

SG100 SG130

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating

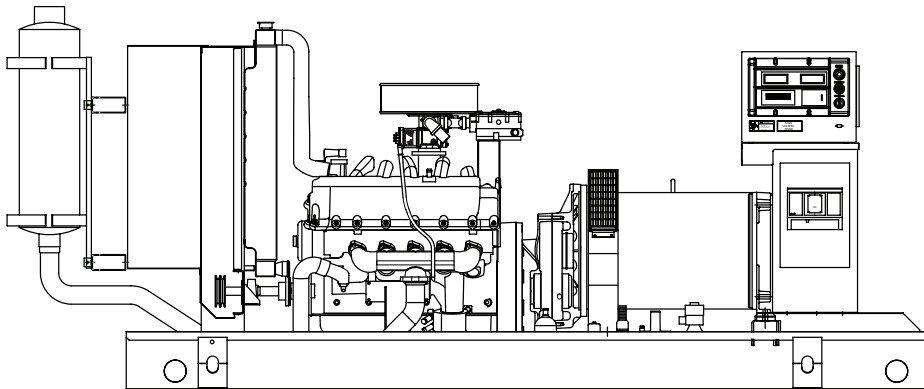
100KW 60 Hz / 100KVA 50 Hz

130KW 60 Hz / 130KVA 50 Hz

Prime Power Rating

80KW 60 Hz / 80KVA 50 Hz

104KW 60 Hz / 104KVA 50 Hz



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
 - ✓ UL2200 COMPLIANCE AVAILABLE
- **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®

POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

SG100/SG130

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 kW and 130 kW
EXCITATION SYSTEM.....	PMG or Brushless

NOTE: 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 Quarts

ENGINE COOLING SYSTEM

TYPE	Closed
WATER PUMP.....	Belt driven
NUMBER OF FAN BLADES.....	7
FAN DIAMETER.....	23 inches
FAN MODE.....	Puller
COOLANT HEATER.....	1500W 120V

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.....	11" - 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/SG130

