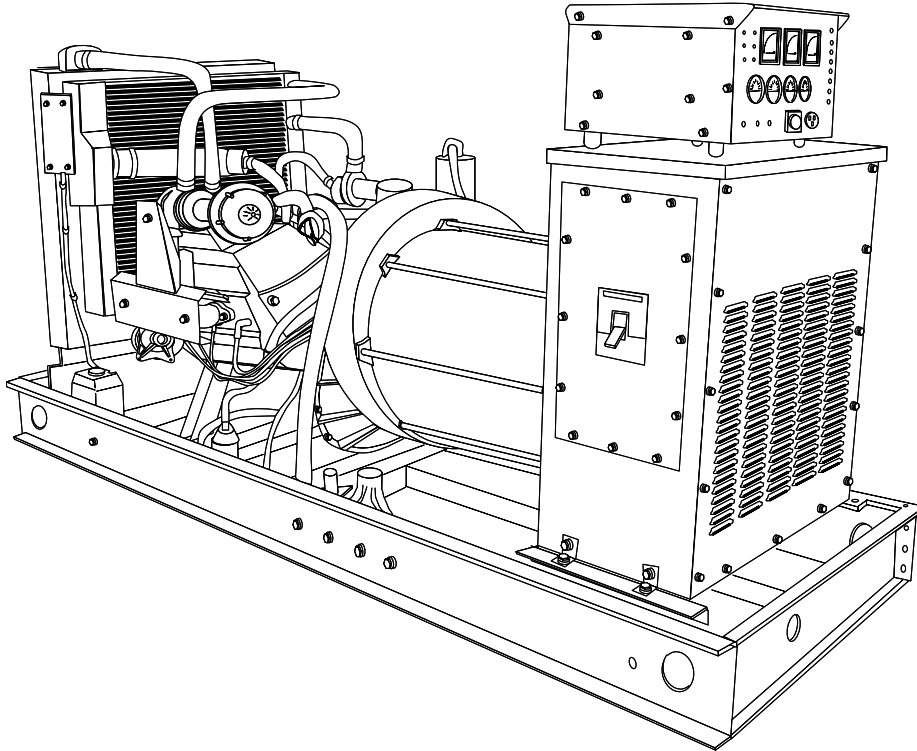


SG150

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
150KW 60 Hz / 150KVA 50 Hz



Power Matched
GENERAC 7.4GTA ENGINE
Turbocharged, Aftercooled, 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 MG1-22 EVALUATION
 - ✓ MOTOR STARTING ABILITY
 - ✓ SHORT CIRCUIT TESTING
- **SOLID-STATE, 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 an 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

SG150

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3%
BALANCED TELEPHONE INFLUENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING	Direct, Flexible Disc
LOAD CAPACITY (STANDBY)	100%

NOTE: Emergency loading in compliance with NFPA 99, NFPA 110, paragraph 5-13.2.6. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

EXCITATION SYSTEM

- PERMANENT MAGNET EXCITER Eighteen pole exciter ✓
 - Magnetically coupled DC current ✓
 - Mounted outboard of main bearing ✓
- REGULATION
- Solid-state ✓
- ±1% regulation ✓

GENERATOR FEATURES

- Four pole, revolving field generator, directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets temperature rise standards for class "F" insulation as defined by NEMA MG1-22 and NEMA MG1-1.
- Rotor and stator and other insulation is impregnated twice with class "H" varnish.
- All models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- Unit tested for motor-starting ability by measuring instantaneous voltage dip with a waveform data acquisition system.
- All models utilize an advanced wire harness design for reliable interconnection within the circuitry.
- Magnetic circuit, including amortisseur windings, tooth and skewed stator design, provides a minimal level of waveform distortion and an electromagnetic interference level which meets accepted requirements for standard AM radio, TV, and marine radio telephone applications.
- Voltage waveform deviation, total harmonic content of the AC waveform, and T.I.F. (Telephone Influence Factor) have been evaluated to acceptable standards in accordance with NEMA MG1-22.
- Alternator is of drip-proof guarded construction.
- Fully life-tested protective systems, including "field circuit and thermal overload protection" and optional main-line circuit breakers capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

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).

