

Home Standby 30

Liquid Cooled Gas Engine Generator Sets

STANDBY POWER RATING
30 KW 60 Hz.

TOP OPENS UPWARD FOR EASY
SERVICE

PRIME POWER RATING
24 KW 60 HZ.

Model 04948

UL 2200 Listed

Power Matched

GENERAC 3.0 GN ENGINE

Naturally Aspirated



STANDARD FEATURES

- Innovative Design & Prototype Testing
- UL2200 Compliance
- Solid State Frequency compensated Voltage Regulation
- Single source Service Response
- Generac Transfer Switches and Controls
- Vibration Isolation of Unit Mounting Base

TEST CRITERIA:

- ✓ PROTOTYPE TESTED
- ✓ SYSTEM TORSIONALS MEASURED & EVALUATED
- ✓ ELECTRO-MAGNETIC INTERFERENCE
- ✓ NEMA MG1 EVALUATION
- ✓ MOTOR STARTING ABILITY
- ✓ SHORT CIRCUIT TESTING

STANDARD EQUIPMENT

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown
- Crank Limiter
- Oil Drain Extension
- Radiator Drain Extension
- Cool flow Radiator
- Closed Coolant Recovery System
- UV / Ozone Resistant Hoses
- Rubber Booted Watertight Electrical Connections
- Critical Exhaust Silencer
- Secondary Fuel Regulator
- Battery Charge alternator
- Static Battery Charger 2 Amp
- Battery Cables
- Battery Tray
- 12 volt solenoid Activated Starter Motor
- Air Cleaner
- Fan Guard
- Control console
- Electronic governor
- Mainline Circuit Breaker
- Flexible Fuel Lines
- Enclosure -Weather Protective Sound Attenuated

GENERAC®
POWER SYSTEMS. INC.

GENERATOR SPECIFICATIONS

Type Four pole revolving field
 Rotor Insulation Class H
 Stator Insulation Class H
 Total harmonic Distortion <3.5%
 Telephone interference factor (TIF) <50
 Alternator Self ventilated and drip proof
 Bearings (pre-lubed and sealed) 1
 Coupling Direct, Flexible Disc
 Load Capacity (standby) 100%

NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN 6271.

EXCITATION SYSTEM

Brush type Carbon brush w/ slip rings
 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 the temperature rise standards for class "F" insulation as defined by NEMA MG1-32.6, while the insulation system meets the requirements for the higher class "H" rating.
- All prototype models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- All prototype models are tested for motor starting ability by measuring the instantaneous voltage dip with a wave-form 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, provide 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 MG1-32.
- Alternator is self-ventilated and drip proof constructed
- Fully life tested protective systems, including "field circuit and thermal overload protection" and main line circuit breakers capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

ENGINE SPECIFICATIONS

Make Generac
 Model 3.0 Liter Ford Platform
 Cylinders 6 cylinder 60° V
 Displacement 3.0 Liters (182 cu. in.)
 Bore 3.5 inches
 Stroke 3.1 inches
 Compression Ratio 9.3:1
 Intake Air Naturally Aspirated
 Number of Main Bearings Four
 Cylinder head Cast Iron
 Pistons Aluminum
 Crankshaft Cast

VALVE TRAIN

Lifter Type Hydraulic Roller Tappets
 Valves per cylinder 2

ENGINE GOVERNOR

Electronic standard
 Frequency Regulation no load to full load ± 0.5%
 Steady State Regulation ±0.25%

LUBRICATION SYSTEM

Type of Oil Pump Gear
 Oil Filter Full flow cartridge
 Crankcase capacity 5 qts.

COOLING SYSTEM

Type of System Pressurized Closed recovery
 Water Pump Pre-lubed, self sealing
 Type of Fan Variable speed clutch
 Number of Fan Blades 7
 Diameter of Fan 17"
 Coolant Heater Not Required

FUEL SYSTEM

Fuel type Natural Gas or LP Vapor
 Carburetor Side Draft
 Secondary Fuel Regulator Standard
 Fuel Shut Off Solenoid Standard
 Operating Fuel Pressure... 7.5 – 11" dynamic. 11-14" static

ELECTRICAL SYSTEM

Battery Charge Alternator 15 amps @ 12 volts
 Starter Motor 12 Volt
 Recommended Battery (Not Included) ...90 AH 12 Volt, 27F
 Ground Polarity Negative

