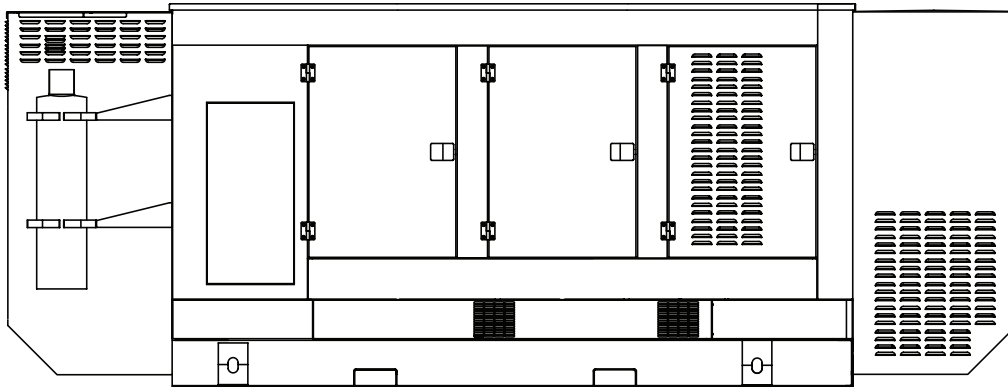


SG135

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
135KW 60 Hz / 135KVA 50 Hz

Prime Power Rating
105KW 60 Hz / 100KVA 50 Hz



Power Matched
GENERAC
13.3GN ENGINE
Naturally Aspirated

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 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[®]
POWER SYSTEMS, INC.

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, ± 1% 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:
 - IT 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.....	13.3GN
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	LPG 8.5:1 Nat. Gas 10.5:1
INTAKE AIR	Naturally Aspirated
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	Stellite-Faced, Heat Resistant Steel
HARDENED VALVE SEATS	Standard

ENGINE GOVERNOR

ELECTRONIC	Standard
FREQUENCY REGULATION,	
NO-LOAD TO FULL LOAD	Isochronous
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	650 mm (25.6 in.)
COOLANT HEATER	2-240V, 1000 W

FUEL SYSTEM

FUEL	
Natural Gas or L.P. Vapor	Standard
L.P. Liquid Withdrawal	Optional
CARBURETOR.....	Down draft
SECONDARY FUEL REGULATOR	Nat. Gas or L.P. Vapor Systems
HOT WATER VAPORIZER.....	L.P. Liquid Withdrawal Systems
AUTOMATIC FUEL LOCKOFF SOLENOID.....	Standard
OPERATING FUEL PRESSURE VAPOR SYSTEMS	7" to 15" H ₂ O
LOW PRESSURE INPUT (7" to 15" H ₂ O)	Standard

ELECTRICAL SYSTEM

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

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).

SG135

OPERATING DATA

	STANDBY		PRIME	
	SG135		SG135	
GENERATOR OUTPUT VOLTAGE/KW-60Hz	NG/LP	Rated AMP	NG/LP	Rated AMP
120/240V, 1-phase, 1.0 pf	135	563	105	438
120/208V, 3-phase, 0.8 pf	135	469	105	365
120/240V, 3-phase, 0.8 pf	135	406	105	316
277/480V, 3-phase, 0.8 pf	135	203	105	158
600V, 3-phase, 0.8 pf	135	163	105	126
	NOTE: Consult your Generac dealer for additional voltages.			
GENERATOR OUTPUT VOLTAGE/KVA-50Hz	NG	Rated AMP	NG	Rated AMP
110/220v, 1-phase, 1.0 pf	135	614	100	455
115/200V, 3-phase, 0.8 pf	135	390	100	289
100/200V, 3-phase, 0.8 pf	135	390	100	289
231/400V, 3-phase, 0.8 pf	135	195	100	145
480V, 3-phase, 0.8 pf	135	163	100	120
	NOTE: Consult your Generac dealer for additional voltages.			
MOTOR STARTING KVA				
Maximum at 35% instantaneous voltage dip with standard alternator—50/60 Hz	240V	480V	240V	480V
with optional alternator—50/60 Hz	199/390	274/405	199/390	274/405
	797/960	1112/1340	797/960	1112/1340
FUEL				
Fuel consumption—60 Hz—100% Load	N.G.	L.P.	N.G.	L.P.
ft. ³ hr.	2081	827	1647	654
m ³ hr.	59.9	23.4	46.6	18.5
Fuel consumption—50 Hz—100% Load				
ft. ³ hr.	1671		1326	
m ³ hr.	47.3		37.5	
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		514,000		440,000
Inlet air 60 Hz - m ³ /min. (cfm)		229 (8086)		229 (8086)
50 Hz - m ³ /min. (cfm)		191 (6744)		191 (6744)
Max. operating air temp. onto radiator*°C (°F)		60 (140)		60 (140)
Max. operating ambient temp.* °C (°F)		50 (122)		50 (122)
Max. external pressure drop on rad.in. H ₂ O		0.50.5		
COMBUSTION AIR REQUIREMENTS				
Flow at rated power 60 Hz - m ³ /min. (cfm)		10.2 (359)		10.2 (359)
50 Hz - m ³ /min. (cfm)		8.5 (299)		8.5 (299)
EXHAUST				
Exhaust flow at rated output 60 Hz - m ³ /min. (cfm)		35.3 (1240)		31.8 (1120)
50 Hz - m ³ /min. (cfm)		29.3 (1031)		26.4 (932)
Max recommended back pressureKpa (Hg)		5.0 (1.5")		5.0 (1.5")
Exhaust temp at rated output °C (°F)		705 (1300)		621 (1150)
Exhaust outlet size I.D. (flange)		4"		4"
ENGINE				
Rated RPM 60 Hz		1800		1800
50 Hz		1500		1500
HP at rated KW 60 Hz		209		170
50 Hz		164		133
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 – psi		113		92
50 Hz – psi		107		86
DERATION FACTORS				
Temperature				
3.0% for every 10°C above - °C		25		25
1.65% for every 10°F above - °F		77		77
Altitude				
1.0% for every 100 m above - m		183		183
3.0% for every 1000 ft. above - ft.		600		600

- 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
- Engine Coolant Heater

- 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
- Air Duct Adapter

OPTIONS

OPTIONAL COOLING SYSTEM ACCESSORIES

- Radiator Duct Adapter

OPTIONAL FUEL ACCESSORIES

- Flexible Fuel Lines
- L.P. Liquid Withdrawal
- Dual Fuel Natural Gas/LP (consult factory for kW ratings)

OPTIONAL EXHAUST ACCESSORIES

- Critical Exhaust Silencer
- Single Exhaust Kit for Indoor Installations

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

- Digital controller H100 Panel (See Bulletin 0172110SBY)

ADDITIONAL OPTIONAL EQUIPMENT

- Automatic Transfer Switch
- 3 Light Remote Annunciator
- 5 Light Remote Annunciator
- 20 Light Remote Annunciator
- Unit Vibration Isolators (Pad/Spring)
- Oil Make-Up System
- Oil Heater
- 5 Year Warranties
- Export Boxing
- GenLink® Communications Software

OPTIONAL ENCLOSURE

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

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