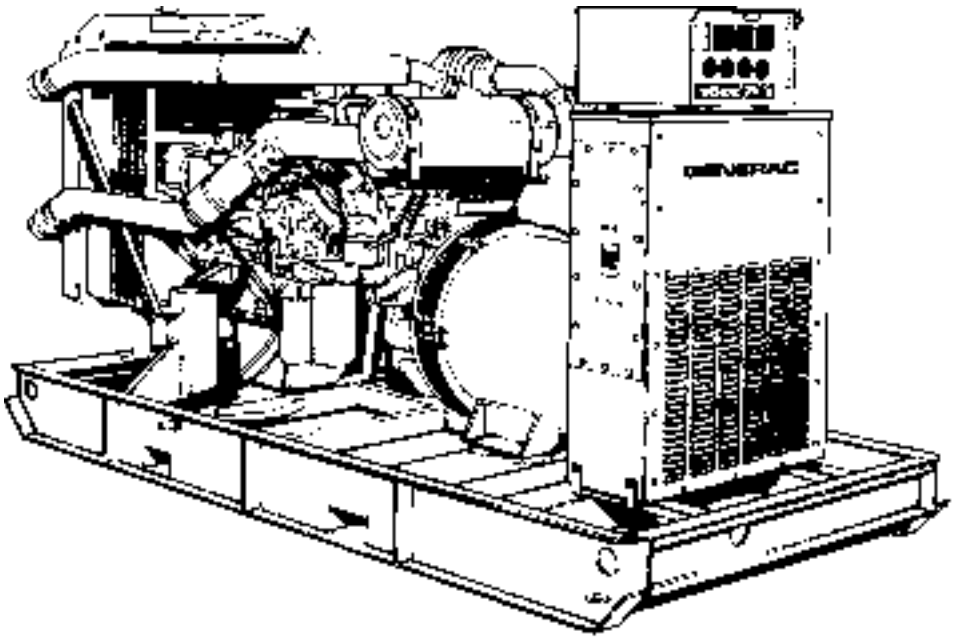
SG200

Liquid Cooled Gas Engine Generator Sets

Continuous Standby Power Rating
206 KW 60 Hz / 206 KVA 50 Hz

Prime Power Rating
160 KW 60 Hz / 160 KVA 50 Hz



Power Matched
GENERAC 13.3GTA ENGINE
Turbocharged/Aftercooled

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 MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
  - ✓ SHORT CIRCUIT TESTING
  - ✓ UL2200 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 an GENERAC POWER SYSTEM.

- **GENERAC TRANSFER SWITCHES, SWITCHGEAR 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, switchgear and controls for total system compatibility.

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APPLICATION & ENGINEERING DATA

GENERATOR SPECIFICATIONS

TYPE ..... Four-pole, revolving field
ROTOR INSULATION ..... Class H
STATOR INSULATION ..... Class H
TOTAL HARMONIC DISTORTION ..... <3%
TELEPHONE INTERFERENCE FACTOR (TIF) ..... <30
SHORT CIRCUIT CURRENT 300%
ALTERNATOR ..... Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED) 1
COUPLING ..... Direct, Flexible Disc
LOAD CAPACITY (STANDBY) 100%
LOAD CAPACITY (PRIME) 110%

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

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, directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets temperature rise standards for class "F" insulation as defined by NEMA MG1-22.4 and NEMA MG1-1.65.
- 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 an oscillograph.
- 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 self-ventilated and drip-proof 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 13.3GTA
CYLINDERS ..... 6 in-line
DISPLACEMENT ..... 13.3 Liter (811 cu. in.)
BORE ..... 137 mm (5.39 in.)
STROKE ..... 150 mm (5.91 in.)
COMPRESSION RATIO 10.5:1
INTAKE AIR ..... Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS 7
CONNECTING RODS ..... 6-Carbon Steel
CYLINDER HEAD ..... Cast Iron with Overhead Valve
CYLINDER LINERS ..... Wet/Replaceable
IGNITION ..... Altronic CD1
PISTONS ..... Heat-Resistant Alloy with 4 Rings
CRANKSHAFT ..... Induction-Hardened, Die-Forged Carbon Steel

VALVE TRAIN

LIFTER TYPE ..... Solid
INTAKE VALVE MATERIAL ..... Special Heat Resistant Steel
EXHAUST VALVE MATERIAL ..... Inconel Alloy High Temp.
HARDENED VALVE SEATS ..... Hight Temp. Alloy Stellite Faced

ENGINE GOVERNOR

ELECTRONIC ..... Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD ... 0.5%
STEADY STATE REGULATION ..... ±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP ..... Gear Driven
OIL FILTER ..... Full flow, cartridge
CRANKCASE CAPACITY ..... 27 Liters (7.13 gal.)

COOLING SYSTEM

TYPE OF SYSTEM ..... Pressurized, closed recovery
WATER PUMP ..... Pre-lubed, self-sealing
TYPE OF FAN ..... Pusher
NUMBER OF FAN BLADES 6
DIAMETER OF FAN ..... 30 in.
COOLANT HEATER ..... 2-240V, 1000 W

FUEL SYSTEM

FUEL
❑ Natural Gas ..... Standard
CARBURETOR ..... Down draft
SECONDARY FUEL REGULATOR ..... Nat. Gas
AUTOMATIC FUEL LOCKOFF SOLENOID ..... Standard
OPERATING FUEL PRESSURE SYSTEMS ..... 7" to 15" H_2O
❑ OPTIONAL HIGH PRESSURE (2 to 20 PSI)
LOW PRESSURE INPUT (7" to 15" H_2O) ..... Standard

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR ..... 20 Amps at 24 V
STARTER MOTOR ..... 24 V
RECOMMENDED BATTERY ..... (2) - 12 V, 135 A.H., 40
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).

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SG200

OPERATING DATA		STANDBY		PRIME	
GENERATOR OUTPUT VOLTAGE/KW-60Hz		**N.G.**	**Rated AMP**	**N.G.**	**Rated AMP**
120/240V, 1-phase, 1.0 pf	NOTE: Consult your Generac dealer for additional voltages.	200	833	120	500
120/208V, 3-phase, 0.8 pf		206	715	160	556
120/240V, 3-phase, 0.8 pf		206	619	160	482
277/480V, 3-phase, 0.8 pf		206	310	160	241
600V, 3-phase, 0.8 pf		206	248	160	193
GENERATOR OUTPUT VOLTAGE/KVA-50Hz		**N.G**	**Rated AMP**	**N.G.**	**Rated AMP**
110/220V, 1-phase, 1.0 pf	NOTE: Consult your Generac dealer for additional voltages.	107	486	100	455
115/200V, 3-phase, 0.8 pf		200	578	160	462
100/200V, 3-phase, 0.8 pf		200	578	160	462
231/400V, 3-phase, 0.8 pf		200	289	160	231
480V, 3-phase, 0.8 pf		200	241	160	193
MOTOR STARTING					
Maximum at 35% instantaneous voltage dip		**240V**	**480V**	**240V**	**480V**
with standard alternator—50/60 Hz		435/500 KVA	600/690 KVA	435/500 KVA	600/690 KVA
with optional alternator—50/60 Hz		797/960 KVA	1112/1340 KVA	797/960 KVA	1112/1340 KVA
FUEL		**N.G.**		**N.G.**	
Fuel consumption—60 Hz—100% Load					
	$ft.^3$ hr.	2630		2000	
	m^3 hr.	74.5		56	
Fuel consumption—50 Hz—100% Load					
	$ft.^3$ hr.	1935		1520	
	m^3 hr.	55		43	
COOLING					
Coolant capacity	System lit. (US gal.)	29 (7.7)		29 (7.7)	
	Engine lit. (US gal.)	21 (5.6)		21 (5.6)	
	Radiator lit. (US gal.)	8 (2.1)		8 (2.1)	
Coolant flow/min.	60 Hz lit. (US gal.)	170 (45)		170 (45)	
	50 Hz lit. (US gal.)	142 (37.5)		142 (37.5)	
Heat rejection to coolant	BTU/hr.	467,000		439,000	
Inlet air	60 Hz m^3/min. (cfm)	493 (17400)		493 (17400)	
	50 Hz m^3/min. (cfm)	410 (14500)		410 (14500)	
Max. inlet air temperature	°F	110		110	
COMBUSTION AIR REQUIREMENTS					
Flow at rated power	60 Hz m^3/min. (cfm)	10.1 (358)		9.8 (345)	
	50 Hz m^3/min. (cfm)	8.8 (312)		8.5 (300)	
EXHAUST					
Exhaust flow at rated output	60 Hz m^3/min. (cfm)	29.9 (1057)		23.6 (833)	
	50 Hz m^3/min. (cfm)	26.1 (920)		20.6 (725)	
Max. recommended back pressure	Kpa (Hg)	5.0 (1.5")		5.0 (1.5")	
Exhaust temp. at rated output	°F	1565		1533	
Exhaust outlet size	(flange)	4" I.D.		4" I.D.	
ENGINE					
Rated RPM	60 Hz	1800		1800	
	50 Hz	1500		1500	
HP at rated KW	60 Hz	318		252	
	50 Hz	342		196	
Piston speed	60 Hz m/min. (ft./min.)	541 (1773)		541 (1773)	
	50 Hz m/min. (ft./min.)	451 (1477)		451 (1477)	
BMEP	60 Hz	172		137	
	50 Hz	157		128	
DERATION FACTORS					
Temperature					
5% for every 10°C above - °C		43		43	
2.77% for every 10°F above - °F		110		110	
Altitude					
1.1% for every 100 m above - m		2131		2131	
3.5% for every 1000 ft. above - ft.		6500		6500	

