

Generator set data sheet

EPA Emissions

Model: **GGHE**
KW rating: **60 natural gas standby**
60 propane standby
Frequency: **60**
Fuel type: **Natural gas/propane**

Exhaust emission data sheet:	EDS-322
Exhaust emission compliance sheet:	
Sound performance data sheet:	MSP-178
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				Prime				Standby				Prime			
	kW (kVA)				kW (kVA)				kW (kVA)				kW (kVA)			
Ratings	60 (75)								60 (75)							
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
scfh	333.2	499.8	656.9	809.2					138.3	201.0	265.6	328.3				
m³/hr	9.4	14.2	18.6	22.9					3.9	5.7	7.5	9.3				

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)	72.7 (97.5)				72.9 (97.7)			
BMEP at rated load, kPa (psi)	723.9 (105.0)				723.9 (105.0)			
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 H2O)	1.7 (7.0)	1.7 (7.0)
Maximum operating pressure, kPa (in H2O)	3.4 (13.6)	3.4 (13.6)

Air	Natural gas		Propane	
	Standby rating	Prime rating	Standby rating	Prime rating
Combustion air, m ³ /min (scfm)	4.0 (141.6)		4.0 (141.6)	
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)	12.5 (441.0)		12.0 (424.0)	
Exhaust temperature, °C (°F)	565.0 (1049.0)		570 (1058)	
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)	4.3 (4050.0)		3.8 (3600.0)	
Maximum cooling air flow static restriction, kPa (in H ₂ O)	0.124 (0.5)			

Weights²

Unit dry weight kgs (lbs)	892 (1966)
Unit wet weight kgs (lbs)	929 (2048)

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.

Alternator data

Natural gas three phase table¹		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 number		204	204	207	204	204	204	205	203	204	204	203
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	71	72	71.7	71	71	71.6	70.4	71	71	70.4
Motor starting kVA (at 90% sustained voltage)	Shunt	231	231	360	231	231	231	260	188	231	231	188
	PMG	272	272	423	272	272	272	306	221	272	272	221
Full load current amps at standby rating		110/190 228	115/200 217	120/208 208	127/220 197	139/240 181	220/380 114	230/400 108	240/416 104	255/440 99	277/480 90	347/600 72

Propane three phase table¹		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 number		204	204	207	204	204	204	205	203	204	204	203
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		78.5	78.5	79.5	79.1	78.5	78.5	79.1	77.8	78.5	78.5	77.8
Motor starting kVA (at 90% sustained voltage)	Shunt	231	231	360	231	231	231	260	188	231	231	188
	PMG	272	272	423	272	272	272	306	221	272	272	221
Full load current amps at standby rating		110/190 228	115/200 217	120/208 208	127/220 197	139/240 181	220/380 114	230/400 108	240/416 104	255/440 99	277/480 90	347/600 72

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		204	204	205	207	204	204	204	205			
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		69.6	69.6	71.1	70.6	69.6	69.6	70.3	69.2			
Motor starting kVA (at 90% sustained voltage)	Shunt	130	130	155	215	130	130	130	155			
	PMG	153	153	183	250	153	153	153	183			
Full load current amps at standby rating		115/230 ² 174	115/230 ³ 261	120/240 ² 167	120/240 ³ 250							

Propane 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		204	204	205	207	204	204	204	205			
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		76.9	76.9	78.5	77.9	76.9	76.9	77.7	76.4			
Motor starting kVA (at 90% sustained voltage)	Shunt	130	130	155	215	130	130	130	155			
	PMG	153	153	183	250	153	153	153	183			
Full load current amps at standby rating		115/230 ² 174	115/230 ³ 261	120/240 ² 167	120/240 ³ 250							

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.

Our energy working for you.™

Derating factors

Natural gas

Standby/prime	Rated power available up to 915 m (3000 ft) at ambient temperatures up to 40 °C (104 °F). Above 915 m (3000 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 40 °C (104 °F).
---------------	---

Propane

Standby/prime	Rated power available up to 1220 m (4000 ft) at ambient temperatures up to 40 °C (104 °F). Above 1220 m (4000 ft) derate at 4% per 305 m (1000 ft), and 2% per 11 °C (1% per 10 °F) above 40 °C (104 °F).
---------------	---

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

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

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.

North America
1400 73rd Avenue N.E.
Minneapolis, MN 55432
USA

Phone 763 574 5000
Fax 763 574 5298

Our energy working for you.™

©2015 Cummins Power Generation Inc. All rights reserved.

Cummins Power Generation and Cummins are registered trademarks of Cummins Inc. PowerCommand, AmpSentry, InPower and "Our energy working for you." are trademarks of Cummins Power Generation. Other company, product, or service names may be trademarks or service marks of others. Specifications are subject to change without notice.

D-3382f (8/15)



power.cummins.com