

8/10/14kW

GUARDIAN® SERIES Residential Standby Generators Air-Cooled Gas Engine

INCLUDES:

- True Power® Electrical Technology
- Two Line LCD Tri-Lingual Digital Nexus™ Controller
- Two Transfer Switch Options Available: 100 Amp Pre-Wired EZ Switch™ or 200 Amp Nexus Smart Switch™. See Page 4 for Details.
- Electronic Governor
- External Main Circuit Breaker, System Status & Maintenance Interval LED Indicators
- Sound Attenuated Enclosure
- Flexible Fuel Line
- Composite Mounting Pad
- Natural Gas or LP Gas Operation
- 3 Year Limited Warranty
- UL 2200 Listed

Standby Power Rating

Models 005882-1, 005870-1 (Steel) - 8 kW 60Hz

Models 005883-1, 005871-1, 006051-1 (Steel) - 10 kW 60Hz

Models 005884-1, 005872-1, 006052-1 (Steel) - 14 kW 60Hz



*Note: CUL certification only applies to unbundled units and units packaged with the EZ Switch™. Units packaged with the Nexus Smart Switch™ are UL certified in the USA only.

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.
- **TRUE POWER® ELECTRICAL TECHNOLOGY:** Superior harmonics and sine wave form produce less than 5% Total Harmonic Distortion for utility quality power. This allows confident operation of sensitive electronic equipment and micro-chip based appliances, such as variable speed HVAC systems.
- **TEST CRITERIA:**
 - ✓ PROTOTYPE TESTED
 - ✓ SYSTEM TORSIONAL TESTED
 - ✓ 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. Digital voltage regulation at ±1%.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **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.

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Engine

- Generac (OHVI) Design
Maximizes engine “breathing” for increased fuel efficiency. Plateau honed cylinder walls and plasma moly rings helps the engine run cooler, reducing oil consumption resulting in longer engine life.
- “Spiny-lok” cast iron cylinder walls
Rigid construction and added durability provide long engine life.
- Electronic ignition/spark advance
These features combine to assure smooth, quick starting every time.
- Full pressure lubrication system
Pressurized lubrication to all vital bearings means better performance, less maintenance and longer engine life. Now featuring a 2 year/200 hour oil change interval.
- Low oil pressure shutdown system
Superior shutdown protection prevents catastrophic engine damage due to low oil.
- High temperature shutdown
Prevents damage due to overheating.

Generator

- Revolving field
Allows for a smaller, light weight unit that operates 25% more efficiently than a revolving armature generator.
- Skewed stator
Produces a smooth output waveform for compatibility with electronic equipment.
- Displaced phase excitation
Maximizes motor starting capability.
- Automatic voltage regulation
Regulates the output voltage to $\pm 1\%$ prevents damaging voltage spikes.
- UL 2200 Listed
For your safety.

Transfer Switch

- Fully Automatic
Transfers your vital electrical loads to the energized source of power.
- Pre-wired, color-coded conduits (EZ Switch™ only)
Ensures the easiest, trouble-free installation.
- DLM Technology (Nexus Smart Switch™ only)
Digital Load Management technology allows for the smart control of two air conditioners without any additional items.
- Remote Mounting
Mounts near your existing distribution panel for simple, low-cost

Nexus™ Controls

- Auto/Off/Manual switch
Selects the operating mode.
- Utility voltage sensing
Constantly monitors utility voltage, setpoints 60% dropout, 80% pick-up, of standard voltage.
- Generator voltage sensing
Constantly monitors generator voltage to ensure the cleanest power delivered to the home.
- Utility interrupt delay
Prevents nuisance start-ups of the engine, adjustable 10-30 seconds.
- Engine warm-up
Ensures engine is ready to assume the load, setpoint approximately 5 seconds.
- Engine cool-down
Allows engine to cool prior to shutdown, setpoint approximately 1 minute.
- Programmable seven day exerciser
Operates engine to prevent oil seal drying and damage between power outages by running the generator for 12 minutes every week.
- Smart battery charger
Delivers charge to the battery only when needed at varying rates depending on outdoor air temperature.
- Main Line Circuit Breaker
Protects generator from overload.
- Electronic governor
Maintains constant 60 Hz frequency.

