

EPA Emissions

Model: GGHF
KW rating: 70 natural gas standby
 75 propane standby
Frequency: 60
Fuel type: Natural gas/propane

➤ Generator set data sheet

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**Power
Generation**

Exhaust emission data sheet:	EDS-323
Exhaust emission compliance sheet:	
Sound performance data sheet:	MSP-179
Cooling performance data sheet:	
Prototype test summary data sheet:	PTS-144
Standard set-mounted radiator cooling outline:	0500-3447

Fuel consumption	Natural gas				Propane			
	Standby kW (kVA)				Prime kW (kVA)			
Ratings	70 (87)				75 (94)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
scfh	402.0	586.5	771.1	955.6				
m³/hr	11.4	16.6	21.8	27.1				

Engine	Natural gas		Propane	
	Standby rating	Prime rating	Standby rating	Prime rating
Engine model	WSG-1068			
Configuration	Cast iron, V 10 cylinder			
Aspiration	Naturally aspirated			
Gross engine power output, kWm (bhp)	83.7 (112.2)		89.3 (119.8)	
BMEP at rated load, kPa (psi)	834.3 (121.0)		889.4 (129.0)	
Bore, mm (in)	90.2 (3.55)			
Stroke, mm (in)	105.9 (4.17)			
Rated speed, rpm	1800			
Piston speed, m/s (ft/min)	6.4 (1250.0)			
Compression ratio	9.0:1			
Lube oil capacity, L (qt)	6.1 (6.5)			
Overspeed limit, rpm	2250 ± 50			
Regenerative power, kW	16.00			

Fuel flow

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

Air	Natural gas		Propane	
	Standby rating	Prime rating	Standby rating	Prime rating
Combustion air, m ³ /min (scfm)	4.5 (160.6)		4.5 (160.2)	
Maximum air cleaner restriction, kPa (in H ₂ O)	1.2 (5.0)			
Alternator cooling air, m ³ /min (scfm)	37.0 (1308.0)			

Exhaust

Exhaust flow at rated load, m ³ /min (cfm)	15.3 (539.0)		15.2 (535.0)	
Exhaust temperature, °C (°F)	667.2 (1233.0)		670.0 (1238.0)	
Maximum back pressure, kPa (in H ₂ O)	5.0 (20.0)			

Standard set-mounted radiator cooling

Ambient design, °C (°F)	40 (104)			
Fan load, kW (HP)	7.1 (9.5)			
Coolant capacity (with radiator), L (US gal)	32.2 (8.5)			
Coolant system air flow, m ³ /min (scfm)	169.8 (6000.0)			
Total heat rejection, MJ/min (Btu/min)	4.5 (4305.0)		4.7 (4410.0)	
Maximum cooling air flow static restriction, kPa (in H ₂ O)	124.5 (0.5)			

Weights²

Unit dry weight kgs (lbs)	945 (2083)
Unit wet weight kgs (lbs)	982 (2165)

Notes:

¹ For non-standard remote installations contact your local Cummins Power Generation representative.

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

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Alternator data

Natural gas three phase table ¹		105 °C	105 °C	105 °C	105 °C	125 °C	125 °C	125 °C	125 °C	150 °C	150 °C	150 °C
Feature code		B418	B415	B268	B304	B417	B414	B267	B303	B416	B413	B419
Alternator data sheet		205	205	207	205	205	205	207	204	204	204	204
Voltage ranges		110/190 thru 120/208 220/380 thru 240/416	120/208 thru 139/240 240/416 thru 277/480	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 139/240 240/416 thru 277/480	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 139/240 240/416 thru 277/480	347/600
Surge kW		71.4	71.3	72	71.9	71.4	71.3	72	71.4	70.6	70.5	71.4
Motor starting kVA (at 90% sustained voltage)	Shunt	260	260	360	260	260	260	360	231	231	231	231
	PMG	306	306	423	306	306	306	423	272	272	272	272

Full load current amps at standby rating	110/190 266	120/208 243	139/240 211	220/380 133	230/400 126	240/416 122	255/440 115	277/480 105	347/600 84
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Propane three phase table ¹		105 °C	105 °C	105 °C	125 °C	125 °C	125 °C	125 °C	150 °C	150 °C	150 °C	
Feature code		B418	B415	B304	B417	B414	B267	B303	B416	B413	B419	
Alternator data sheet		205	206	205	205	205	207	204	205	205	204	
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 139/240 240/416 thru 277/480	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 139/240 240/416 thru 277/480	347/600	
Surge kW		78.7	78.9	79.2	78.7	78.5	79.5	78.6	78.7	78.5	78.6	
Motor starting kVA (at 90% sustained voltage)	Shunt	260	313	260	260	260	360	231	260	260	231	
	PMG	306	368	306	306	306	423	272	306	306	272	

Full load current amps at standby rating	110/190 285	120/208 261	139/240 226	220/380 143	230/400 135	240/416 130	255/440 123	277/480 113	347/600 90
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Natural gas single phase table		105 °C	105 °C	105 °C	105 °C	125 °C	125 °C	125 °C	125 °C			
Feature code		B418	B415	B274	B268	B417	B414	B273	B267			
Alternator data sheet number		205	205	206	207	205	205	205	207			
Voltage ranges		120/240 ²	120/240 ²	120/240 ³	120/240 ³	120/240 ²	120/240 ²	120/240 ³	120/240 ³			
Surge kW		69.9	69.9	71.1	70	69.9	69.9	70.7	70			
Motor starting kVA (at 90% sustained voltage)	Shunt	155	155	185	215	155	155	155	215			
	PMG	183	183	220	250	183	183	183	250			

Full load current amps at standby rating	115/230 ² 203	115/230 ³ 304	120/240 ² 195	120/240 ³ 292
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Propane Single phase table		105 °C	105 °C	105 °C	125 °C	125 °C	125 °C	125 °C				
Feature code		B418	B415	B274	B417	B414	B273	B267				
Alternator data sheet number		205	206	207	205	205	206	207				
Voltage ranges		120/240 ²	120/240 ²	120/240 ³	120/240 ²	120/240 ²	120/240 ³	120/240 ³				
Surge kW		77.1	77.7	79.1	77.1	77.1	78.2	77				
Motor starting kVA (at 90% sustained voltage)	Shunt	155	185	215	155	155	185	215				
	PMG	183	220	250	183	183	220	250				

Full load current amps at standby rating	115/230 ² 218	115/230 ³ 326	120/240 ² 208	120/240 ³ 313
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Notes:

- 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.
- The broad range alternators can supply single phase output up to 2/3 set rated 3-phase kW at 1.0 power factor.
- 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/prime	Engine power available up to 305 m (1000 ft) at ambient temperatures up to 29 °C (85 °F). Above 305 m (1000 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 29 °C (85 °F).
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Propane

Standby/prime	Engine power available up to 305 m (1000 ft) at ambient temperatures up to 29 °C (85 °F). Above 305 m (1000 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 29 °C (85 °F).
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Ratings definitions

Emergency standby power (ESP):	Limited-time running power (LTP):	Prime power (PRP):	Base load (continuous) power (COP):
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

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

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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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