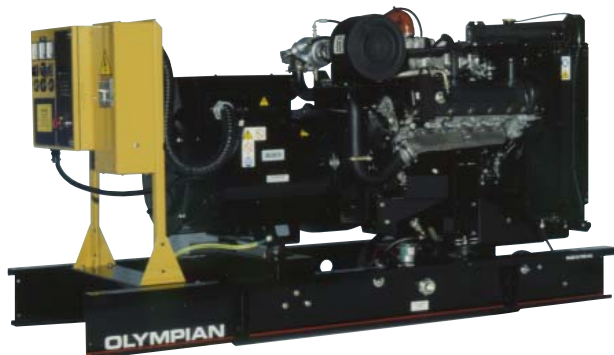




Exclusively from your Caterpillar® dealer



STANDBY 100 kW
PRIME 80 kW
60 Hz

Model	Standby — kW (kVA)	Prime — kW (kVA)
	Natural	Natural
G100F3	100 (125)	85 (106.3)
G90F3S	90 (90)	80 (80)
G100F3S	100 (100)	85 (85)

GeneratorJoe

FEATURES

GENERATOR SET

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

ENGINE

- Governor, Isochronous Woodward electronic
- Electrical system, 12 VDC
- Cartridge type filters
- Battery, rack, and cables
- Coolant and lube oil drains piped to edge of base

GENERATOR

- Insulation system, class H
- Drip proof generator air intake (NEMA 2, IP23)
- Electrical design in accordance with BS5000 Part 99, IEC60034-1, VDE0530, UTE51100, NEMA MG-1.33

AUTOMATIC VOLTAGE REGULATOR

- Voltage regulation $\pm 0.5\%$ 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 125° F (52° C)

MOUNTING ARRANGEMENT

- Heavy-duty fabricated steel base with lifting points
- Anti-vibration pads to ensure vibration isolation
- Complete OSHA guarding
- Stub-up pipe ready for connection to silencer pipework
- Flexible fuel lines to base with NPT connections

CIRCUIT BREAKER

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

CONTROL SYSTEM

- 2001 Autostart control panel
- Vibration isolated NEMA 1 enclosure with lockable hinged door
- DC and AC wiring looms

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, VDE 0530, NEMA MG1-33, NFPA 110 (with optional equipment)

DOCUMENTATION

- Operation and maintenance manuals provided
- Wiring diagrams included

WARRANTY

- 12 months from date of initial start-up (3 year shelf life)

4016 Quartz Drive
Santa Rosa, CA 95405
Phone: 707 539-9003
Fax: 707 539-5212
Email: sales@generatorjoe.NET
Web www.generatorjoe.NET

Materials and specifications are subject to change without notice.

STANDBY 100 kW
PRIME 85 kW
60 Hz



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OPTIONAL EQUIPMENT*

ENCLOSURE

- Weatherproof enclosure (includes internal silencer system)
- Panel viewing window
- External emergency stop pushbutton

SILENCER SYSTEM — OPEN UNIT

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

ENGINE

- Battery heater
- Lube oil drain pump
- Lube oil sump heater

CIRCUIT BREAKER

- Auxiliary voltfree contacts
- Shunt trip (100+ amp breakers)

GENERATOR

- Anti-condensation heater
- AREP excitation system (3-Phase only)
- Generator upgrade 1 size (3-Phase only)
- Permanent magnet generator

COOLING SYSTEM

- Coolant heater
- Low coolant temperature alarm
- Low coolant level shutdown
- Radiator transition flange

MOUNTING ACCESSORIES

- Seismic (Zone 4) vibration isolators

CONTROL SYSTEM

- Control Panel Removal, AC and DC wiring looms terminated in sockets
- 4001 Autostart control panel
- 4001E Autostart control panel
- Access 4000 digital control panel

FUEL SYSTEM

- Natural gas only
- Low gas pressure alarm

REMOTE ANNUNCIATORS

- 8- and 16-channel remote annunciator panel (supplied loose)
- Remote annunciator upgrade normal/run control switch
- Remote annunciator upgrade lockdown emergency stop button

MISCELLANEOUS ACCESSORIES

- Toolkit
- Additional operator's manual pack
- Special enclosure color
- French Language labels
- CSA certification

EXTENDED WARRANTY

- 24 months
 - 36 months
 - 48 months
 - 60 months
- (See warranty policy for details of coverage)

TESTING

- Factory witness test (restricted to 6 hours — full load, 1.0 pf)