Unit

- Weather protective enclosure
Ensures protection against mother nature. Hinged key locking roof panel for security. Lift-out front for easy access to all routine maintenance items. Electrostatically applied textured epoxy paint for added durability.
- Enclosed critical grade muffler
Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
- Small, compact, attractive
Makes for an easy, eye appealing installation.
- SAE
Sound attenuated enclosure ensures quiet operation.

Installation System

- 1' Flexible Fuel Line Connector
Easy Installation.
- Composite Mounting Pad

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Generator

Model	005882-1, 005870-1 (8 kW)	005883-1, 005871-1, 0060651-1 (10 kW)	005884-1, 005872-1, 0060652-1 (14 kW)
Rated Maximum Continuous Power Capacity (LP)	8,000 Watts*	10,000 Watts*	14,000 Watts*
Rated Maximum Continuous Power Capacity (NG)	7,000 Watts*	9,000 Watts*	13,000 Watts*
Rated Voltage	240	240	240
Rated Maximum Continuous Load Current – 240 Volts	33.3 LP/29.2 NG	41.6 LP/37.5 NG	58.3 LP/54.2 NG
Total Harmonic Distortion	Less than 5%	Less than 5%	Less than 5%
Main Line Circuit Breaker	35 Amp	45 Amp	60 Amp
Phase	1	1	1
Number of Rotor Poles	2	2	2
Rated AC Frequency	60Hz	60Hz	60Hz
Power Factor	1	1	1
Battery Requirement (not included)	Group 26R 12 Volts and 525 Cold-cranking Amperes Minimum	Group 26R 12 Volts and 525 Cold-cranking Amperes Minimum	Group 26R 12 Volts and 525 Cold-cranking Amperes Minimum
Unit Weight (Pounds/Kilograms)	340/154.2	387/175.4	439/199.1
Dimensions (L x W x H) Inches/mm	48 x 25 x 29 (1218 x 638 x 732)		
Sound output in dB(A) at 23 ft. with generator operating at normal load	62	63	66

Engine

Type of Engine	GENERAC OHVI	GENERAC OHVI V-TWIN	GENERAC OHVI V-TWIN
Number of Cylinders	1	2	2
Displacement	410cc	530cc	992cc
Cylinder Block	Aluminum w/Cast Iron Sleeve	Aluminum w/Cast Iron Sleeve	Aluminum w/Cast Iron Sleeve
Valve Arrangement	Overhead Valve	Overhead Valve	Overhead Valve
Ignition System	Solid-state w/Magneto	Solid-state w/Magneto	Solid-state w/Magneto
Governor System	Electronic	Electronic	Electronic
Compression Ratio	9.5:1	9.5:1	9.5:1
Starter	12 Vdc	12 Vdc	12 Vdc
Oil Capacity Including Filter	Approx. 1.5 Qts./1.4L	Approx. 1.7 Qts./1.6L	Approx. 1.9 Qts./1.8L
Operating RPM	3,600	3,600	3,600
Fuel Consumption			
Natural Gas	ft ³ /hr.		
	1/2 Load	77	102
	Full Load	139	156
Liquid Propane	ft ³ /hr (gal/hr) [Liter/hr]		
	1/2 Load	34 (0.94) [3.56]	46 (1.25) [4.73]
	Full Load	62 (1.68) [6.36]	70 (1.93) [7.31]
Required fuel pressure to generator fuel inlet at all load ranges – 5 to 7 inches of water column for natural gas, 10 to 12 inches of water column for LP gas For Btu content, multiply ft ³ /hr x 2520 (LP) or ft ³ /hr x 1000 (NG)			

Controls

2-Line Plain Text LCD Display	Simple user interface for ease of operation.
Mode Switch	
-Auto	Automatic Start on Utility failure. 7 day exerciser.
-Off	Stops unit. Power is removed. Control and charger still operate.
-Manual/Test (start)	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Programmable start delay between 10-30 seconds	Standard
Engine Start Sequence	Cyclic cranking: 16 sec. on, 7 rest (90 sec. maximum duration).
Engine Warm-up	5 seconds
Engine Cool-Down	1 minute
Starter Lock-out	Starter cannot re-engage until 5 sec. after engine has stopped.
Smart Battery Charger	Standard
Automatic Voltage Regulation with Over and Under Voltage Protection	Standard
Automatic Low Oil Pressure Shutdown	Standard
Overspeed Shutdown	Standard, 72Hz
High Temperature Shutdown	Standard
Overcrank Protection	Standard
Safety Fused	Standard
Failure to Transfer Protection	Standard
Low Battery Protection	Standard
50 Event Run Log	Standard
Future Set Capable Exerciser	Standard
Incorrect Wiring Protection	Standard
Internal Fault Protection	Standard
Common External Fault Capability	Standard

