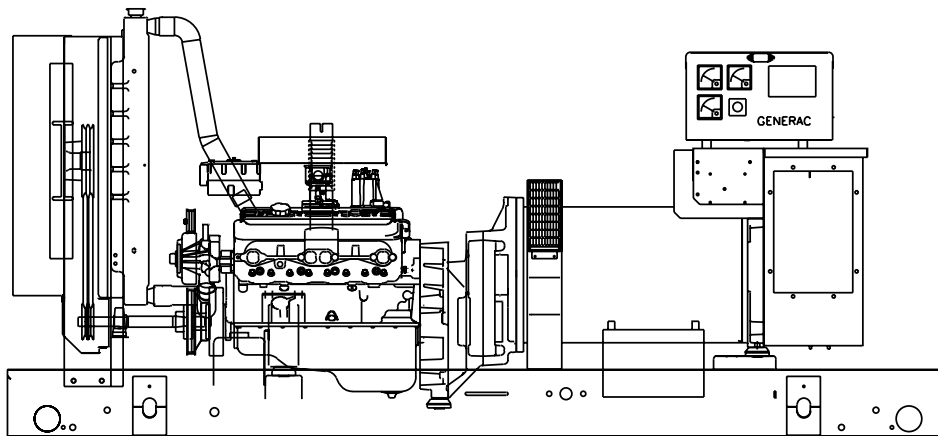


SG080

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
80KW 60 Hz / 80KVA 50 Hz

Prime Power Rating
64KW 60 Hz / 64KVA 50 Hz



Power Matched

GENERAC 5.7GN ENGINE

Naturally Aspirated – Gear Driven

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TEST CRITERIA:**
 - ✓ PROTOTYPE TESTED
 - ✓ SYSTEM TORSIONAL TESTED
 - ✓ ELECTRO-MAGNETIC INTERFERENCE
 - ✓ NEMA MG1 EVALUATION
 - ✓ MOTOR STARTING ABILITY
 - ✓ SHORT CIRCUIT TESTING
 - ✓ UL 2200 COMPLIANCE AVAILABLE
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own a GENERAC POWER SYSTEM.
- **GENERAC TRANSFER SWITCHES AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, and controls for total system compatibility.

GENERAC[®]
POWER SYSTEMS, INC.

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3%
BALANCED TELEPHONE INFLUENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING	Direct, Flexible Disc
LOAD CAPACITY (STANDBY)	100%

NOTE: Emergency loading in compliance with NFPA 99, NFPA 110, paragraph 5-13.2.6. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

EXCITATION SYSTEM

- BRUSHLESS Magnetically coupled DC current ✓
 - Eight-pole exciter w/ battery-driven field boost ✓
 - Mounted outboard of main bearing ✓
- PERMANENT MAGNET EXCITER Eighteen pole exciter ✓
 - Magnetically coupled DC current ✓
 - Mounted outboard of main bearing ✓
- REGULATION Solid-state ✓
 - ±1% regulation ✓

GENERATOR FEATURES

- Four pole, revolving field generator, connected to the engine shaft through a heavy-duty, gear reduction unit for permanent alignment.
- Generator meets temperature rise standards for class "F" insulation as defined by NEMA MG1-22 and NEMA MG1-1.
- Rotor and stator and other insulation is impregnated twice with class "H" varnish.
- All models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- Unit tested for motor-starting ability by measuring instantaneous voltage dip with a wave form data acquisition system.
- All models utilize an advanced wire harness design for reliable interconnection within the circuitry.
- Magnetic circuit, including amortisseur windings, tooth and skewed stator design, provides a minimal level of waveform distortion and an electromagnetic interference level which meets accepted requirements for standard AM radio, TV, and marine radio telephone applications.
- Voltage waveform deviation, total harmonic content of the AC waveform, and T.I.F. (Telephone Influence Factor) have been evaluated to acceptable standards in accordance with NEMA MG1-22.
- Alternator is of drip-proof guarded constructed.
- Fully life-tested protective systems, including "field circuit and thermal overload protection" and optional main-line circuit breakers capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

ENGINE SPECIFICATIONS

MAKE	GENERAC
MODEL	5.7
CYLINDERS	V-8
DISPLACEMENT	5.7 Liter (350 cu. in.)
BORE	101.6 mm (4.00 in.)
STROKE	88.4 mm (3.48 in.)
COMPRESSION RATIO	9.4:1
INTAKE AIR	Naturally Aspirated
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	8-Drop forged steel
CYLINDER HEAD	Cast Iron
PISTONS	8-Notched Head, Aluminum Alloy
CRANKSHAFT	Nodular Steel