OPERATING DATA

	STANDBY								PRIME							
	SG100				SG130				SG100				SG130			
GENERATOR OUTPUT VOLTAGE/KW-60Hz	kW-NG	AMP	kW-LP	AMP	kW-NG	AMP	kW-LP	AMP	kW-NG	AMP	kW-LP	AMP	kW-NG	AMP	kW-LP	AMP
120/240V, 1-phase, 1.0 pf	100	417	105	438	130	542	135	563	80	333	84	350	104	433	108	450
120/208V, 3-phase, 0.8 pf	100	347	105	364	130	451	135	468	80	278	84	291	104	361	108	375
120/240V, 3-phase, 0.8 pf	100	301	105	316	130	391	135	406	80	241	84	253	104	313	108	325
277/480V, 3-phase, 0.8 pf	100	150	105	158	130	195	135	203	80	120	84	126	104	156	108	162
600V, 3-phase, 0.8 pf	100	120	105	126	130	156	135	162	80	96	84	101	104	125	108	130
	NOTE: Consult your Generac dealer for additional voltages.															
GENERATOR OUTPUT VOLTAGE/KVA-50Hz	kVA-NG	AMP	kVA-LP	AMP	kVA-NG	AMP	kVA-LP	AMP	kVA-NG	AMP	kVA-LP	AMP	kVA-NG	AMP	kVA-LP	AMP
110/220V, 1-phase, 1.0 pf	80	291	84	305	104	378	108	393	64	233	67	244	83	303	86	314
115/200V, 3-phase, 0.8 pf	100	289	105	303	130	375	135	390	80	231	84	242	104	300	108	312
100/200V, 3-phase, 0.8 pf	100	289	105	303	130	375	135	390	80	231	84	242	104	300	108	312
231/400V, 3-phase, 0.8 pf	100	144	105	152	130	188	135	195	80	115	84	121	104	150	108	156
480V, 3-phase, 0.8 pf																
MOTOR STARTING KVA																
Maximum at 35% instantaneous voltage dip with standard alternator—50/60 Hz	240V		480V		240V		480V		240V		480V		240V		480V	
with optional alternator—50/60 Hz	175/210		212/254		234/281		276/331		175/210		212/254		234/281		276/331	
	417/500		575/690		417/500		575/690		417/500		575/690		417/500		575/690	
FUEL	N.G.		L.P.		N.G.		L.P.		N.G.		L.P.		N.G.		L.P.	
Fuel consumption—60 Hz—100% Load																
ft. ³ hr.	1158		465		1494		600		926		372		1195		480	
m ³ hr.	32.8		13.2		42.3		17.0		26.2		10.5		33.8		13.6	
Fuel consumption—50 Hz—100% Load																
ft. ³ hr.	926		372		1195		480		741		298		956		384	
m ³ hr.	26.2		10.5		33.8		13.6		21.0		8.4		27.1		10.9	
COOLING																
Coolant capacity	System - lit. (US gal.)		23.7 (6.3)		23.7 (6.3)		23.7 (6.3)		23.7 (6.3)		23.7 (6.3)		23.7 (6.3)		23.7 (6.3)	
	Engine - lit. (US gal.)		12.3 (3.3)		12.3 (3.3)		12.3 (3.3)		12.3 (3.3)		12.3 (3.3)		12.3 (3.3)		12.3 (3.3)	
	Radiator - lit. (US gal.)		11.4 (3.0)		11.4 (3.0)		11.4 (3.0)		11.4 (3.0)		11.4 (3.0)		11.4 (3.0)		11.4 (3.0)	
Coolant flow/min.	60 Hz - lit. (US gal.)		198 (52.3)		268 (70.5)		198 (52.3)		198 (52.3)		268 (70.5)		198 (52.3)		268 (70.5)	
	50 Hz - lit. (US gal.)		165 (43.6)		223 (58.9)		165 (43.6)		165 (43.6)		223 (58.9)		165 (43.6)		223 (58.9)	
Heat rejection to coolant	BTU/hr.		340,000		460,000		272,000		368,000		368,000		368,000		368,000	
Inlet air	60 Hz - m ³ /min. (cfm)		156 (5510)		170 (6000)		156 (5510)		170 (6000)		156 (5510)		170 (6000)		170 (6000)	
	50 Hz - m ³ /min. (cfm)		130 (4590)		142 (5015)		130 (4590)		142 (5014)		142 (5014)		142 (5014)		142 (5014)	
Max. operating air temp onto radiator	°C (°F)		60 (140)		60 (140)		60 (140)		60 (140)		60 (140)		60 (140)		60 (140)	
*see note																
Max. operating ambient temp	°C (°F)		50 (122)		50 (122)		50 (122)		60 (140)		60 (140)		60 (140)		60 (140)	
*see note																
Max. external pressure drop on radiator	in. H ₂ O		0.5		0.5		0.5		0.5		0.5		0.5		0.5	
COMBUSTION AIR REQUIREMENTS																
Flow at rated power	60 Hz - m ³ /min. (cfm)		8.3 (295)		10.7 (379)		6.7 (236)		8.6 (303)		8.6 (303)		8.6 (303)		8.6 (303)	
	50 Hz - m ³ /min. (cfm)		6.6 (235)		8.5 (302)		5.3 (188)		6.8 (241)		6.8 (241)		6.8 (241)		6.8 (241)	
EXHAUST																
Exhaust flow at rated output	60 Hz - m ³ /min. (cfm)		26.6 (938)		34.0 (1206)		21.3 (751)		27.0 (965)		27.0 (965)		27.0 (965)		27.0 (965)	
	50 Hz - m ³ /min. (cfm)		21.2 (748)		28.0 (1005)		16.9 (598)		23.0 (804)		23.0 (804)		23.0 (804)		23.0 (804)	
Maximum recommended back pressure	Kpa (Hg)		10.0 (2.9")		10.0 (2.9")		10.0 (2.9")		10.0 (2.9")		10.0 (2.9")		10.0 (2.9")		10.0 (2.9")	
Exhaust temp at rated output	°C (°F)		677 (1250.0)		677 (1250.0)		619 (1146.0)		619 (1146.0)		619 (1146.0)		619 (1146.0)		619 (1146.0)	
Exhaust outlet size (2)	mm (in.)		64 (2.5)		64 (2.5)		64 (2.5)		64 (2.5)		64 (2.5)		64 (2.5)		64 (2.5)	
ENGINE																
Rated RPM	60 / 50 Hz		2300 / 1917		3000 / 2500		2300 / 1917		3000 / 2500		3000 / 2500		3000 / 2500		3000 / 2500	
HP at rated KW	60 / 50 Hz		147 / 117		189 / 151		119 / 94		152 / 121		152 / 121		152 / 121		152 / 121	
Piston speed	60 Hz - m/sec. (ft./min.)		8.1 (1597)		10.6 (2083)		8.1 (1597)		10.6 (2083)		10.6 (2083)		10.6 (2083)		10.6 (2083)	
	50 Hz - m/sec. (ft./min.)		6.8 (1331)		8.8 (1736)		6.8 (1331)		8.8 (1736)		8.8 (1736)		8.8 (1736)		8.8 (1736)	
BMEP	60 / 50 Hz - psi		122.3 / 116.9		120.5 / 115.1		98.5 / 94.0		96.9 / 92.5		96.9 / 92.5		96.9 / 92.5		96.9 / 92.5	
POWER ADJUSTMENT FOR AMBIENT CONDITIONS																
Temperature																
	5% for every 10°C above - °C		25		25		25		25		25		25		25	
	2.77% for every 10°F above - °F		77		77		77		77		77		77		77	
Altitude																
	1.1% for every 100 m above - m		183		183		183		183		183		183		183	
	3.5% for every 1000 ft. above - ft.		600		600		600		600		600		600		600	