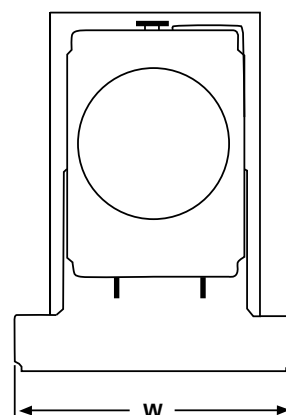
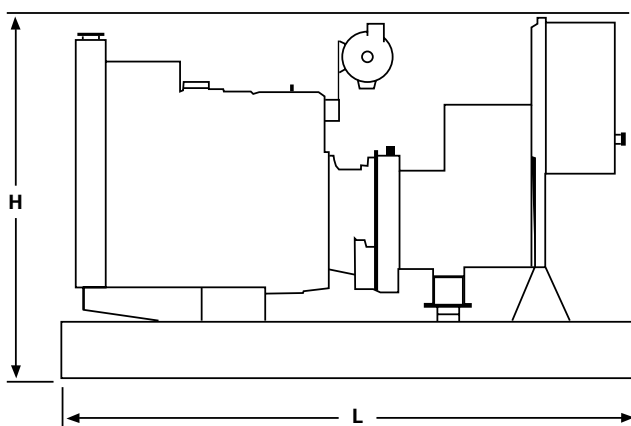
*Some options may not be available on all models. Not all options are listed.

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GENERATOR SET DIMENSIONS AND WEIGHTS

GeneratorJoe



Model	Length in (mm)	Width in (mm)	Height in (mm)	Weight lbs (kg)**
G100F3	94.5 (2400)	36.1 (918)	55.0 (1399)	2198 (999)
G90F3S	94.5 (2400)	36.1 (918)	55.0 (1399)	2473 (1124)
G100F3S	94.5 (2400)	36.1 (918)	55.0 (1399)	2594 (1179)

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

**Includes oil and coolant

STANDBY 100 kW
PRIME 80 kW
60 Hz

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SPECIFICATIONS



GENERATOR

Voltage Regulation ±0.5% 3 Phase and 1.0% Single
 Phase at steady state from no load to full load
 Frequency ±0.25% for constant load,
 Waveform Distortion THD less than 4%,
 no load to full load
 Radio Interference Compliance with 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
 12 reconnectable leads
 Insulation Class H per NEMA MG1-1.66
 Temperature Rise Within Class H limits
 Overspeed Capability 125%
 Available Voltages 1-Phase — 120/240, 110/220
 3-Phase — 277/480,
 120/240, 120/208
 Deration Please consult factory
 for available outputs
 Ratings At 86° F (30° C), 500 ft. (152.4 m),
 60% humidity, 1.0 pf (1-Phase)
 0.8 pf (3-Phase)



ENGINE

Manufacturer Ford Motor Co.
 Model WSG1068 Turbo
 Type 4-Cycle
 Aspiration Turbocharged
 Cylinder Configuration V10
 Displacement — cu in (L) 415 (6.8)

Bore — in (mm) 3.55 (90.2)
 Stroke — in (mm) 4.16 (105.8)
 Compression Ratio 9.0:1
 Governor
 Type Electronic
 Class A1
 Piston Speed — ft/sec (m/sec) 20.8 (6.3)
 Air Cleaner Type Dry, light duty

Natural Gas
 Engine Speed — rpm 1800
 Max Power at Rated rpm — hp (kW)
 Standby 162.7 (121.4)
 Prime 139.8 (104.3)
 BMEP — psi (kPa)
 Standby 174 (1200)
 Prime 149.5 (1031)



CONTROL PANEL

NEMA 1 steel enclosure with lockable hinged 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 ISO8528-3)

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.



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STANDBY 100 kW
PRIME 85 kW
60 Hz