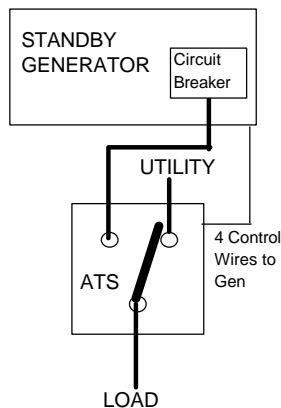
OPERATING DATA

3.0 Liter

SG030

Generator Output Voltage		Standby Rating		Prime Rating	
60 Hz		Natural Gas	Propane	Natural Gas	Propane
120/240 1 Phase 1.0 PF		27 kW	30 kW	22 kW	24kW
		113 Amps	125 Amps	92 Amps	100 Amps
Motor Starting kVA		STANDBY		PRIME	
Line to Line Voltage		240v		240v	
Inst Voltage Dip in kVA	15%	27 kVA		27 kVA	
	20%	33 kVA		33 kVA	
	25%	40 kVA		40 kVA	
	30%	54 kVA		54 kVA	
	35%	69 kVA		69 kVA	
Engine Fuel Consumption @		27 kW	30 kW	22 kW	24 kW
% of Rated Load		Natural Gas	Propane	Natural Gas	Propane
25%		110 cu.ft./hr.	46 cu.ft./hr.	95 cu.ft./hr.	40 cu.ft./hr.
50%		209 cu.ft./hr.	86 cu.ft./hr.	180 cu.ft./hr.	75 cu.ft./hr.
75%		300 cu.ft./hr.	124 cu.ft./hr.	258 cu.ft./hr.	108 cu.ft./hr.
100%		387 cu.ft./hr.	160 cu.ft./hr.	332 cu.ft./hr.	140 cu.ft./hr.
Engine Cooling		27 kW	30 kW	22 kW	24 kW
Heat Rejection to Coolant(Full Load)		107,500 btu/hr.	122,000 btu/hr	88,000 btu/hr	97,600 btu/hr
Coolant Capacity (total)		3.0 gallons		3.0 gallons	
Coolant Flow (Gallons/Min)		17.9		17.9	
Inlet Cooling Air CFM		4200 CFM		4200 CFM	
Max air temp to radiator ° F(Derates Apply)		140		140	
Max ambient temperature ° F		120		120	
Combustion Air Requirements		27 kW	30 kW	22 kW	24 kW
Maximum Flow at Rated Power (CFM)		90		81	
ENGINE PARAMETERS		27 kW	30 kW	22 kW	24 kW
Rated RPM		1800		1800	
HP at Rated kW		45	49.7	36.5	39.8
Piston Speed (Ft/Min)		930		930	
BMEP (psi)		108	119	88	96
Exhaust		27 kW	30 kW	22 kW	24 kW
Exhaust Flow @ FL (ACFM)		240	262	196	210
Exhaust Temperature ° F(Average)		1050	1100	950	990
Max Recommended Back Pressure In.Hg		1.5		1.5	
Exhaust Outlet per engine		One on Muffler (included)		One on Muffler (included)	
Power Adjustments		27 kW	30 kW	22 kW	24 kW
Temperature 5% for every 10° C above ° C		25		25	
2.77% for every 10°F above ° F		77		77	
1.1% for every 100 m above m		152		152	
3.5% for every 1000 ft above ft		500		500	

HOME STANDBY TRANSFER SWITCH (ORDERED SEPARATELY)



SEQUENCE OF OPERATIONS

UTILITY FAIL Utility voltage sensor detects when utility voltage is below 60% of nominal. Engine start sequence is initiated after a 10 second delay

ENGINE WARMUP Fixed at 15 seconds

TRANSFER SWITCH Transfers load from RETRANSFER Utility to Standby Generator Time delay after Utility voltage supply is at 100 % for 45 seconds.

ENGINE COOLDOWN Time delay for engine no load cool down.

Generac Power Systems GTS line of automatic transfer switches are also available for this model.

