

## 17/20kW

### 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 005873-1, 005885-1 (Steel) - 17 kW 60Hz  
Models 005886-1, 006053-1 (Aluminum) - 17 kW 60Hz  
Models 005875-1, 005887-1 (Aluminum) - 20 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
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ 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.

## 17/20kW

**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   | 005873-1, 005885-1, 005886-1, 006053-1<br>(17 kW)        | 005875-1, 005887-1<br>(20kW) |
|---|--|------------------------------|
| Rated Maximum Continuous Power Capacity (LP)  | 17,000 Watts*  | 20,000 Watts*                |
| Rated Maximum Continuous Power Capacity (NG)  | 16,000 Watts*  | 18,000 Watts*                |
| Rated Voltage   | 240  | 240                          |
| Rated Maximum Continuous Load Current – 240 Volts                                     | 70.8 LP/66.6 NG  | 83.3 LP/75 NG                |
| Total Harmonic Distortion   | Less than 5%   | Less than 5%                 |
| Main Line Circuit Breaker   | 65 Amp   | 90 Amp                       |
| Phase   | 1  | 1                            |
| Number of Rotor Poles   | 2  | 2                            |
| Rated AC Frequency  | 60Hz   | 60Hz                         |
| Power Factor  | 1  | 1                            |
| Battery Requirement (not included)  | Group 26R 12 Volts and 525 Cold-cranking Amperes Minimum |                              |
| Unit Weight (Pounds/Kilos)  | 455/210.9 (Steel); 421/191 (Aluminum)                    | 451/204.6                    |
| 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               | 66   | 66                           |
| Sound output in dB(A) at 23 ft. with generator in Quiet-Test™ low-speed exercise mode | 60   | 60                           |

### Engine

|                               | GENERAC OHVI V-TWIN                     | GENERAC OHVI V-TWIN         |
|-------------------------------|---|-----------------------------|
| Type of Engine                | GENERAC OHVI V-TWIN                     | GENERAC OHVI V-TWIN         |
| Number of Cylinders           | 2                                       | 2                           |
| Displacement                  | 992cc                                   | 999cc                       |
| Cylinder Block                | Aluminum w/Cast Iron Sleeve             | Aluminum w/Cast Iron Sleeve |
| Valve Arrangement             | Overhead Valve                          | Overhead Valve              |
| Ignition System               | Solid-state w/Magneto                   | Solid-state w/Magneto       |
| Governor System               | Electronic                              | Electronic                  |
| Compression Ratio             | 9.5:1                                   | 9.5:1                       |
| Starter                       | 12 Vdc                                  | 12 Vdc                      |
| Oil Capacity Including Filter | Approx. 1.9 Qts./1.8L                   | Approx. 1.9 Qts./1.8L       |
| Operating RPM                 | 3,600                                   | 3,600                       |
| Fuel Consumption              |   |                             |
| Natural Gas                   | ft <sup>3</sup> /hr.                    |                             |
|                               | 1/2 Load                                | 183                         |
|                               | Full Load                               | 261                         |
| Liquid Propane                | ft <sup>3</sup> /hr (gal/hr) [Liter/hr] |                             |
|                               | 1/2 Load                                | 59 (1.61) [6.09]            |
|                               | Full Load                               | 94 (2.57) [9.73]            |
|                               |   | 69 (1.89) [7.15]            |
|                               |   | 106 (2.90) [10.98]          |

Note: Fuel pipe must be sized for full load. 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<sup>3</sup>/hr x 2520 (LP) or ft<sup>3</sup>/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

available on 17kW model only

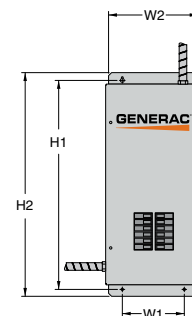
- Electrically operated, mechanically-held contacts for fast, positive connections.
- Rated for all classes of load, 100% equipment rated, both inductive and resistive.
- 2 pole, 250 VAC contactors.
- 160 millisecond transfer time.
- Dual coil design.
- Main contacts are silver plated or silver alloy 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                           | 005873-1 (17kW) |
|---------------------------------|-----------------|
| No. of Poles                    | 2               |
| Current Rating (amps)           | 100             |
| Voltage Rating (VAC)            | 250             |
| Utility Voltage Monitor (fixed) |                 |
| -Pick-up                        | 80%             |
| -Dropout                        | 60%             |
| Return to Utility               | approx. 15 sec. |
| Exerciser weekly for 12 minutes | Standard        |
| UL Listed                       | Standard        |
| Total of Pre-wired Circuits     | 16              |
| No. 15A 120V                    | 5               |
| No. 20A 120V                    | 5               |
| No. 20A 240V                    | 1               |
| No. 30A 240V                    | -               |
| No. 40A 240V                    | 1               |
| No. 50A 240V                    | 1               |
| Circuit Breaker Protected       |                 |
| Available RMS Symmetrical       |                 |
| Fault Current @ 250 Volts       | 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 |



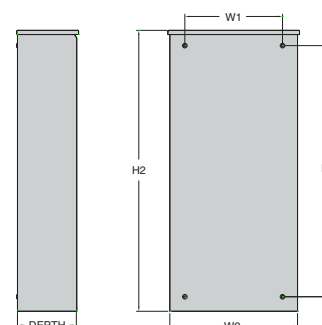
### Nexus Smart Switch™ Features

- 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  | 006053-1 (17kW)/005875-1 (20kW) |
|--|---------------------------------|
| 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<br>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 |



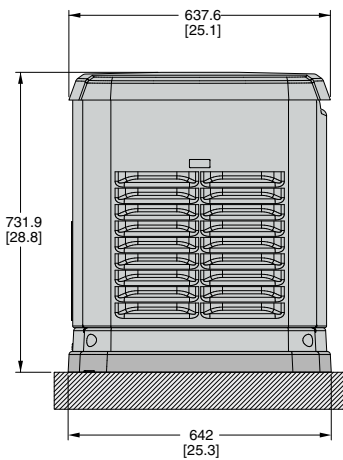
**17/20kW**

**available accessories**

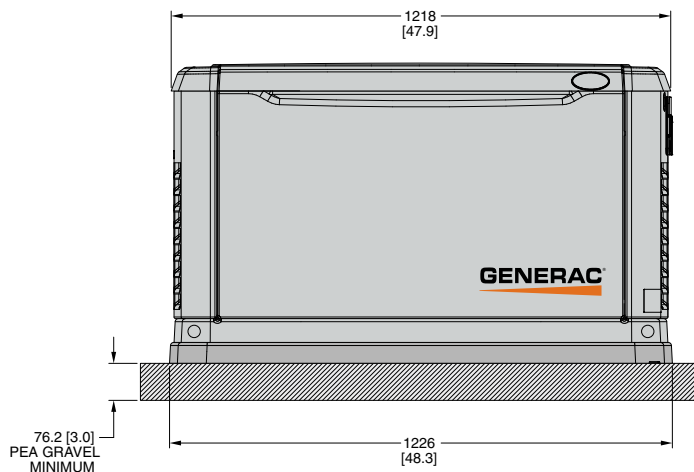
| Model #                    | Product                               | Description  |
|----------------------------|---------------------------------------|--|
| 5819                       | 26R Wet Cell Battery                  | Every standby generator requires a battery to start the system. Generac 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   |
| 5664 - 17kW<br>5665 - 20kW | 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 exercise 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