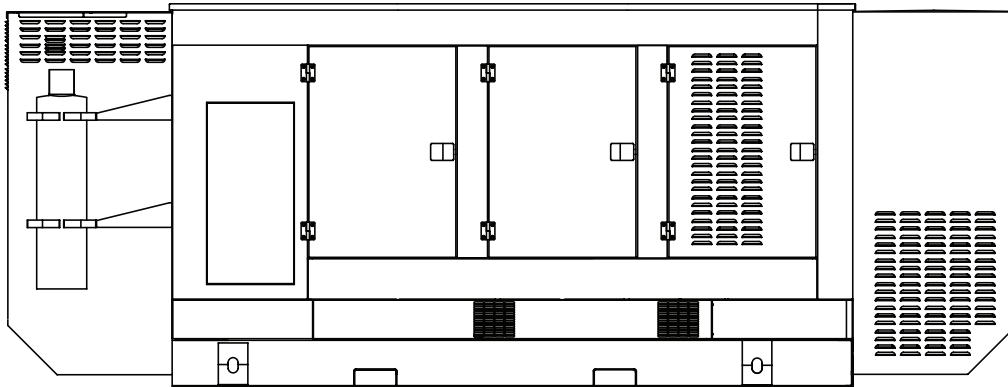


SG135

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating

135KW 60 Hz / 135KVA 50 Hz



Power Matched

GENERAC
13.3GN ENGINE

Naturally Aspirated
Meets 2009 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
 - ✓ 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®

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:
 - 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.....	13.3GN
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
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	
GENERATOR OUTPUT VOLTAGE/KW-60Hz		<u>N.G.</u>	<u>Rated AMP</u>
120/240V, 1-phase, 1.0 pf		135	563
120/208V, 3-phase, 0.8 pf		135	469
120/240V, 3-phase, 0.8 pf	NOTE: Consult your Generac dealer for additional voltages.	135	406
277/480V, 3-phase, 0.8 pf		135	203
600V, 3-phase, 0.8 pf		135	163
GENERATOR OUTPUT VOLTAGE/KVA-50Hz		<u>N.G.</u>	<u>Rated AMP</u>
110/220V, 1-phase, 1.0 pf		135	614
115/200V, 3-phase, 0.8 pf		135	390
100/200V, 3-phase, 0.8 pf	NOTE: Consult your Generac dealer for additional voltages.	135	390
231/400V, 3-phase, 0.8 pf		135	195
MOTOR STARTING Maximum at 35% instantaneous voltage dip with standard alternator—50/60 Hz with optional alternator—50/60 Hz		<u>240V</u> 199/390 797/960 KVA	<u>480V</u> 274/405 1112/1340 KVA
FUEL		<u>N.G.</u>	<u>L.P.</u>
Fuel consumption—60 Hz—100% Load			
	ft. ³ hr.	2081	827
	m ³ hr.	59.9	23.4
Fuel consumption—50 Hz—100% Load			
	ft. ³ hr.	1671	
	m ³ hr.	47.3	
COOLING			
Coolant capacity	System lit. (US gal.)		29 (7.7)
	Engine lit. (US gal.)		21 (5.6)
	Radiator lit. (US gal.)		8 (2.1)
Coolant flow/min.	60 Hz lit. (US gal.)		170 (45)
	50 Hz lit. (US gal.)		142 (37.5)
Heat rejection to coolant	BTU/hr.		514,000
Inlet air	60 Hz m ³ /min. (cfm)		229 (8086)
	50 Hz m ³ /min. (cfm)		191 (6744)
Max. operating air temp. onto radiator*	°C (°F)		60 (140)
Max. operating ambient temp.*	°C (°F)		50 (122)
Max. external pressure drop on rad.	in. H ₂ O		0.5
COMBUSTION AIR REQUIREMENTS			
Flow at rated power	60 Hz m ³ /min. (cfm)		10.2 (359)
	50 Hz m ³ /min. (cfm)		8.5 (299)
EXHAUST			
Exhaust flow at rated output	60 Hz m ³ /min. (cfm)		35.3 (1240)
	50 Hz m ³ /min. (cfm)		29.3 (1031)
Max. recommended back pressure	Kpa (Hg)		5.0 (1.5")
Exhaust temp. at rated output	°F		705 (1300)
Exhaust outlet size	(flange)		4" I.D.
ENGINE			
Rated RPM	60 Hz		1800
	50 Hz		1500
HP at rated KW	60 Hz		209
	50 Hz		164
Piston speed	60 Hz - m/min. (ft./min.)		541 (1773)
	50 Hz - m/min. (ft./min.)		451 (1477)
BMEP	60 Hz - psi		113
	50 Hz - psi		107
DERATION FACTORS			
Temperature			
	3.0% for every 10°C above - °C		25
	1.65% for every 10°F above - °F		77
Altitude			
	1.0% for every 100 m above - m		183
	3.0% for every 1000 ft. above - ft.		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

Distributed by:

