Home Standby - 15
Home Standby - 20

Liquid Cooled Gas Engine Generator Sets

Continuous Standby Power Rating
15kW 60 Hz
20kW 60 Hz

Prime Power Rating
11kW 60 Hz
15kW 60 Hz

Models:
04721 (15kW/Single Phase NG or LPV)
04722 (15kW/Single Phase NG or LPV)
04723 (20kW/Single Phase NG or LPV)
04724 (20kW/Single Phase NG or LPV)
UL 2200 Listed

Power Matched
GENERAC MMC 4G15 ENGINE
Naturally Aspirated
2 Year Limited Warranty

Generac 100 Amp Automatic Transfer Switch (UL Listed) Included with Models 04721 & 04723. Available for models 04722 & 04724

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**

- **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 a GENERAC POWER SYSTEM.

- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

GUARDIAN®
by Generac Power Systems, Inc.

APPLICATION & ENGINEERING DATA

GENERATOR SPECIFICATIONS

TYPE Home Standby 15 ..... Four-pole, revolving field
TYPE Home Standby 20 ..... Two-pole, revolving field
ROTOR INSULATION ..... Class F
STATOR INSULATION ..... Class F
VOLTAGE WAVE FORM DEVIATION ..... <5%
TOTAL HARMONIC DISTORTION (line to line) ..... <5%
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 DIN6271 standards.

EXCITATION SYSTEM

DIRECT ..... DC excitation system ✓
Low-velocity brushes and slip rings ✓
REGULATION ..... Solid-state ✓
±1% regulation ✓

GENERATOR FEATURES

- ❒ Two/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.
- ❒ Stator windings are “trickle” varnished and rotor windings are “roll-dipped” for complete Class H impregnation.
- ❒ Unit tested for motorstarting 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 balanced 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 standard mainline circuit breakers capable of handling full output capacity.
- ❒ System torsional acceptability confirmed during prototype testing.

ENGINE SPECIFICATIONS

MAKE ..... GENERAC
MODEL ..... MMC 4G15
CYLINDERS ..... 4 in-line
DISPLACEMENT ..... 1.5 Liter (91.5 cu. in.)
BORE ..... 75.5 mm (2.97 in.)
STROKE ..... 82 mm (3.23 in.)
COMPRESSION RATIO 9:4:1
INTAKE AIR ..... Naturally Aspirated
NUMBER OF MAIN BEARINGS 5
CONNECTING RODS ..... 4-Drop forged steel
CYLINDER HEAD ..... S.O.H.C.
PISTONS ..... 4-Aluminum Alloy
CRANKSHAFT ..... Drop Forged Steel

VALVE TRAIN

LIFTER TYPE ..... Rocker Arm Type
INTAKE VALVE MATERIAL ..... High Temperature Alloy Forged
EXHAUST VALVE MATERIAL ..... High Temperature Alloy Forged
VALVE SEATS ..... Replaceable

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 ..... 3.8 Liters (4 qts.)

COOLING SYSTEM

TYPE OF SYSTEM ..... Pressurized, closed recovery
WATER PUMP ..... Pre-lubed, self-sealing
TYPE OF FAN ..... Pusher
NUMBER OF FAN BLADES 6
DIAMETER OF FAN ..... 380 mm (15.0 in.)
COOLANT HEATER ..... 500 W

FUEL SYSTEM

FUEL
❒ Natural Gas or L.P. Vapor ..... Standard
CARBURETOR ..... Down draft
SECONDARY FUEL REGULATOR. Nat. Gas or L.P. Vapor Systems
AUTOMATIC FUEL LOCKOFF SOLENOID ..... Standard
OPERATING FUEL PRESSURE VAPOR SYSTEMS ..Nat. Gas 5 to 14” H_2O
LP Vapor.....11” to 14” H_2O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR ..... 15 Amps at 12 V
STARTER MOTOR ..... 12 V
RECOMMENDED BATTERY ..... 12 V, 525 CCA @ 0°F/75 A.H., 26R
GROUND POLARITY ..... Negative

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).