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). * Maximum wattage and current are subject to and limited by such factors as fuel Btu content, ambient temperature, altitude, engine power and condition, etc. Maximum power decreases about 3.5 percent for each 1,000 feet above sea level; and also will decrease about 1 percent for each 6° C (10° F) above 16° C (60°F). Sound output ratings from certain points on the generator subject to change based on installation parameters.

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switch options

EZ Switch™ Features

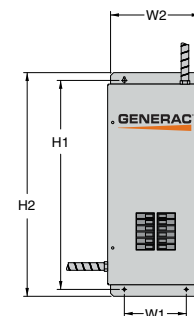
- Electrically operated, mechanically-held contacts for fast, positive connections.
- Rated for all classes of load, 100% equipment rated, both inductive and resistive.
- 2 pole, 250 VAC contactors.
- 160 millisecond transfer time.
- Dual coil design.
- Main contacts are silver plated or silver alloy to resist welding and sticking.
- NEMA 1 (indoor rated) enclosure is standard on the 100 amp switch.
- Pre-wired 30 foot (9.1 meter) whip to connect to the pre-wired external connection box.
- Pre-wired 2 foot (0.61 meter) whip, color coded to connect into the existing electrical panel.

Model	005870-1 (8 kW)	Model 005871-1 (10 kW)	Model 005872-1 (14 kW)
No. of Poles	2	2	2
Current Rating (amps)	100	100	100
Voltage Rating (VAC)	250	250	250
Utility Voltage Monitor (fixed)			
-Pick-up	80%	80%	80%
-Dropout	60%	60%	60%
Return to Utility	approx. 15 sec.	approx. 15 sec.	approx. 15 sec.
Exerciser weekly for 12 minutes	Standard	Standard	Standard
UL Listed	Standard	Standard	Standard
Total of Pre-wired Circuits	10	12	14
No. 15A 120V	3	5	4
No. 20A 120V	3	3	6
No. 20A 240V	1	-	1
No. 30A 240V	1	1	-
No. 40A 240V	-	1	1
No. 50A 240V	-	-	-
Circuit Breaker Protected			
Available RMS Symmetrical Fault Current @ 250 Volts	10,000	10,000	10,000

Dimensions

Mechanical Dimensions (in inches)						
Current Rating	No. of Poles	Height		Width		Depth
		H1	H2	W1	W2	
100 UL Listed	2	26.5 in	29.25 in	8.14 in	12.5 in	7
		673mm	743mm	207mm	317.5mm	178mm

Terminal Wire Ranges			
ATS Rated Amps	Switch Terminal	Neutral Lug/Stud	Ground Lug
100A 2-Pole UL	1 x 1/0-12	1 x 3/8-16 Stud	1 x 2/0-14



Nexus Smart Switch™ Features

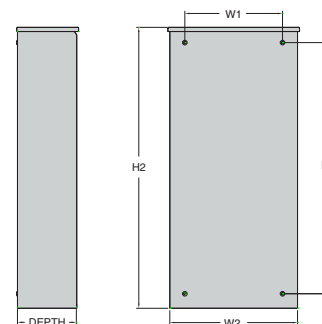
available on 10 & 14kW models only

- Includes Digital Load Management technology standard (DLM).
- Intelligently manages two air conditioner loads with no additional hardware.
- Up to four more large (240V) loads can be managed when used in conjunction with DLM modules.
- Electrically operated, mechanically-held contacts for fast, clean connections.
- Rated for all classes of load, 100% equipment rated, both inductive and resistive.
- Dual coil design.
- Service Rated.
- NEMA 3R aluminum outdoor enclosure.
- Main contacts are silver plated or silver alloy to resist welding and sticking.

