

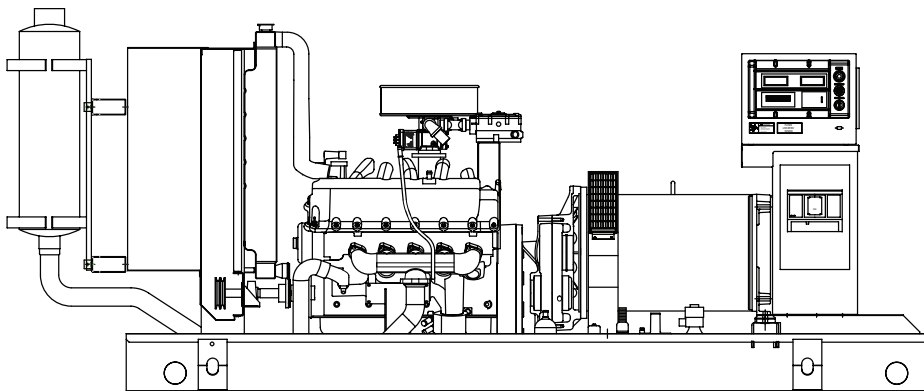
SG100 SG130

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating

100KW 60 Hz

130KW 60 Hz



Power Matched

GENERAC 6.8GN ENGINE

Naturally Aspirated - Gear Driven
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, 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/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: 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:
 - IFT 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

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). (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

SG100/SG130

OPERATING DATA

	STANDBY								
	SG100				SG130				
	NG	AMP	LP	AMP	NG	AMP	LP	AMP	
GENERATOR OUTPUT VOLTAGE/KW-60Hz									
120/240V, 1-phase, 1.0 pf	89	371	100	417	117	488	130	542	
120/208V, 3-phase, 0.8 pf	94	326	100	347	122	423	130	451	
120/240V, 3-phase, 0.8 pf	94	283	100	301	122	367	130	391	
277/480V, 3-phase, 0.8 pf	94	141	100	150	122	183	130	195	
600V, 3-phase, 0.8 pf	94	113	100	120	122	147	130	156	
	NOTE: Consult your Generac dealer for additional voltages.								
MOTOR STARTING KVA									
Maximum at 35% instantaneous voltage dip with standard alternator—60 Hz	240V		480V		240V		480V		
with optional alternator—60 Hz	206		275		305		406		
	490		653		490		653		
FUEL	N.G.		L.P.		N.G.		L.P.		
Fuel consumption—60 Hz—100% Load*									
ft. ³ hr.	1260		507.8		1786		720		
m ³ hr.	35.7		14.4		50.6		20.4		
COOLING									
Coolant capacity	System - lit. (US gal.)	23.7 (6.3)		23.7 (6.3)		12.3 (3.3)		12.3 (3.3)	
	Engine - lit. (US gal.)	12.3 (3.3)		11.4 (3.0)		11.4 (3.0)		11.4 (3.0)	
	Radiator - lit. (US gal.)	11.4 (3.0)		198 (52.3)		268 (70.5)		268 (70.5)	
Coolant flow/min.	60 Hz - lit. (US gal.)	198 (52.3)		340,000		460,000		460,000	
Heat rejection to coolant	BTU/hr.	340,000		170 (6000)		170 (6000)		170 (6000)	
Inlet air	60 Hz - m ³ /min. (cfm)	156 (5510)		60 (140)		60 (140)		60 (140)	
Max. operating air temp onto radiator	°C (°F)	60 (140)		50 (122)		50 (122)		50 (122)	
***see note		50 (122)		0.5		0.5		0.5	
Max. operating ambient temp	°C (°F)	50 (122)							
***see note									
Max. external pressure drop on radiator	in. H ₂ O	0.5							
COMBUSTION AIR REQUIREMENTS									
Flow at rated power	60 Hz - m ³ /min. (cfm)	8.3 (295)		10.7 (379)					
EXHAUST									
Exhaust flow at rated output	60 Hz - m ³ /min. (cfm)	26.6 (938)		34.0 (1206)					
Maximum recommended back pressure	Kpa (Hg)	10.0 (2.9")		10.0 (2.9")					
Exhaust temp at rated output	°C (°F)	677 (1250.0)		677 (1250.0)					
Exhaust outlet size (2)	mm (in.)	64 (2.5)		64 (2.5)					
ENGINE									
Rated RPM	60 Hz	2300		3000					
HP at rated KW**	60 Hz	147		189					
Piston speed	60 Hz - m/sec. (ft./min.)	8.1 (1597)		10.6 (2083)					
BMEP	60 Hz - psi	122.3 / 116.9		120.5 / 115.1					
POWER ADJUSTMENT FOR AMBIENT CONDITIONS									
Temperature									
5% for every 10°C above - °C		25		25					
2.77% for every 10°F above - °F		77		77					
Altitude									
1.1% for every 100 m above - m		183		183					
3.5% for every 1000 ft. above - ft.		600		600					

* 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
- 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
- 5 Year Warranties
- Export Boxing
- GenLink® Communications Software

■ OPTIONAL ENCLOSURES

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

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