VALVE TRAIN

LIFTER TYPE	Hydraulic
INTAKE VALVE MATERIAL	Heat Resistant Steel
EXHAUST VALVE MATERIAL	Stellite Faced
HARDENED VALVE SEATS	Standard

ENGINE GOVERNOR

<input type="checkbox"/> ELECTRONIC	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD ...	0.5%
STEADY STATE REGULATION	±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Trochoid
OIL FILTER	Full flow, cartridge
CRANKCASE CAPACITY	5 quarts

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, closed recovery
WATER PUMP	Pre-lubed, self-sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	7
DIAMETER OF FAN	660 mm (26 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL	
<input type="checkbox"/> Natural Gas or LP Vapor	Standard
<input type="checkbox"/> LP Liquid Withdrawal	Optional
CARBURETOR	Twin Side Draft
SECONDARY FUEL REGULATOR	Nat. Gas
AUTOMATIC FUEL LOCKOFF SOLENOID	Standard
OPERATING FUEL PRESSURE SYSTEM	7" to 15" H ₂ O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	20 Amps at 12 V
STARTER MOTOR	12 V
RECOMMENDED BATTERY	(1) - 12 V, 90 A.H., 27F
GROUND POLARITY	Negative

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). Prime (Unlimited Running Time): Applicable for supplying electric power in lieu of commercially purchased power. Prime power is the maximum power available at variable load. A 10% overload capacity is available for 1 hour in 12 hours. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

OPERATING DATA

	STANDBY		PRIME	
	SG080		SG080	
GENERATOR OUTPUT VOLTAGE/KW-60Hz	KW	Rated AMP	KW	Rated AMP
120/240V, 1-phase, 1.0 pf	80	333	64	267
120/208V, 3-phase, 0.8 pf	80	278	64	222
120/240V, 3-phase, 0.8 pf	80	241	64	192
277/480V, 3-phase, 0.8 pf	80	120	64	96
600V, 3-phase, 0.8 pf	80	86	64	77
NOTE: Consult your Generac dealer for additional voltages.				
GENERATOR OUTPUT VOLTAGE/KVA-50Hz	KVA	Rated AMP	KVA	Rated AMP
110/220V, 1-phase, 1.0 pf	64	291	51	233
115/200V, 3-phase, 0.8 pf	80	231	64	185
100/200V, 3-phase, 0.8 pf	80	231	64	185
231/400V, 3-phase, 0.8 pf	80	115	64	92
NOTE: Consult your Generac dealer for additional voltages.				
MOTOR STARTING KVA				
Maximum at 35% instantaneous voltage dip with standard alternator — 50/60 Hz	231/240V	400/480V	231/240V	400/480V
with optional alternator — 50/60 Hz	137/165	161/193	137/165	161/193
	234/281	276/331	234/281	276/331
FUEL	N.G.	L.P.	N.G.	L.P.
Fuel consumption—60 Hz—100% Load				
ft. ³ /hr.	1080	433.7	864.0	347.0
m ³ /hr.	30.6	12.3	24.5	9.8
Fuel consumption—50 Hz—100% Load				
ft. ³ /hr.	864.0	347.0	691.2	277.6
m ³ /hr.	24.5	9.8	19.6	7.9
COOLING				
Coolant capacity				
System - gal. (lit.)	5.0 (18.9)		5.0 (18.9)	
Engine - gal. (lit.)	3.3 (12.4)		3.3 (12.4)	
Radiator - gal. (lit.)	1.7 (6.5)		1.7 (6.5)	
Coolant flow/min.				
60 Hz - gal. (lit.)	24.0 (90.9)		24.0 (90.9)	
50 Hz - gal. (lit.)	20.0 (75.7)		20.0 (75.7)	
Heat rejection to coolant				
BTU/hr.	355,000		284,000	
Inlet air				
60 Hz - cfm (m ³ /min.)	5500 (155.8)		5500 (155.8)	
50 Hz - cfm (m ³ /min.)	4583 (129.8)		4583 (129.8)	
Max. operating air temp onto radiator				
*see note °C (°F)	60 (140)		60 (140)	
Max. operating ambient temp				
*see note °C (°F)	50 (122)		50 (122)	
Max. external pressure drop on rad. in H ₂ O	0.5	0.5		
COMBUSTION AIR REQUIREMENTS				
Flow at rated power				
60 Hz - cfm (m ³ /min.)	240 (7.7)		192 (6.2)	
50 Hz - cfm (m ³ /min.)	190 (6.1)		152 (4.9)	
EXHAUST				
Exhaust flow at rated output				
60 Hz - cfm (m ³ /min.)	854 (24.2)		683 (19.3)	
50 Hz - cfm (m ³ /min.)	676 (19.1)		541 (15.3)	
Maximum recommended back pressure				
in. Hg (kPa)	2.9 (9.8)		2.9 (9.8)	
Exhaust temperature at rated output				
°F (°C)	1400 (760)		1200 (649)	
Exhaust outlet size (2)				
in. (mm)	2.5 (63.5)		2.5 (63.5)	
ENGINE				
Rated RPM	60 / 50 Hz	3000 / 2500	3000 / 2500	
HP at rated KW	60 / 50 Hz	120 / 95	97 / 77	
Piston speed	60 Hz - ft./min. (m/sec.)	1740 (8.8)	1740 (8.8)	
50 Hz - ft./min. (m/sec.)	1450 (7.4)		1450 (7.4)	
BMEP	60 / 50 Hz - psi	91 / 86	73 / 70	
POWER ADJUSTMENT FOR AMBIENT CONDITIONS				
Temperature				
-3% for every 10°C above - °C	43		43	
-1.5% for every 10°F above - °F	110		110	
Altitude				
1.1% for every 100 m above - m	150		150	
-3.5% for every 1000 ft. above - ft.	500		500	