* Note: 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
- 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 EXHAUST ACCESSORIES

- Single Exhaust Kit for Indoor Installations

■ 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)
- 20 Light Remote Annunciator

■ ADDITIONAL OPTIONAL EQUIPMENT (CONT.)

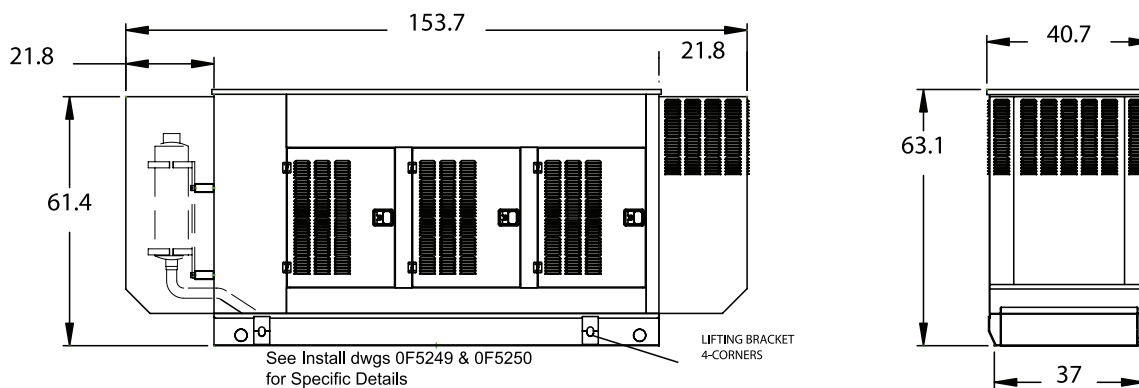
- Remote Relay Panels
- Oil Make-Up System
- Oil Heater
- 5 Year Warranties
- Export Boxing
- GenLink® Communications Software

■ OPTIONAL ENCLOSURES

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

Distributed by:

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.



mm [in]

GENERAC® POWER SYSTEMS, INC. • P.O. BOX 8 • WAUKESHA, WI 53187

262/544-4811 • FAX 262/544-4851