	GGHH Natural Gas			
	¼	½	¾	Full
ft ³ /hr	506.5	780	1048.5	1352.4
m ³ /hr	14.3	22.1	29.7	38.3
Propane				
ft ³ /hr	200.7	293.3	399.5	501.7
m ³ /hr	5.7	8.3	11.3	14.2
Gal/hr	5.5	8.1	11.0	13.8
L/hr	20.9	30.5	41.6	52.2

Alternator details

Design: Brushless, revolving field, 12-lead re-connectable single phase design.

Insulation system: Class H per NEMA MG1-1.65.

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 derives its power from the main output of the generator, eliminating the need for a separate excitation power source.

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 performance

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

Governor regulation class: ISO 8528 Part 1 Class G3.

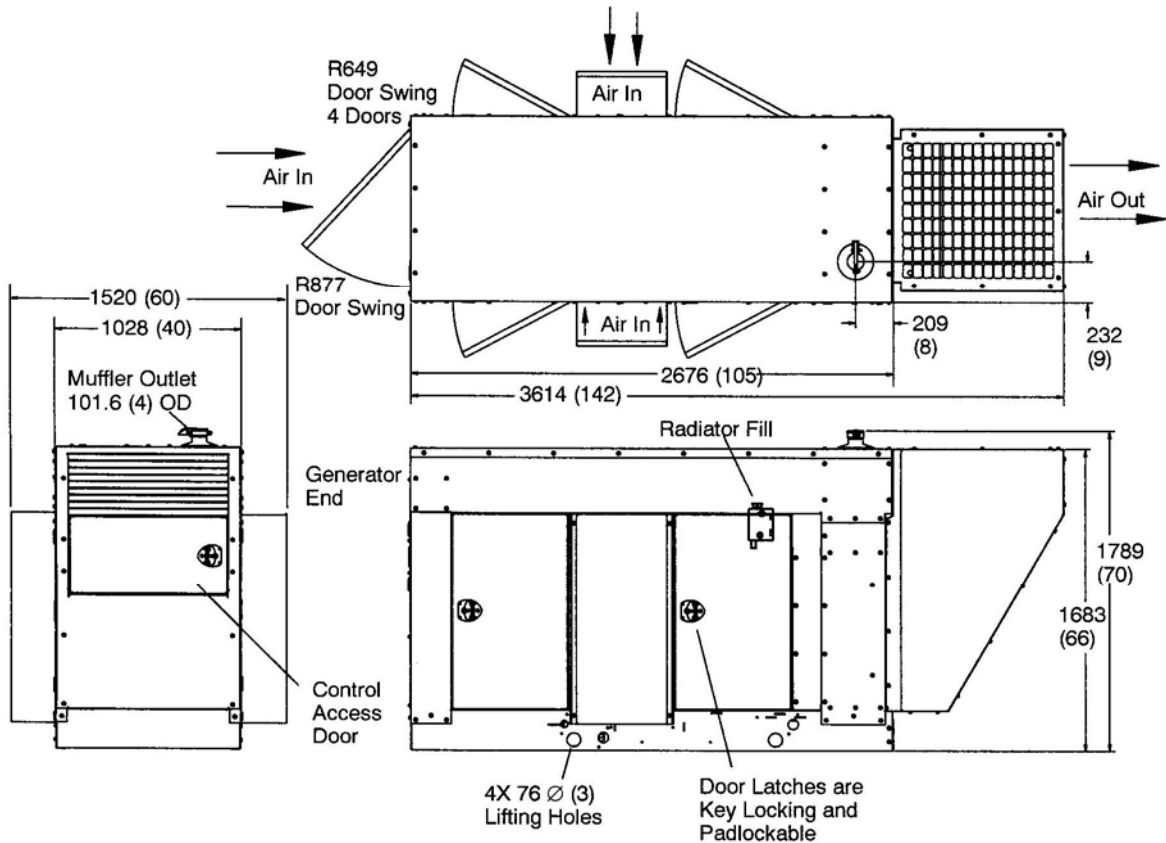
Voltage regulation: 1%, no load to full load.