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G100F3 (3-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data — 1800 rpm/60 Hz		Natural Gas	
		Standby	Prime
Power Rating	kW (kVA)	100 (125)	85 (106.3)
Lubricating System Type: Full Pressure Oil Filter: Spin-On, Full Flow Oil Type Required: API CD 15W-40 Total Oil Capacity Oil Pan	U.S. gal (L) U.S. gal (L)	1.5 (5.7) 1.2 (4.7)	1.5 (5.7) 1.2 (4.7)
Fuel System Generator Set Fuel Consumption 100% Load 75% Load 50% Load	Cfh (m³/hr) Cfh (m³/hr) Cfh (m³/hr)	1242 (35.2) 952 (27.0) 661 (18.7)	1068 (30.3) 801 (22.7) 534 (15.1)
Engine Electrical System Ignition System: Electronic, Distributorless Voltage/Ground: 12/Negative Battery Charging Generator Ampere Rating	Amps	110	110
Cooling System Water Pump Type: Centrifugal Radiator System Capacity Incl. Engine Maximum Coolant Static Head Coolant Flow Rate Minimum Water Temperature to Engine Temperature Rise Across Engine (Air) Heat Rejected to Coolant at Rated Power Total Heat Radiated to Room at Rated Power Radiator Fan Load	U.S. gal (L) Ft H ₂ O (m H ₂ O) U.S. gal/hr (L/min) °F (°C) °F (°C) Btu/min (kW) Btu/min (kW) Hp (kW)	5.3 (20) 32.4 (98) 2268 (143) 169 (76) 10.8 (6) 4372 (76.9) 2504 (44.0) 10.3 (7.65)	5.3 (20) 32.4 (98) 2268 (143) 169 (76) 10.8 (6) 3733 (65.7) 2137 (37.6) 10.3 (7.65)
Air Requirements 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 (m³/min) In H ₂ O (kPa) Cfm (m³/min) Cfm (m³/min) In H ₂ O (kPa) Cfm (m³/min)	265 (7.5) 10.1 (2.5) 8052 (228) 932 (26.4) 0.5 (0.125) 10276 (291)	225 (6.4) 10.1 (2.5) 8052 (228) 932 (26.4) 0.5 (0.125) 10276 (291)
Exhaust System Maximum Allowable Backpressure Exhaust Flow at Rated kW Exhaust Temperature at Rated kW — Dry Exhaust	In Hg (kPa) Cfm (m³/min) °F (°C)	4.5 (15.3) 692 (19.6) 1319 (715)	4.5 (15.3) 665 (18.8) 1248 (676)
Generator Set Noise Rating* (Without Attenuation) at 3 ft (1 m)	dB(A)	97	97

Generator Technical Data	277/480V	120/240V	120/208V
Motor Starting Capability: (kVA) (30% Voltage Dip)			
Self Excited	216	162	162
PM Excited	283	212	212
AREP Excited	283	212	212
Full Load Efficiencies:			
Standby	91.7	90.6	90.6
Prime	92.0	91.0	91.0
Reactances (per unit):			
X_d	3.62	4.82	4.82
X'_d	0.13	0.17	0.17
X''_d	0.080	0.107	0.107
X_q	2.18	2.90	2.90
X''_q	0.101	0.135	0.135
X_2	0.091	0.121	0.121
X_0	0.006	0.008	0.008
Time Constants:	t'_d 100 ms	t''_d 10 ms	t'_{do} 2555 ms t_a 15 ms

* dB(A) levels are for guidance only
 ** With PMG Excited Option AR12

STANDBY 90 kW
PRIME 80 kW
60 Hz

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G90F3S (3-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data — 1800 rpm/60 Hz		Natural Gas	
		Standby	Prime
Power Rating	kW (kVA)	90 (90)	80 (80)
Lubricating System Type: Full Pressure Oil Filter: Spin-On, Full Flow Oil Type Required: API CD 15W-40 Total Oil Capacity Oil Pan	U.S. gal (L) U.S. gal (L)	1.5 (5.7) 1.2 (4.7)	1.5 (5.7) 1.2 (4.7)
Fuel System Generator Set Fuel Consumption 100% Load 75% Load 50% Load	Cfh (m³/hr) Cfh (m³/hr) Cfh (m³/hr)	1126 (31.9) 865 (24.5) 603 (17.0)	1010 (28.6) 758 (21.4) 505 (14.3)
Engine Electrical System Ignition System: Electronic, Distributorless Voltage/Ground: 12/Negative Battery Charging Generator Ampere Rating	Amps	110	110
Cooling System Water Pump Type: Centrifugal Radiator System Capacity Incl. Engine Maximum Coolant Static Head Coolant Flow Rate Minimum Water Temperature to Engine Temperature Rise Across Engine (Air) Heat Rejected to Coolant at Rated Power Total Heat Radiated to Room at Rated Power Radiator Fan Load	U.S. gal (L) Ft H ₂ O (m H ₂ O) U.S. gal/hr (L/min) °F (°C) °F (°C) Btu/min (kW) Btu/min (kW) Hp (kW)	5.3 (20) 32.4 (98) 2268 (143) 169 (76) 10.8 (6) 4049 (71.2) 2314 (40.7) 10.3 (7.65)	5.3 (20) 32.4 (98) 2268 (143) 169 (76) 10.8 (6) 3628 (63.8) 2081 (36.6) 10.3 (7.65)
Air Requirements 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 (m³/min) In H ₂ O (kPa) Cfm (m³/min) Cfm (m³/min) In H ₂ O (kPa) Cfm (m³/min) TBA	239 (6.8) 10.1 (2.5) 8052 (228) 932 (26.4) TBA	225 (6.4) 10.1 (2.5) 8052 (228) 932 (26.4) TBA
Exhaust System Maximum Allowable Backpressure Exhaust Flow at Rated kW Exhaust Temperature at Rated kW — Dry Exhaust	In Hg (kPa) Cfm (m³/min) °F (°C)	4.5 (15.3) 671 (19.0) 1265 (685)	4.5 (15.3) 659 (18.6) 1234 (668)
Generator Set Noise Rating* (Without Attenuation) at 3 ft (1 m)	dB(A)	97	97