* Note: Values given are maximum temperatures to which power adjustments can be applied. Consult your Generac Power Systems representative if operating conditions exceed these maximums.

STANDARD ENGINE & SAFETY FEATURES

SG080

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Engine Coolant Heater
- Fuel Lockoff Solenoid
- Secondary Fuel Regulator
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation of Unit to Mounting Base
- 12 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Isochronous Governor

OPTIONS

■ OPTIONAL COOLING SYSTEM ACCESSORIES

- 208/240V Coolant Heater

■ OPTIONAL FUEL ACCESSORIES

- Flexible Fuel Lines

■ OPTIONAL EXHAUST ACCESSORIES

- Critical Exhaust Silencer (Std. on enclosed genset)
- Single Exhaust Kit For Indoor Installations

■ OPTIONAL ELECTRICAL ACCESSORIES

- Battery, 12 Volt, 135 A.H., 4DL
- Battery Heater
- 2A Battery Charger
- 10A Dual Rate Battery Charger

■ OPTIONAL ALTERNATOR ACCESSORIES

- Alternator Strip Heater
- Alternator Tropicalization
- Voltage Changeover Switch
- Main Line Circuit Breaker

■ CONTROL CONSOLE OPTIONS

- Analog Control "C" Panel (Bulletin 0151160SBY)
- Analog/Digital Control "E" Panel (Bulletin 0161310SBY)

■ ADDITIONAL OPTIONAL EQUIPMENT

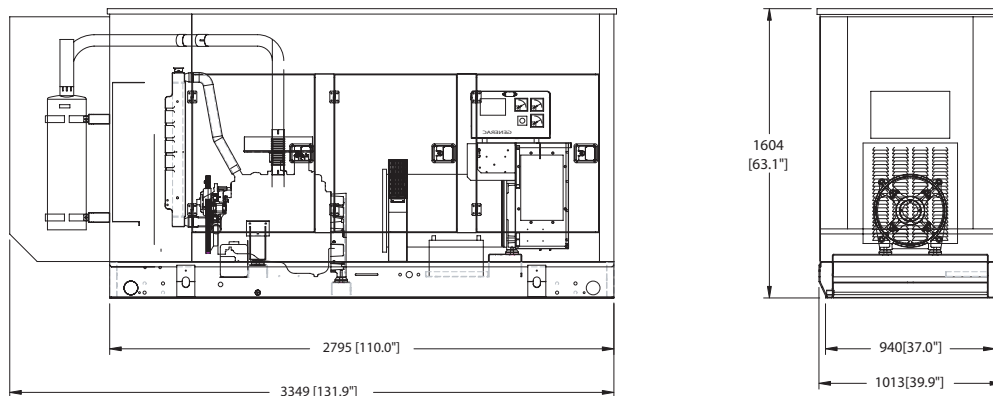
- Automatic Transfer Switch
- 3 Light Remote Annunciator
- 5 Light Remote Annunciator
- 20 Light Remote Annunciator
- Remote Relay Panels
- Oil Make-up System
- Oil Heater
- 5 Year Warranties
- Export Boxing
- GenLink® Communications Software

■ OPTIONAL ENCLOSURE

- Weather Protective
- Sound Attenuated
- Aluminum and Stainless Steel
- Enclosed Muffler

Distributed by:

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



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