

Exclusively from your Caterpillar® dealer



**STANDBY 20-25 kW**  
**PRIME 18-22.5 kW**  
**60 Hz**

Model	Standby — kW (kVA)	Prime — kW (kVA)
G20G1	20.0 (25.0)	18.0 (22.5)
G25G1	25.0 (31.3)	22.5 (28.1)
G20G1S	20.0 (20.0)	18.0 (18.0)
G25G1S	25.0 (25.0)	22.5 (22.5)

## FEATURES

### GENERATOR SET

- Complete system designed and built at ISO 9001 certified facilities
- Factory tested to design specifications at full load conditions

### ENGINE

- Governor, Woodward L-Series electronic
- Electrical system, 12 VDC
- Cartridge type filters
- Natural gas fuel system
- Gas shutoff valve, solenoid operated
- Gas pressure regulator
- Low oil pressure shutdown

### GENERATOR

- Insulation system, class H
- Drip proof generator air intake (NEMA 2, IP23)
- Electrical design in accordance with BS5000 Part 99, IEC60034-1, EN61000-6, NEMA MG-1.33

### AUTOMATIC VOLTAGE REGULATOR

- Voltage within  $\pm 0.5\%$  3 Phase and  $\pm 1.0\%$  Single Phase at steady state from no load to full load
- Provides fast recovery from transient load changes

### COOLING SYSTEM

- Radiator and cooling fan complete with protective guards
- Standard ambient temperatures up to 110° F (43° C)
- High coolant temperature shutdown
- Low coolant level shutdown
- Low coolant temperature alarm

### MOUNTING ARRANGEMENT

- Heavy-duty fabricated steel base with lifting points
- Anti-vibration pads to ensure vibration isolation
- Battery, rack, and cables
- Coolant and lube oil drains piped to edge of base
- Complete OSHA guarding

- Stub-up pipe ready for connection to silencer pipework
- Weather protective enclosures are available
- Sound attenuated enclosures are available
- Fuel line terminated at base with NPT connections
- Safety shutdown and alarm indicators

### CIRCUIT BREAKER

- 3-pole with solid neutral, UL/CSA listed
- NEMA 1 steel enclosure, vibration isolated
- Electrical stub-up area directly below circuit breaker

### CONTROL SYSTEM

- EMCP3.1 control panel
- Vibration isolated NEMA 1 enclosure with hinged access door
- Engine and generator instrumentation
- Volts adjust potentiometer (optional)
- Audible alarm for all faults
- Volt-free contact for common alarm
- AD/DC wiring harnesses

### EQUIPMENT FINISH

- All electroplated hardware
- Anticorrosive protection prior to painting
- High gloss polyurethane paint for durability and scuff resistance

### QUALITY STANDARDS

- BS4999, BS5000, BS5514, IEC60034, EN61000-6, NEMA MG1-33, ISO 8528, NFPA 110 (with optional equipment)

### DOCUMENTATION

- Operation and maintenance manuals provided
- Wiring diagrams included

### WARRANTY

- All equipment carries full manufacturer's warranty

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## OPTIONAL EQUIPMENT\*

### ENCLOSURE

- Weatherproof enclosure (includes internal silencer system)
- Sound attenuated enclosure (includes internal silencer system)

### SILENCER SYSTEM — OPEN UNIT

- Level 1 silencer
- Level 2 silencer
- Level 3 silencer
- Mounting kit
- Through-wall installation kit

### ENGINE

- Battery heater
- Lube oil sump heater, 100/120V

### SKIDBASE ACCESSORIES

- Seismic vibration isolators (Zone 4)

### GENERATOR

- Anti-condensation heater
- Generator upgrade 1 size (G20G1, G25G1)  
(Available on 3 phase models only)

### COOLING SYSTEM

- Coolant heater, 110/120V
- Radiator transition flange

### CONTROL SYSTEM

- EMCP3.2 control panel
- Circuit breaker auxiliary contacts, volt free
- Circuit breaker shunt trip (100 amp and above)
- Static battery charger
- UL listed static battery chargers

### MISCELLANEOUS ACCESSORIES

- Toolkit
- Additional operator's manual pack
- CSA certification
- French and Spanish language labels