ENGINE SPECIFICATIONS

MAKE	GENERAC
MODEL	7.4GTA
CYLINDERS	V-8
DISPLACEMENT	7.4 Liter (454 cu. in.)
BORE	108 mm (4.25 in.)
STROKE	102 mm (4.00 in.)
COMPRESSION RATIO	9.1:1
INTAKE AIR	Twin Turbocharged, Aftercooled
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	8-Drop forged steel
CYLINDER HEAD	Cast Iron
PISTONS	8-Notched Head, Aluminum Alloy
CRANKSHAFT	Nodular Steel

VALVE TRAIN

LIFTER TYPE	Hydraulic
INTAKE VALVE MATERIAL	Heat Resistant Steel
EXHAUST VALVE MATERIAL	Stellite Faced
HARDENED VALVE SEATS	Standard

ENGINE GOVERNOR

- ELECTRONIC
- Standard
- FREQUENCY REGULATION, NO-LOAD TO FULL LOAD ... 0.5%
- STEADY STATE REGULATION
- ±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Trochoid
OIL FILTER	Full flow, cartridge
CRANKCASE CAPACITY	7.6 Liters (8 qts.)

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, closed recovery
WATER PUMP	Pre-lubed, self-sealing
TYPE OF FAN	Puller, Front Exit
NUMBER OF FAN BLADES	7
DIAMETER OF FAN	660.4 mm (26 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL - Natural Gas	Standard
CARBURETOR	Twin Side draft
SECONDARY FUEL REGULATOR	Nat. Gas
AUTOMATIC FUEL LOCKOFF SOLENOID	Standard
OPERATING FUEL PRESSURE SYSTEM	7" to 15" H ₂ O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	20 Amps at 12 V
STARTER MOTOR	12 V
RECOMMENDED BATTERY	(1) - 12 V, 90 A.H., 27F
GROUND POLARITY	Negative

SG150

OPERATING DATA

	STANDBY		NO PRIME RATING AVAILABLE	
	SG150			
GENERATOR OUTPUT VOLTAGE/KW-60Hz	NG	Rated AMP		
120/240V, 1-phase, 1.0 pf	150	625		
120/208V, 3-phase, 0.8 pf	150	521		
120/240V, 3-phase, 0.8 pf	150	452		
277/480V, 3-phase, 0.8 pf	150	226		
600V, 3-phase, 0.8 pf	150	181		
	NOTE: Consult your Generac dealer for additional voltages.			
GENERATOR OUTPUT VOLTAGE/KVA-50Hz	NG	Rated AMP		
110/220V, 1-phase, 1.0 pf	150	682		
115/200V, 3-phase, 0.8 pf	150	434		
100/200V, 3-phase, 0.8 pf	150	434		
231/400V, 3-phase, 0.8 pf	150	217		
480V, 3-phase, 0.8 pf	150	181		
	NOTE: Consult your Generac dealer for additional voltages.			
MOTOR STARTING				
Maximum at 35% instantaneous voltage dip with standard alternator	240V	480V		
with optional alternator	390	405		
	500	690		
FUEL	N.G.			
Fuel consumption—60 Hz—100% Load				
ft. ³ /hr.		2395		
m ³ /hr.		67.8		
Fuel consumption—50 Hz—100% Load				
ft. ³ /hr.		1996		
m ³ /hr.		56.5		
COOLING				
Coolant capacity	System lit.(US gal.)	20 (5)		
	Engine lit.(US gal.)	8 (2)		
	Radiator lit.(US gal.)	12 (3)		
Coolant flow/min.	60 Hz lit.(US gal.)	189 (50)		
	50 Hz lit.(US gal.)	158 (42)		
Heat rejection to coolant	BTU/hr.	751,080		
Inlet air	60 Hz m ³ /min. (cfm)	250 (8800)		
	50 Hz m ³ /min. (cfm)	208 (7330)		
Max. inlet air temperature	°F	110		
COMBUSTION AIR REQUIREMENTS				
Flow at rated power	60 Hz m ³ /min. (cfm)	10.8 (425)		
	50 Hz m ³ /min. (cfm)	9.0 (340)		
EXHAUST				
Exhaust flow at rated output	60 Hz m ³ /min. (cfm)	44.2 (1560)		
	50 Hz m ³ /min. (cfm)	30.7 (1300)		
Maximum recommended back pressure	Kpa (Hg)	5.0 (1.5")		
Exhaust temperature at rated output	°C (°F)	816(1500)1500Max		
Exhaust outlet size	N.P.T. (female)	(2) - 2.5"		
ENGINE				
Rated RPM	60 Hz	2760		
	50 Hz	2300		
HP at rated KW	60 Hz	223		
	50 Hz	186		
Piston speed	60 Hz m/min. (ft./min.)	560 (1840)		
	50 Hz m/min. (ft./min.)	467 (1533)		
BMEP	60 Hz	145		
	50 Hz	139		
POWER ADJUSTMENT FOR AMBIENT CONDITIONS				
Temperature				
-3% for every 10°C above - °C		25		
-1.5% for every 10°F above - °F		77		
Altitude				
-3.0% for every 300 m above - m		1500		
-3.0% for every 1000 ft. above - ft.		5000		

