

APPLICATION & ENGINEERING DATA

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3%
TELEPHONE INTERFERENCE 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 DIN2671 standards.

EXCITATION SYSTEM

<input type="checkbox"/> BRUSHLESS	Magnetically coupled DC current ✓
	Eight-pole exciter w/ battery-driven field boost ✓
	Mounted outboard of main bearing ✓
<input type="checkbox"/> 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 MG1-22.4 and NEMA MG1-1.65.
- 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 an oscillograph.
- 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 self-ventilated and drip-proof constructed.
- 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 DIN2671). 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 DIN2671).

ENGINE SPECIFICATIONS

MAKE	GENERAC
MODEL	7.4GN
CYLINDERS	V-8
DISPLACEMENT	7.4 Liter (454 cu. in.)
BORE	108 mm (4.25 in.)
STROKE	102 mm (4.00 in.)
COMPRESSION RATIO	8.5:1
INTAKE AIR	Naturally Aspirated
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	Aluminized Steel Faced
EXHAUST VALVE MATERIAL	Stellite Faced
HARDENED VALVE SEATS	Standard

ENGINE GOVERNOR

<input type="checkbox"/> MECHANICAL (Gear Driven)	Standard
	FREQUENCY REGULATION, NO-LOAD TO FULL LOAD ... 5.0%
	STEADY STATE REGULATION
	±0.5%
<input type="checkbox"/> ELECTRONIC	Optional
	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	4.7 Liters (5 qts.)

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, closed recovery
WATER PUMP	Pre-lubed, self-sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	7
DIAMETER OF FAN	580 mm (23 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL	
<input type="checkbox"/> Natural Gas or L.P. Vapor	Standard
<input type="checkbox"/> 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

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	50 Amps at 12 V
STARTER MOTOR	12 V
RECOMMENDED BATTERY	(1) - 12 V, 90 A.H., 27F
GROUND POLARITY	Negative