Alternator Technical Data		120/240V	110/220V
Motor Starting Capability: (30% Voltage Dip)	(kVA) Self Excited PM Excited** AREP Excited**	156 210 210	132 174 174
Full Load Efficiencies (LPG):	Standby Prime	88.5 88.5	87.2 87.2
Reactances (per unit): Reactances shown are applicable to the standby rating	X _d X _d X _d X _q X _q	2.42 0.156 0.093 1.45 0.111	2.88 0.185 0.111 1.72 0.132
Time Constants:	t' _d 165 ms	t'' _d 13 ms	t' _{do} 2712 ms t _a 20 ms

* dB(A) levels are for guidance only
 ** With PMG Excited Option AR12

STANDBY 100 kW
PRIME 85 kW
60 Hz



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G100F3S (1-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data — 1800 rpm/60 Hz		Natural Gas	
		Standby	Prime
Power Rating	kW (kVA)	100 (100)	85 (85)
Lubricating System Type: Full Pressure Oil Filter: Spin-On, Full Flow Oil Type Required: API CD 15W-40 Total Oil Capacity Oil Pan	U.S. gal (L)	1.5 (5.7)	1.5 (5.7)
	U.S. gal (L)	1.2 (4.7)	1.2 (4.7)
Fuel System Generator Set Fuel Consumption 100% Load 75% Load 50% Load	Cfh (m³/hr)	1126 (31.9)	1010 (28.6)
	Cfh (m³/hr)	865 (24.5)	758 (21.4)
	Cfh (m³/hr)	603 (17.0)	505 (14.3)
Engine Electrical System Ignition System: Electronic, Distributorless Voltage/Ground: 12/Negative Battery Charging Generator Ampere Rating	Amps	110	110
Cooling System Water Pump Type: Centrifugal Radiator System Capacity Incl. Engine Maximum Coolant Static Head Coolant Flow Rate Minimum Water Temperature to Engine Temperature Rise Across Engine (Air) Heat Rejected to Coolant at Rated Power Total Heat Radiated to Room at Rated Power Radiator Fan Load	U.S. gal (L)	5.3 (20)	5.3 (20)
	Ft H ₂ O (m H ₂ O)	32.4 (98)	32.4 (98)
	U.S. gal/hr (L/min)	2268 (143)	2268 (143)
	°F (°C)	169 (76)	169 (76)
	°F (°C)	10.8 (6)	10.8 (6)
	Btu/min (kW)	4049 (71.2)	3628 (63.8)
	Btu/min (kW)	2314 (40.7)	2081 (36.6)
	Hp (kW)	10.3 (7.65)	10.3 (7.65)
Air Requirements 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 (m³/min)	265 (7.5)	225 (6.4)
	In H ₂ O (kPa)	10.1 (2.5)	10.1 (2.5)
	Cfm (m³/min)	8052 (228)	8052 (228)
	Cfm (m³/min)	932 (26.4)	932 (26.4)
	In H ₂ O (kPa)	0.5 (0.125)	0.5 (0.125)
	Cfm (m³/min)	10276 (291)	10276 (291)
Exhaust System Maximum Allowable Backpressure Exhaust Flow at Rated kW Exhaust Temperature at Rated kW — Dry Exhaust	In Hg (kPa)	4.5 (15.3)	4.5 (15.3)
	Cfm (m³/min)	692 (19.6)	665 (18.8)
	°F (°C)	1319 (715)	1248 (676)
Generator Set Noise Rating* (Without Attenuation) at 3 ft (1 m)	dB(A)	97	97

Generator Technical Data		120/240V	110/220V	
Motor Starting Capability: (30% Voltage Dip)	(kVA)			
	Self Excited	180	150	
	PM Excited**	240	204	
	AREP Excited**	240	204	
Full Load Efficiencies:	Standby	88.7	88.5	
	Prime	89.2	88.0	
Reactances (per unit): Reactances shown are applicable to the standby rating	X _d	2.31	2.75	
	X' _d	0.146	0.173	
	X'' _d	0.087	0.104	
	X _q	1.39	1.65	
	X'' _q	0.104	0.123	
Time Constants:	t' _d	165 ms	t' _{do}	2752 ms
	t'' _d	13 ms	t _a	20 ms

* dB(A) levels are for guidance only
 ** With PMG Excited Option AR12

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