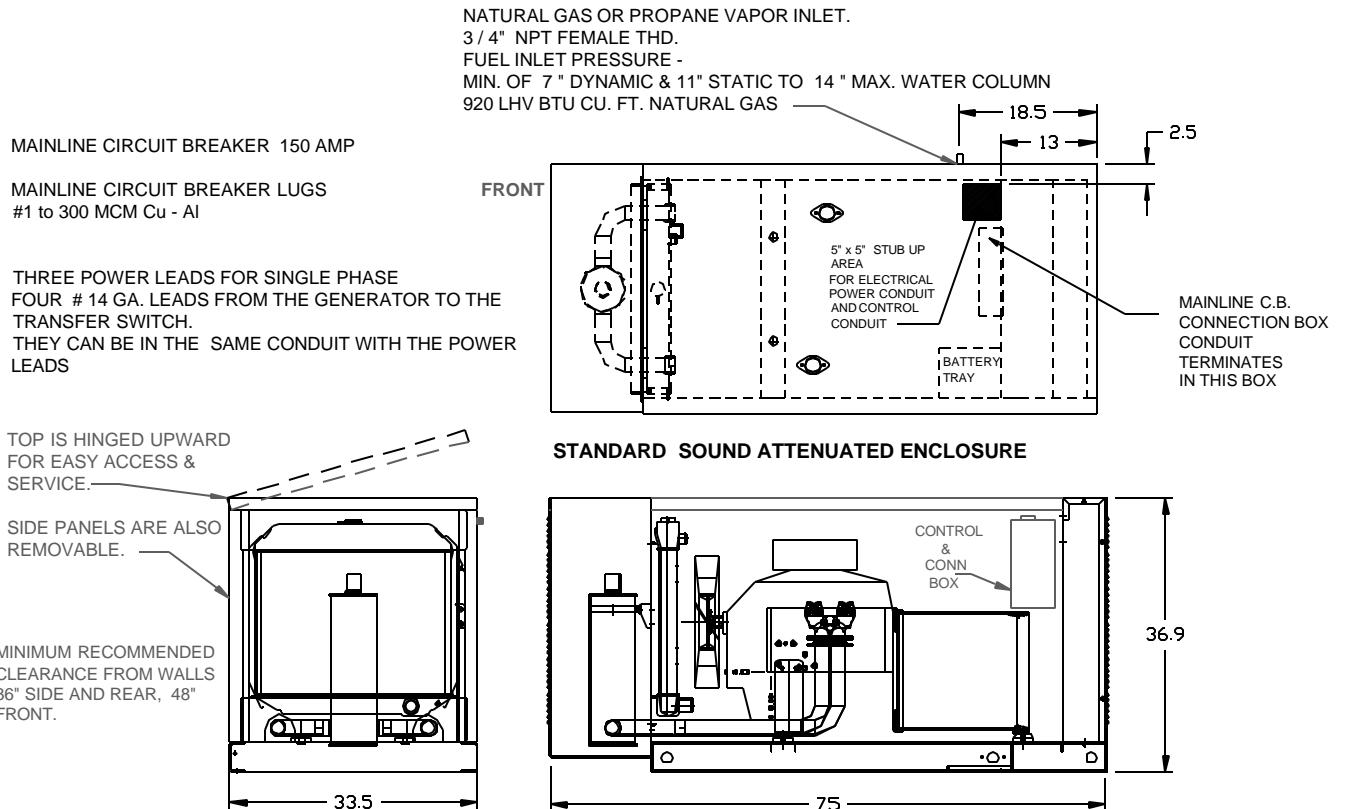
Transfer Switch Rating -	200 Amps
Number of Poles -	2
UL Listed -	1008
Interrupt Rating -	10,000 A
Maximum Switch Time -	160 ms
Maximum Voltage -	250 V
Exerciser -	Standard not adj 15 min/wk.
Dimensions H, W, D. -	24 x 20 x 7
Model	004635

GENERAC POWER SYSTEMS, INC.

STANDARD ENGINE & SAFETY FEATURES HOME STANDBY 30

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil pressure Automatic Shutdown
- Overspeed Automatic shutdown
- Crank Limiter
- Oil Drain Extension
- Radiator Drain Extension
- Factory Installed Cool Flow Radiator
- Closed coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber Booted Water-tight Electrical Connections
- Critical Exhaust Silencer
- Secondary Fuel Regulator
- 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
- Electronic Governor
- Mainline Circuit Breaker
- Weather Protective Sound Attenuated Enclosure
- Flexible Fuel Lines
- Battery Charger 2 Amp
- Automatic Transfer Switch (Optional)

Stub up & Installation Detail



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