STANDARD ENGINE & SAFETY FEATURES

SG150

- 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
- 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 CleanerS
- Fan Guard
- Control Console
- Electronic Governor

OPTIONS

■ OPTIONAL COOLING SYSTEM ACCESSORIES

- Radiator Duct Adapter
- 208/240V Coolant Heater

■ OPTIONAL FUEL ACCESSORIES

- Flexible Fuel Lines

■ OPTIONAL EXHAUST ACCESSORIES

- Critical Exhaust Silencer

■ OPTIONAL ELECTRICAL ACCESSORIES

- Battery, 12 Volt, 135 A.H., 4DL
- Battery Heater
- 2A Battery Charger
- 10A Dual Rate Battery Charger

■ OPTIONAL ALTERNATOR ACCESSORIES

- Alternator Strip Heater
- Alternator Tropicalization
- Voltage Changeover Switch
- Main Line Circuit Breaker

■ CONTROL CONSOLE OPTIONS

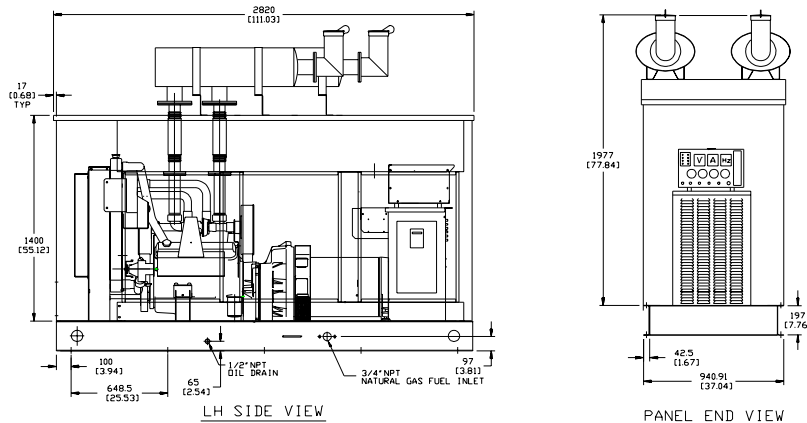
- See control console specification sheet

■ ADDITIONAL OPTIONAL EQUIPMENT

- Automatic Transfer Switch
- Weather Protective Enclosure (Locking Type)
- Isochronous Governor
- 3 Light Remote Annunciator
- 5 Light Remote Annunciator
- 20 Light Remote Annunciator
- Remote Relay Panel
- Oil Heater
- Export Boxing

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]

WEIGHT: 2500 lbs.

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

262/544-4811 • FAX 262/544-4851