Model	006051-1 (10kW) / 006052-1 (14kW)
No. of Poles	2
Current Rating (amps)	200
Voltage Rating (VAC)	250
Utility Voltage Monitor (fixed) (Function of Nexus Controller)	
-Pick-up	80%
-Dropout	60%
Return to Utility (Function of Nexus Controller)	approx. 13 sec.
Exerciser weekly for 12 minutes (Function of Nexus Controller)	Standard
UL Listed	Standard
Enclosure Type	NEMA 3R
Withstand Rating (Amps)	10,000
Lug Range	400MCM - #4

Dimensions

	200 Amps 120/240, 1Ø Open Transition Service Rated				
	Height		Width		Depth
	H1	H2	W1	W2	
Inches	27.24	30.0	11.4	13.5	7.09
mm	692.0	762.4	289.0	343.0	180.0



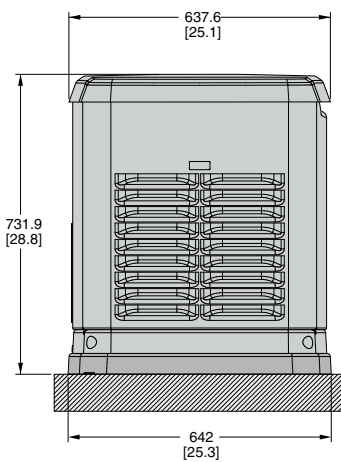
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available accessories

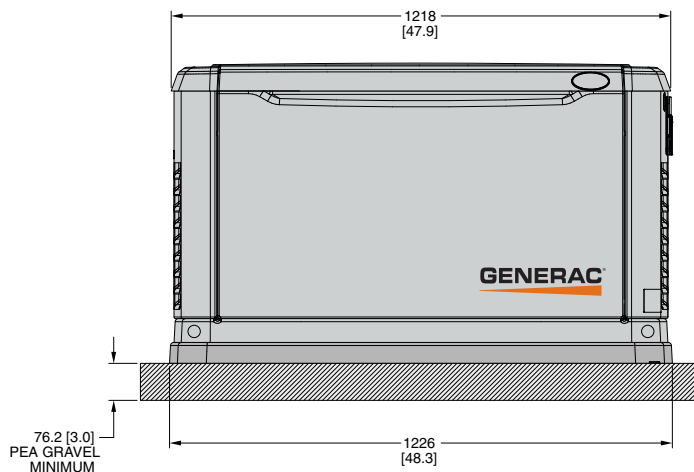
Model #	Product	Discription
5819	26R Wet Cell Battery	Every standby generator requires a battery to start the system. Generac offers the recommended 26R wet cell battery for use with all air-cooled standby product.
6212	Cold Weather Kit	If the temperature regularly falls below 32° F, install a cold weather kit to maintain optimal battery temperature. Kit consists of battery warmer with thermostat built into the wrap.
5621	Auxiliary Transfer Switch Contact Kit	The auxiliary transfer switch contact kit allows the transfer switch to lock out a single large electrical load you may not need.
5839	Fascia Base Wrap Kit	The fascia base wrap snaps together around the bottom the new air cooled generators. This offers a sleek, contoured appearance as well as offering protection from rodents and insects by covering the lifting holes located in the base.
5703	Paint Kit	Bisque Kit
5662 - 8kW 5663 - 10kW 5664 - 14kW	Scheduled Maintenance Kit	Generac's scheduled maintenance kits provide all the hardware necessary to perform complete routine maintenance on a Generac automatic standby generator.
5928	Nexus Wireless Remote	Completely wireless and battery powered, Generac's Nexus wireless remote monitor provides you with instant status information without ever leaving the house. Not compatible with CorePower or EcoGen systems.
5951	Advanced Nexus Wireless Remote	Remotely control generator functions with the advanced model's LCD display. In addition to remote testing of the generator, set the excercise cycle and maintenance interval reminders. Not compatible with CorePower or EcoGen systems.
5937	DLM Load Control DLM Module (50 Amps)	DLM Modules are used in conjunction with the Nexus Smart Switch to increase its load management capabilities. It gives the Nexus Smart Switch additional load management flexibility not found in any other transfer switch. Not compatible with EZ Switch™.

dimensions

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.



LEFT SIDE VIEW



FRONT VIEW