Home Standby - 15
Home Standby - 20

OPERATING DATA

	STANDBY				PRIME			
	Home Standby-15		Home Standby-20		Home Standby-15		Home Standby-20	
GENERATOR OUTPUT VOLTAGE/KW - 60Hz	N.G./L.P.	Rated AMP	N.G./L.P.	Rated AMP	N.G./L.P.	Rated AMP	N.G./L.P.	Rated AMP
120/240V, 1-phase, 1.0 pf	15	62.5	20	83.3	11	45.8	15	62.5
MOTORSTARTING								
Maximum at 35% instantaneous voltage dip with standard alternator; 60 Hz	28 KVA		39 KVA		28 KVA		39 KVA	
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.(gal./hr.)	265	110 (3.0)	369	153 (4.2)	204	85 (2.3)	301	125 (3.4)
m^3 /hr.	7.5	3.1	10.4	4.3	5.8	2.4	8.5	3.5
COOLING								
Coolant capacity — System lit.(US gal.)	7.5 (2)		7.5 (2)		7.5 (2)		7.5 (2)	
Engine lit.(US gal.)	0.9 (0.25)		0.9 (0.25)		0.9 (0.25)		0.9 (0.25)	
Radiator lit.(US gal.)	6.6 (1.75)		6.6 (1.75)		6.6 (1.75)		6.6 (1.75)	
Coolant flow/min. — 60 Hz lit.(US gal.)	25 (6.6)		40 (10.6)		25 (6.6)		40 (10.6)	
Heat rejection to coolant — 60 Hz BTU/hr.	72,000		96,000		53,000		77,000	
Cooling air flow — 60 Hz m^3/min. (cfm)	40 (883)		45 (1590)		40 (883)		45 (1590)	
COMBUSTION AIR REQUIREMENTS								
Flow at rated power 60 Hz m^3/min. (cfm)	1.2 (41)		1.6 (57)		0.9 (32)		1.3 (47)	
EXHAUST								
Exhaust flow at rated output 60 Hz m^3/min. (cfm)	3.9 (137)		6.0 (212)		3.0 (105)		4.9 (173)	
Max. recommended back pressure — Kpa (Hg)	5.0 (1.5")		5.0 (1.5")		5.0 (1.5")		5.0 (1.5")	
Exhaust temp. at rated output — °C (°F)	621 (1150)		704 (1300)		593 (1100)		677 (1250)	
Exhaust outlet size — N.P.T. (female)	1.5"		1.5"		1.5"		1.5"	
ENGINE								
Rated at RPM — 60 Hz	1800		3600		1800		3600	
HP at rated KW — 60 Hz	24		32		17		26	
Piston speed — 60 Hz m/min. (ft./min.)	295 (969)		590 (1937)		295 (969)		590 (1937)	
BMEP — 60 Hz	116		78		85		62	
POWER ADJUSTMENT FOR AMBIENT CONDITIONS								
Temperature								
-3% for every 10°C above - °C	25		25		25		25	
-1.5% for every 10°F above - °F	77		77		77		77	
Altitude								
-3% for every 300 m above - m	913		913		913		913	
-3% for every 1000 ft. above - ft.	3000		3000		3000		3000	

TRANSFER SWITCH SPECIFICATIONS (*If so equipped*)		
No. of Poles		2
Current Rating	(amps)	100
Voltage Rating	(VAC)	250
Utility Voltage Monitor	(fixed)	
	Pick-up	80%
Enclosure - NEMA 3R		Standard
Dropout		60%
Return to Utility		1 minute
Exerciser 15 minutes weekly		Standard
UL Listed		Standard
Dimensions	(H" x W" x D")	20 x 15 x 7
Weight		35 lbs.

STANDARD ENGINE & SAFETY FEATURES

Home Standby - 15
Home Standby - 20

- ❒ 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
- ❒ Engine Block Heater
- ❒ Rubber-Booted Engine Electrical Connections
- ❒ Fuel Lockoff Solenoid
- ❒ Isochronous Governor
- ❒ Secondary Fuel Regulator (N.G. and L.P.)
- ❒ Weather Protective Enclosure (Locking Type)
- ❒ 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
- ❒ UV/Ozone Resistant Hoses
- ❒ Stainless Steel Flexible Exhaust Connection
- ❒ Flexible Fuel Line
- ❒ Critical Exhaust Silencer
- ❒ Battery Trickle Charger
- ❒ Main Line Circuit Breaker
- ❒ Automatic Transfer Switch
  (Included with models 04721 & 04723 only)

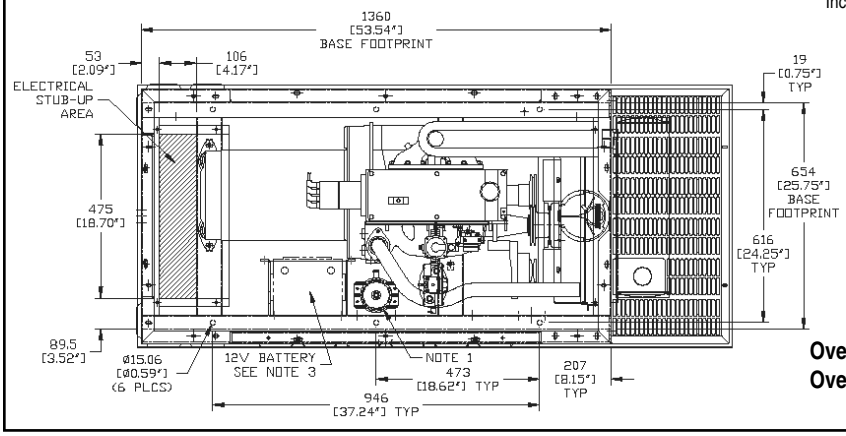
Home Standby Control Features:

Home Standby Control Console
Manual/Auto/Off switch
Hour meter
Fault indicator lamp
Fuse (panel overload)
Set exercise time switch

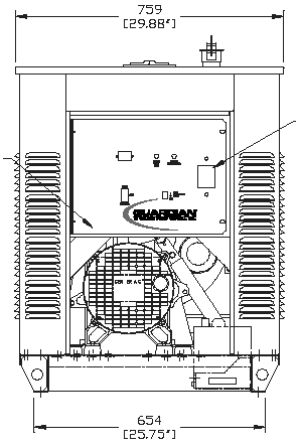
Home Standby Microprocessor Controls
Automatic voltage regulation
Utility voltage sensing
Utility interrupt delay
(10-second setpoint)
Engine warm-up
(10-second setpoint)
Engine cool-down
(1-minute setpoint)
Seven-day exerciser

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



15 kW UNIT WEIGHT*: 980 lbs.
20 kW UNIT WEIGHT*: 985 lbs.
*Includes Transfer Switch



Overall Height = 40 inches
Overall Length = 68 inches

Bulletin E21590SBY / Printed in USA 7.02, 8.02, 3.03, 9.04