

SG230

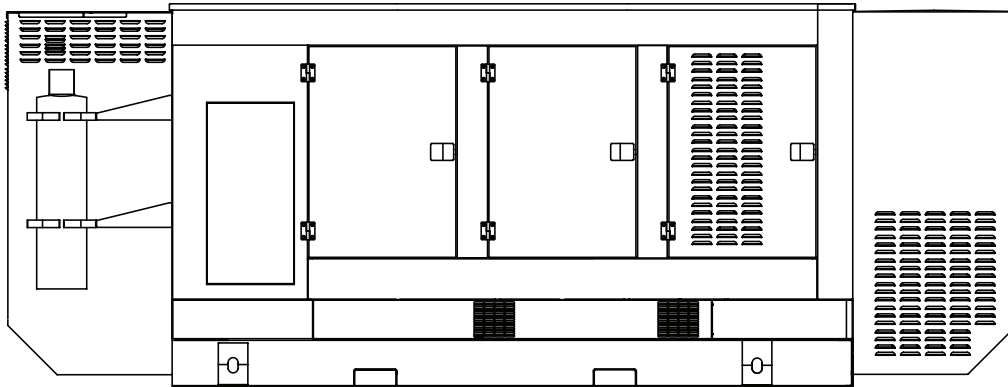
SG250

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating

230 KW 60 Hz

250 KW 60 Hz



Power Matched

GENERAC

13.3GTA ENGINE

Turbocharged/Aftercooled

Meets EPA Emission Regulations

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
 - ✓ UL2200 COMPLIANCE AVAILABLE
- **SOLID-STATE, FREQUENCY COMPENSATED DIGITAL 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, 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.

GENERAC®

APPLICATION & ENGINEERING DATA

SG230/SG250

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3.0%
TELEPHONE INFLUENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	2
COUPLING	Flexible Disc
LOAD CAPACITY (STANDBY)	100%

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

EXCITATION SYSTEM

PERMANENT MAGNET PILOT EXCITER.....	Eighteen-pole exciter ✓
	Magnetically coupled DC current ✓
	Mounted outboard of main bearing ✓
REGULATION.....	H100 Controller Digital ✓
	3 Phase Sensing, ± 0.25% regulation ✓

GENERATOR FEATURES

- Revolving field heavy duty generator
- Directly connected to the engine
- Operating temperature rise 120 °C above a 40 °C ambient
- Insulation is Class H rated at 150 °C rise
- All prototype models have passed three phase short circuit testing
- PMG

CONTROL PANEL FEATURES

- TWO FOUR LINE LCD DISPLAYS READ:
 - Voltage (all phases)
 - Power factor
 - kVAR
 - Engine speed
 - Run hours
 - Fault history
 - Coolant temperature
 - Low oil pressure shutdown
 - Overvoltage
 - Low coolant level
 - Not in auto position (flashing light)
 - ATS selection
 - Current (all phases)
 - kW
 - Transfer switch status
 - Low fuel pressure
 - Service reminders
 - Oil pressure
 - Time and date
 - High coolant temperature shutdown
 - Overspeed
 - Low coolant level
 - Exercise speed
- INTERNAL FUNCTIONS:
 - I/T function for alternator protection from line to neutral and line to line short circuits
 - Emergency stop
 - Programmable auto crank function
 - 2 wire start for any transfer switch
 - Communicates with the Generac HTS transfer switch
 - Built-in 7 day exerciser
 - Adjustable engine speed at exerciser
 - RS232 port for GenLink® control
 - RS485 port remote communication
 - Canbus addressable
 - Governor controller and voltage regulator are built into the master control board
 - Temperature range -40 °C to 70 °C

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	High Temp. Alloy Stellite Faced

ENGINE GOVERNOR

ELECTRONIC	Standard
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.....	8
DIAMETER OF FAN	39 in.
COOLANT HEATER	240V, 2000 W

FUEL SYSTEM

FUEL	
<input type="checkbox"/> Natural Gas.....	Standard
CARBURETOR.....	Down draft
SECONDARY FUEL REGULATOR.....	Nat. Gas
AUTOMATIC FUEL LOCKOFF SOLENOID.....	Standard
OPERATING FUEL PRESSURE SYSTEMS.....	10" to 15" H ₂ O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	20 Amps at 24 V
STARTER MOTOR	24 V
RECOMMENDED BATTERY.....	(2) - 12 V, 925 CCA, 31
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).