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

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

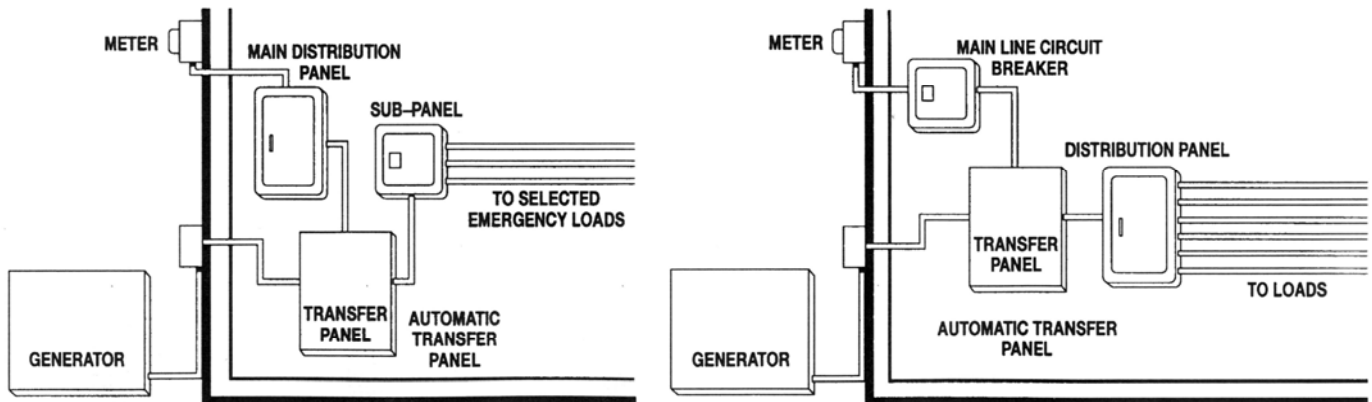
Motor starting kVA (at 90% sustained voltage): GGHG: 250, GGHH: 305

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 500-4087 and wiring diagram from your distributor/dealer.

Automatic transfer panel configurations



Dedicated emergency standby service system

Full-service rating standby system

Options and accessories

- Battery, 12 V 620 cca (P/N 416-0823)
- Battery heater kit (P/N 333-0469)
- Full line of complementing automatic transfer panels

Housing features

- Sound attenuated, weather protective design, key-lockable service access doors
- Internal starting battery tray and tie down
- Heavy-duty aluminum housing, stainless steel fasteners

Derating factors

85GGHG Model, Natural Gas

Engine power available up to 1554 m (5100 ft) at ambient temperatures up to 40 °C (104 °F). Above 1554 m (5100 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 40 °C (104 °F).

85GGHG Model, Propane

Engine power available up to 1097 m (3600 ft) at ambient temperatures up to 40 °C (104 °F). Above 1097 m (3600 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 40 °C (104 °F).

100GGHH Model, Natural Gas

Engine power available up to 594 m (1950 ft) at ambient temperatures up to 40 °C (104 °F). Above 594 m (1950 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 40 °C (104 °F).

100GGHH Model, Propane

Engine power available up to 305 m (1000 ft) at ambient temperatures up to 25 °C (77 °F). Above 305 m (1000 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 25 °C (77 °F).

Testing and standards



This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.



The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins Power Generation products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.



All low voltage models are CSA certified to product class 4215-01.



The generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies. The PowerCommand control is Listed to UL 508 - Category NITW7 for U.S. and Canadian usage.

U.S. EPA

Engine certified to U.S. EPA SI Stationary Emergency Emission Regulation 40 CFR, Part 60.

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.

To easily locate the nearest Cummins Onan distributor/dealer in your area visit www.cumminsonan.com.


Warranty policy

Cummins Onan residential home standby generators come with a standard two-year warranty. Additional two and five-year warranty options are available. Some restrictions apply. See warranty document AB2023-02 for more information.

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

 **IMPORTANT**

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.

 **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.

Contact your distributor/dealer for more information.

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