### EXTENDED SERVICE CONTRACTS

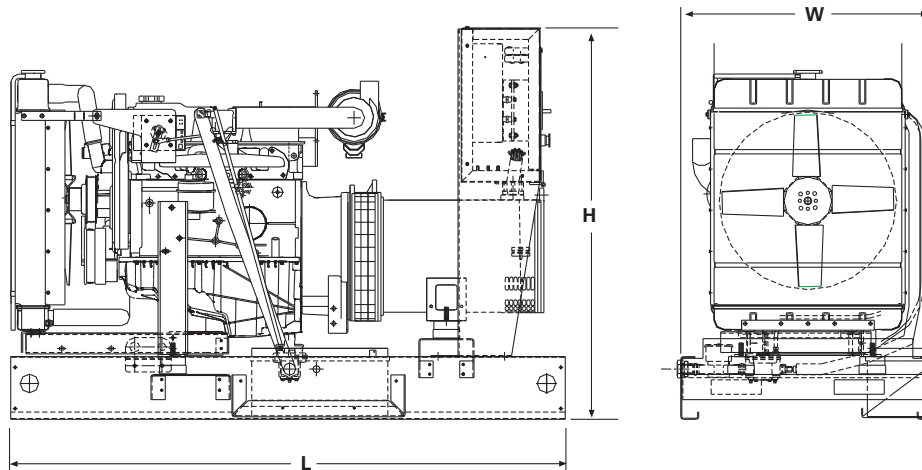
- Extended Service Coverage available

### TESTING

- Special factory test available

\*Some options may not be available on all models. Not all options are listed.

## GENERATOR SET DIMENSIONS AND WEIGHTS



Model	Length in (mm)	Width in (mm)	Height in (mm)	Weight lb (kg)**
G20G1	63.0 (1600)	28.0 (710)	43.0 (1092)	928 (421)
G25G1	63.0 (1600)	28.0 (710)	43.0 (1092)	972 (441)
G20G1S	63.0 (1600)	28.0 (710)	43.0 (1092)	928 (421)
G25G1S	63.0 (1600)	28.0 (710)	43.0 (1092)	972 (441)

**NOTE:** General configuration not to be used for installation. See specific dimensional drawings for detail.

\*\*Includes oil and coolant

**S T A N D B Y 2 0 - 2 5 k W**  
**P R I M E 1 8 - 2 2 . 5 k W**  
**6 0 H z**

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## SPECIFICATIONS



### GENERATOR

Voltage Regulation.....  $\pm 0.5\%$  3 Phase and  $\pm 1.0\%$   
Single Phase at steady state from no load to full load  
Frequency.....  $\pm 0.25\%$  for constant load,  
no load to full load  
Waveform Distortion..... THD less than 4%,  
at no load  
Radio Interference..... EN61000-6  
Telephone Influence Factor..... TIF <50  
per NEMA MG 1-32.11  
Telephone Harmonic Factor..... THF <2%  
Stator..... 2/3 pitch  
Type..... Brushless, self excited, self-regulated,  
drip proof, 4-pole, sealed bearings,  
direct coupled by flexible disk  
Insulation..... Class H  
Temperature Rise..... Within Class H limits  
Overspeed Capability..... 125%  
Available Voltages..... 1-Phase — 240/120,  
220/110, 230/115  
3-Phase — 480/277, 240/120,  
208/120, 220/127, 460/266  
Deration..... Please consult factory  
for available outputs  
Ratings..... At 77°F (25°C), 500 ft. (152.4 m),  
60% humidity, 1.0 pf (1-Phase),  
0.8 pf (3-Phase)



### ENGINE

Manufacturer..... GM  
Model..... GM 3.0L RL  
Type..... 4-Cycle  
Aspiration..... Natural

Cylinder Configuration..... In-line 4  
Displacement — cu in (L)..... 183.1 (3.0)  
Bore — in (mm)..... 4.0 (101.6)  
Stroke — in (mm)..... 3.6 (91.4)  
Compression Ratio..... 10.05:1  
Governor  
Type..... Electronic  
Class..... ISO 8528 G2  
Piston Speed — ft/sec (m/sec)..... 18.0 (5.5)  
Air Cleaner Type..... Disposable

### Natural Gas

Engine Speed — rpm..... 1800  
Max Power at Rated rpm — hp (kW)  
Standby..... 50.0 (37.3)  
Prime..... 45.0 (33.6)  
BMEP — psi (kPa)  
Standby..... 146.0 (1007.0)  
Prime..... 131.5 (907.0)



### CONTROL PANEL

NEMA 1 steel enclosure with hinged access door  
Vibration isolated mounted Autostart control panel  
Single location customer connector point  
Electrical stub-up area directly below control panel

## RATING DEFINITIONS

**Standby** — Applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The generator is peak rated (as defined in ISO 8528-3).

