

# EPA Emissions

**Model:** GGLB  
**KW rating:** 150 natural gas standby  
 140 propane standby  
**Frequency:** 60  
**Fuel type:** Natural gas  
 Propane

## > Generator set data sheet

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<b>Exhaust emission data sheet:</b>	<b>EDS-1030</b>
<b>Exhaust emission compliance sheet:</b>	
<b>Sound performance data sheet:</b>	<b>MSP-1009</b>
<b>Cooling performance data sheet:</b>	<b>MCP-135</b>
<b>Prototype test summary data sheet:</b>	<b>PTS-268</b>
<b>Standard set-mounted radiator cooling outline:</b>	<b>0500-4207</b>

<b>Fuel consumption</b>	<b>Natural gas</b>								<b>Propane</b>							
	<b>Standby kW (kVA)</b>				<b>Prime kW (kVA)</b>				<b>Standby kW (kVA)</b>				<b>Prime kW (kVA)</b>			
<b>Ratings</b>	150 (188)								140 (175)							
<b>Load</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>
<b>scfh</b>	689	1079	1520	1950					261	407	567	784				
<b>m<sup>3</sup>/hr</b>	19.5	30.5	43.0	55.2					7.4	11.5	16.0	22.2				

<b>Engine</b>	<b>Natural gas</b>		<b>Propane</b>	
	<b>Standby rating</b>	<b>Prime rating</b>	<b>Standby rating</b>	<b>Prime rating</b>
Engine model	GM8.1L-HO			
Configuration	Cast iron, V 8 cylinder			
Aspiration	Turbocharged and CAC			
Gross engine power output, kWm (bhp)	167.8 (225.0)		156.9 (210)	
BMEP at rated load, kPa (psi)	1379.0 (200.0)		1289 (187)	
Bore, mm (in)	108.0 (4.25)		108.0 (4.25)	
Stroke, mm (in)	111.0 (4.37)		111.0 (4.37)	
Rated speed, rpm	1800		1800	
Piston speed, m/s (ft/min)	6.7 (1310.0)		6.7 (1310.0)	
Compression ratio	9.1:1		9.1:1	
Lube oil capacity, L (qt)	7.6 (8.0)		7.6 (8.0)	
Overspeed limit, rpm	2400 ± 50		2400 ± 50	
Regenerative power, kW	15.00		15.00	

## Fuel flow

Minimum operating pressure, kPa (in H <sub>2</sub> O)	1.7 (7.0)		1.7 (7.0)	
Maximum operating pressure, kPa (in H <sub>2</sub> O)	3.4 (13.6)		3.4 (13.6)	

<b>Air</b>	<b>Natural gas</b>		<b>Propane</b>	
	<b>Standby rating</b>	<b>Prime rating</b>	<b>Standby rating</b>	<b>Prime rating</b>
Combustion air, m <sup>3</sup> /min (scfm)	9.5 (335.0)		9.1 (320)	
Maximum air cleaner restriction, kPa (in H <sub>2</sub> O)	1.5 (6.0)		1.5 (6.0)	
Alternator cooling air, m <sup>3</sup> /min (scfm)	37.0 (1308.0)		37.0 (1308.0)	

## Exhaust

Exhaust flow at rated load, m <sup>3</sup> /min (cfm)	29.7 (1050.0)		28.3 (1000.0)	
Exhaust temperature, °C (°F)	615.0 (1139.0)		660.0 (1220.0)	
Maximum back pressure, kPa (in H <sub>2</sub> O)	8.7 (35.0)		8.7 (35.0)	
Available back pressure for additional sound attenuation and piping, kPa (in H <sub>2</sub> O)	2.5 (10.0)		2.5 (10.0)	

## Standard set-mounted radiator cooling

Ambient design, °C (°F)	50 (122)		50 (122)	
Fan load, kW (HP)	6.3 (8.5)		6.3 (8.5)	
Coolant capacity (with radiator), L (US gal)	22.3 (5.9)		22.3 (5.9)	
Coolant system air flow, m <sup>3</sup> /min (scfm)	283.0 (10000.0)		283.0 (10000.0)	
Total heat rejection, MJ/min (Btu/min)	11.3 (10700.0)		11.1 (10500.0)	
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	124.5 (0.5)		124.5 (0.5)	

## Weights<sup>2</sup>

Unit dry weight kgs (lbs)	1157 (2550)
Unit wet weight kgs (lbs)	1213 (2675)

### Notes:

<sup>1</sup> For non-standard remote installations contact your local Cummins Power Generation representative.

<sup>2</sup> Weights represent a set with standard features. See outline drawing for weights of other configurations.

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## Alternator data

Natural gas and propane three phase table <sup>1</sup>		105 °C	105 °C	105 °C	125 °C	125 °C	125 °C	150 °C	150 °C	150 °C		
Feature code		B418	B415	B304	B417	B414	B303	B416	B413	B419		
Alternator data sheet		210	210	209	210	210	209	210	209	208		
Voltage ranges		110/190 thru 120/208 220/380 thru 240/416	120/208 thru 139/240 240/416 thru 277/480	347/600	110/190 thru 120/208 220/380 thru 240/416	120/208 thru 139/208 240/416 thru 277/480	347/600	110/190 thru 120/208 220/380 thru 240/416	120/208 thru 139/240 240/416 thru 277/480	347/600		
Surge kW		160	160	160	160	160	160	160	159	159		
Motor starting kVA (at 90% sustained voltage)	Shunt	563	563	516	563	563	516	563	516	422		
	PMG	663	663	607	663	663	607	663	607	497		
Full load current amps at standby rating		<u>120/208</u> 522	<u>127/220</u> 493	<u>139/240</u> 452	<u>220/380</u> 286	<u>240/416</u> 261	<u>277/480</u> 226	<u>347/600</u> 181				

Natural gas and propane single phase table		105 °C	105 °C	125 °C	125 °C	125 °C						
Feature code		B418	B415	B417	B414	B273						
Alternator data sheet		210	210	210	210	210						
Voltage ranges		120/240 <sup>2</sup>	120/240 <sup>2</sup>	120/240 <sup>2</sup>	120/240 <sup>2</sup>	120/240 <sup>3</sup>						
Surge kW		157	157	157	157	160						
Motor starting kVA (at 90% sustained voltage)	Shunt	330	330	330	330	330						
	PMG	385	385	385	385	385						
Full load current amps at standby rating		<u>120/240</u> <sup>2</sup> 413	<u>120/240</u> <sup>3</sup> 625									

### Notes:

- <sup>1</sup> Single phase power can be taken from a three phase generator set at up to 2/3 set rated 3-phase kW at 1.0 power factor. Also see Note 3 below.
- <sup>2</sup> The broad range alternators can supply single phase output up to 2/3 set rated 3-phase kW at 1.0 power factor.
- <sup>3</sup> The extended stack (full single phase output) and 4 lead alternators can supply single phase output up to full set rated 3-phase kW at 1.0 power factor.

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## Derating factors

### Natural gas

Standby	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).
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### Propane

Standby	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).
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## Ratings definitions

<b>Emergency standby power (ESP):</b>	<b>Limited-time running power (LTP):</b>	<b>Prime power (PRP):</b>	<b>Base load (continuous) power (COP):</b>
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

## Formulas for calculating full load currents:

### Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

### Single phase output

$$\frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$$

### Cummins Power Generation

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

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