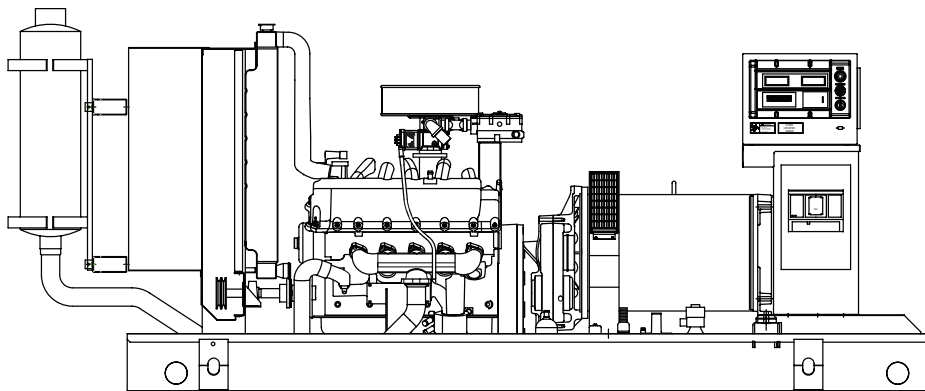


SG100

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
100 kVA 50 Hz 3-phase
80 kVA 50 Hz 1-phase

Prime Power Rating
85 kVA 50 Hz 3-phase
68 kVA 50 Hz 1-phase



Power Matched

GENERAC 6.8GN 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
- **SOLID-STATE, DIGITAL, 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, 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

SG100

GENERATOR SPECIFICATIONS

TYPE	Synchronous
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION.....	<3.5%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR OUTPUT LEADS 3 PHASE.....	4 wire
BEARINGS.....	Sealed Ball
COUPLING.....	Gear Drive
LOAD CAPACITY (STANDBY RATING).....	100%
EXCITATION SYSTEM.....	PMG or Brushless

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.

VOLTAGE REGULATOR

TYPE	Full Digital
SENSING	3 Phase
REGULATION.....	± 1/4%
FEATURES.....	Built into H-100 Control Panel V/F Adjustable Adjustable Voltage and Gain

GENERATOR FEATURES

- Revolving field heavy duty generator
- Quiet drive coupling
- 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

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:
 - I²T 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.....	V Type
CYLINDERS.....	10
DISPLACEMENT.....	6.8 Liter
BORE.....	3.55
STROKE.....	4.17
COMPRESSION RATIO.....	9:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS.....	Hardened
LIFTER TYPE.....	Hydraulic

GOVERNOR SPECIFICATIONS

TYPE	Electronic
FREQUENCY REGULATION.....	Isochronous
STEADY STATE REGULATION.....	± 0.25%

All functions are factory preset.
Individual parameter adjustments can be made via GenLink®.

ENGINE LUBRICATION SYSTEM

OIL PUMP.....	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	6.3 Liters

ENGINE COOLING SYSTEM

TYPE	Closed
WATER PUMP.....	Belt driven
NUMBER OF FAN BLADES.....	7
FAN DIAMETER.....	584 MM
FAN MODE.....	Puller
COOLANT HEATER.....	1500W 240V

FUEL SYSTEM

FUEL TYPE.....	Natural gas, propane vapor, liquid propane
CARBURETOR.....	Down Draft
SECONDARY FUEL REGULATOR.....	Standard
FUEL SHUT OFF SOLENOID.....	Standard
OPERATING FUEL PRESSURE.....	127-356 mm, 5" - 14" H ₂ O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER.....	12V 2 Amp
RECOMMENDED BATTERY.....	Group 24F, 525CCA
SYSTEM VOLTAGE.....	12 Volts

SG100

OPERATING DATA

Generator Output Voltage 50 Hertz

	Standby Rating < 200 hrs/yr.				Prime Rating **			
	Nat Gas		Propane		Nat Gas		Propane	
Rating and Full Load Amps	kVA	Amps	kVA	Amps	kVA	Amps	kVA	Amps
220 Volt Single Phase	80	364	80	364	68	309	68	309
220 Volt Three Phase	100	262	100	262	85	223	85	223
380 Volt Three Phase	100	152	100	152	85	129	85	129
400 Volt Three Phase	100	144	100	144	85	123	85	123

Motor Starting kVA

Instantaneous Voltage Dip %	10%	15%	20%	25%	30%	35%
High Voltage 380 - 400	63	94	126	158	189	220
Low Voltage 220	47	71	94	118	142	165
Single Phase	40	60	80	100	120	140

Fuel Consumption

(Nat Gas in Cu. Meters/Hr.) (LPG in Liters/Hr.)

Applied Load in Percent of Stdby Rating	25%		50%		75%		100%	
Fuel	NG	LPG	NG	LPG	NG	LPG	NG	LPG
Consumption	11.73	17.27	21.56	31.76	29.51	43.46	37.83	55.72

Cooling System

Coolant Capacity (Liters)	25.0
Heat Rejection to Coolant (Btu/Hr.)	397,594
Inlet Air to Radiator (Cu Meters/Min)	137.3
Max Operating Air Temp to Radiator	60° C
Max Operating Ambient Temp	50° C
Max External pressure drop on radiator	12.7 mm Water

Combustion Air Requirements

Full Load Standby Rating Cu.M/Min	6.09
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Exhaust

Exhaust Flow	15.86
Max Back Pressure	7.5 kPA, 56 mm Hg.
Exhaust Temp ° C	552

Engine

Rated RPM	1957
HP @ Standby kVA Rating	126

Maximum Power Deration

5% for every 10° C above - 25° C	25
1.1% for every 100 Meters above 183 Meters	183

**Prime Rating: Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power Rating during any operating period of 250 hours. The total operating time at 100% Prime Power shall not exceed 250 hours per year.

Standby Rating: This rating should be applied where reliable utility power is available. A standby rated engine should be sized for a maximum of 80% average load factor and 200 hours operation per year. This includes less than 25 hours per year at the Standby Power Rating.

- 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
- 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
- 12 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Ischronous Governor

OPTIONS

■ OPTIONAL COOLING SYSTEM ACCESSORIES

- Radiator Duct Adapter
- 208/240V Coolant Heater

■ OPTIONAL FUEL ACCESSORIES

- Flexible Fuel Lines
- L.P. Liquid Withdrawal
- Automatic Gaseous Dual Fuel

■ OPTIONAL ELECTRICAL ACCESSORIES

- 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 (Bulletin 0172110SBY)

■ ADDITIONAL OPTIONAL EQUIPMENT

- Automatic Transfer Switch (GTS, HTS)
- 21 Light Remote Annunciator

■ ADDITIONAL OPTIONAL EQUIPMENT (CONT.)

- Remote Relay Panels
- Oil Make-Up System
- Oil Heater
- Export Boxing
- GenLink® Communications Software

■ OPTIONAL ENCLOSURES

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

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