SG230/SG250

OPERATING DATA	SG230		SG250	
GENERATOR OUTPUT VOLTAGE/KW-60Hz 120/208V, 3-phase, 0.8 pf 120/240V, 3-phase, 0.8 pf 277/480V, 3-phase, 0.8 pf 600V, 3-phase, 0.8 pf NOTE: Consult your Generac dealer for additional voltages.	<u>KW</u> 230 230 230 230	<u>Rated AMP</u> 798 692 346 277	<u>KW</u> 250 250 250 250	<u>Rated AMP</u> 867 752 376 301
MOTOR STARTING Maximum at 35% instantaneous voltage dip with standard alternator—60 Hz with optional alternator—60 Hz	<u>208/240V</u> 692 KVA 794 KVA	<u>480V</u> 922 KVA 1059 KVA	<u>208/240V</u> 692 KVA 794 KVA	<u>480V</u> 922 KVA 1059 KVA
FUEL Fuel consumption—60 Hz—100% Load ft. ³ hr.*	<u>N.G.</u>		<u>N.G.</u>	
No Load 25% 50% 75% 100%	907 1449 2048 2606 3252		907 1495 2145 2751 3446	
COOLING Coolant capacity System lit. (US gal.) Coolant flow/min. 60 Hz lit. (US gal.) Heat rejection to coolant BTU/hr. Inlet air 60 Hz (cfm) Max. operating air temp. onto radiator*** °C (°F) Max. operating ambient temp.*** °C (°F) Max. external pressure drop on rad. in. H ₂ O	56.7 (15) 170 (45) 897,600 19,200 60 (140) 50 (122) 0.5		56.7 (15) 170 (45) 951,100 19,200 60 (140) 50 (122) 0.5	
COMBUSTION AIR REQUIREMENTS Flow at rated power 60 Hz cfm	918		1060)	
EXHAUST Exhaust flow at rated output 60 Hz m ³ /min. (cfm) Max. recommended back pressure Kpa (Hg) Exhaust temp. at rated output °F Exhaust outlet size (flange)	925 (3266) 5.0 (1.5") 1450 4" I.D.		1070 (3776) 5.0 (1.5") 1460 4" I.D.	
ENGINE Rated RPM 60 Hz HP at rated KW** 60 Hz Piston speed 60 Hz ft./min. BMEP 60 Hz	2300 357 2265 151		2300 385 2265 163	
DERATION FACTORS Temperature 4.1% for every 10°C above - °C 2.4% for every 10°F above - °F Altitude 0.7% for every 100 m above - m 2.1% for every 1000 ft. above - ft.	43 110 1524 5000		43 110 1371 4500	

* Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

** Refer to "Emissions Data Sheets" for maximum bHP for EPA and SCAQMD permitting purposes.

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

- 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.)
- 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 (H100)

OPTIONS

■ OPTIONAL COOLING SYSTEM ACCESSORIES

- Radiator Duct Adapter

■ OPTIONAL FUEL ACCESSORIES

- Flexible Fuel Lines

■ 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
- Main Line Circuit Breaker

■ CONTROL CONSOLE OPTIONS

- Digital Controller H100 *see specification 0172110SBY*

■ ADDITIONAL OPTIONAL EQUIPMENT

- Automatic Transfer Switch (GTS or HTS)
- 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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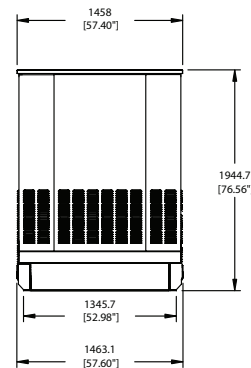
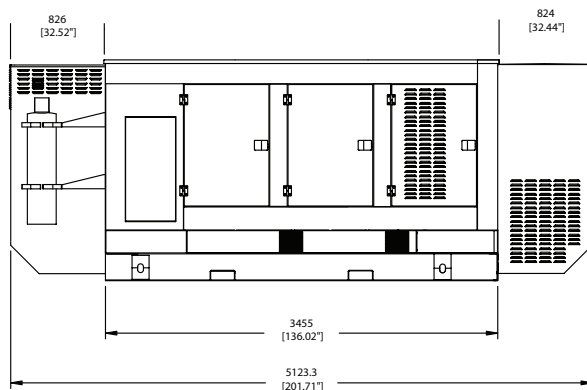


Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.

Sound Attenuated Enclosure

Note: Muffler shown is inside enclosure

mm [in]



Reference Install Drawing:
OF9953STD
OF9954SAE