**Prime** — Applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and the generator set can supply 10 percent overload power for 1 hour in 12 hours.

**Consult your Olympian representative for more information.**

Market: N. America

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**60 Hz**

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**G25G1S (1-Phase)**

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Generator Set Technical Data — 1800 rpm/60 Hz		Standby	Prime
<b>Power Rating (at 240V)</b>	kW (kVA)	25.0 (25.0)	22.5 (22.5)
<b>Lubricating System</b> Type: Full Pressure Oil Filter: Spin-On, Full Flow Oil Type Required: API CF-4 Total Oil Capacity Oil Pan	U.S. gal (l) U.S. gal (l)	1.2 (4.7) 1.0 (3.8)	1.2 (4.7) 1.0 (3.8)
<b>Fuel System</b> Generator Set Fuel Consumption 100% Load 75% Load 50% Load	Cfh (m <sup>3</sup> /hr) Cfh (m <sup>3</sup> /hr) Cfh (m <sup>3</sup> /hr)	413.2 (11.7) 342.6 (9.7) 250.7 (7.1)	384.9 (10.9) 314.3 (8.9) 226.0 (6.4)
<b>Engine Electrical System</b> Ignition System: Electronic, Distributorless Voltage/Ground: 12/Negative Battery Charging Generator Ampere Rating	Amps	70	70
<b>Cooling System</b> Water Pump Type: Centrifugal Radiator System Capacity Incl. Engine Maximum Coolant Static Head Coolant Flow Rate Minimum Temperature to Engine Temperature Rise Across Engine Heat Rejected to Coolant at Rated Power Total Heat Radiated to Room at Rated Power Radiator Fan Load	U.S. gal (l) Ft H <sub>2</sub> O (m H <sub>2</sub> O) U.S. gal/min (l/min) °F (°C) °F (°C) Btu/min (kW) Btu/min (kW) Hp (kW)	3.9 (14.7) 15.1 (4.6) 1080 (68.1) 160 (71) 10.1 (5.6) 1437 (25.0) 450 (7.9) 1.6 (1.2)	3.9 (14.7) 15.1 (4.6) 1080 (68.1) 160 (71) 10.1 (5.6) 1293 (23.0) 405 (7.1) 1.6 (1.2)
<b>Air Requirements</b> Combustion Air Flow Maximum Air Cleaner Restriction Radiator Cooling Air (zero restriction) Generator Cooling Air Allowable Air Flow Restriction (after radiator) Cooling Airflow (@ rated speed) Rate with restriction	Cfm (m <sup>3</sup> /min) In H <sub>2</sub> O (kPa) Cfm (m <sup>3</sup> /min) Cfm (m <sup>3</sup> /min) In H <sub>2</sub> O (kPa) Cfm (m <sup>3</sup> /min)	94.0 (2.7) 20.1 (5.0) 6166 (174.6) 381 (10.8) 1.25 (0.311) 2200 (62.3)	94.0 (2.7) 20.1 (5.0) 6166 (174.6) 381 (10.8) 1.25 (0.311) 2200 (62.3)
<b>Exhaust System</b> Maximum Allowable Backpressure Exhaust Flow at Rated kW Exhaust Temperature at Rated kW — Dry Exhaust	In Hg (kPa) Cfm (m <sup>3</sup> /min) °F (°C)	3.0 (10.0) 343 (9.7) 1198 (648)	3.0 (10.0) 343 (9.7) 1179 (637)
<b>Generator Set Noise Rating*</b> (Without Attenuation) at 3ft (1m)	dB(A)	89.6	89.6

Generator Technical Data		240/120V	230/115V	220/110V
<b>Motor Starting Capability:</b> (kVA) Self Excited		40	38	35
<b>Full Load Efficiencies:</b>	Standby Prime	88.0 88.5	87.2 87.9	86.5 87.3
<b>Reactances (per unit):</b>	X <sub>d</sub> X' <sub>d</sub> Reactances shown are applicable to the LPG standby rating	2.08 0.25 0.125 1.04 0.176	2.27 0.27 0.136 1.13 0.192	2.48 0.30 0.149 1.24 0.210
<b>Time Constants:</b>	t' <sub>d</sub> 40 ms	t'' <sub>d</sub> 6 ms	t' <sub>do</sub> 380 ms	t <sub>a</sub> 8 ms

\* dB(A) levels are for guidance only