STANDARD ENGINE & SAFETY FEATURES

SG200

- 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
- Isochronous Governor
- Fuel Lockoff Solenoid
- Secondary Fuel Regulator (N.G. and L.P.)
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation of Unit to Mounting Base
- 24 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console

OPTIONS

- **OPTIONAL COOLING SYSTEM ACCESSORIES**
  - ❍ Radiator Duct Adapter
- **OPTIONAL FUEL ACCESSORIES**
  - ❍ Flexible Fuel Lines
  - ❍ High Pressure Gas Regulator
- **OPTIONAL EXHAUST ACCESSORIES**
  - ❍ Critical Exhaust Silencer
- **OPTIONAL ELECTRICAL ACCESSORIES**
  - ❍ Battery, (2) - 12 Volt, 135 A.H., 4DLT
  - ❍ Battery, (2) - 12 Volt, 225 A.H., 8D
  - ❍ Battery Heater
  - ❍ 2A Battery Charger
  - ❍ 10A Dual Rate Battery Charger
- **OPTIONAL ALTERNATOR ACCESSORIES**
  - ❍ Alternator Upsizing
  - ❍ Alternator Strip Heater
  - ❍ Alternator Tropicalization
  - ❍ Voltage Changeover Switch
  - ❍ Main Line Circuit Breaker
- **CONTROL CONSOLE OPTIONS**
  - *• See control console specification sheet*
- **ADDITIONAL OPTIONAL EQUIPMENT**
  - ❍ Automatic Transfer Switch
  - ❍ 3 Light Remote Annunciator
  - ❍ 5 Light Remote Annunciator
  - ❍ 20 Light Remote Annunciator
  - ❍ Remote Relay Panels
  - ❍ Unit Vibration Isolators
  - ❍ Oil Make-Up System
  - ❍ Oil Heater
  - ❍ 5 Year Warranties
  - ❍ Export Boxing
  - ❍ GenLink® Communications Software
- **OPTIONAL ENCLOSURES**
  - ❍ Weather Protective
  - ❍ Sound Attenuated
  - ❍ Aluminum and Stainless Steel
  - ❍ Enclosed Muffler

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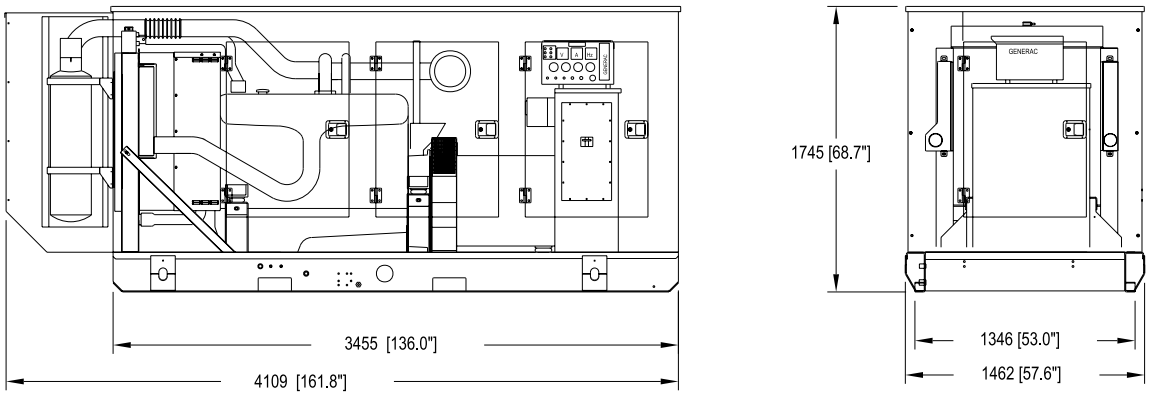
Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



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