

## 20 kW

### GUARDIAN® SERIES Residential & Commercial Standby Generators Air-Cooled Gas Engine

#### INCLUDES:

- True Power™ Electrical Technology
- Two Line LCD Multilingual Digital Evolution™ Controller (English/Spanish/ French /Portuguese)
- Electronic Governor
- System Status & Maintenance Interval LED Indicators
- Sound Attenuated Enclosure
- Flexible Fuel Line Connector
- Direct-To-Dirt Composite Mounting Pad
- Natural Gas or LP Gas Operation
- 5 Year Limited Warranty
- Capability to be installed within 18" (457 mm) of a building\*

Standby Power Rating  
Model G007077-0 (Aluminum - Bisque) - 20 kW 60 Hz



QUIET TEST™ 

\*Only if located away from doors, windows and fresh air intakes, and unless otherwise directed by local codes.

## FEATURES

- **INNOVATIVE ENGINE DESIGN & RIGOROUS TESTING** are at the heart of Generac's success in providing the most reliable generators possible. Generac's G-Force™ engine lineup offers added peace of mind and reliability for when you need it the most. The G-Force series engines are purpose built and designed to handle the rigors of extended run times in high temperatures and extreme operating conditions.
- **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.

THE GENERAC PROMISE



**Engine**

- Generac G-Force 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.
- Quiet-Test™ Greatly reduces sound output and fuel consumption during bi-weekly exercise.
- “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 up to a 2 year/200 hour oil change interval.
- Low oil pressure shutdown system 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.

**Evolution™ Controls**

- Two-line LCD multilingual display Provides homeowners easily visible logs of history, maintenance and events up to 50 occurrences.
- Auto/Manual/Off illuminated buttons Selects the operating mode and provides easy, at-a-glance status indication in any condition.
- Sealed, raised buttons Smooth, weather-resistant user interface for programming and operations.
- Utility voltage sensing Constantly monitors utility voltage, setpoints 65% 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 2-1500 seconds from the factory default setting of 5 seconds by a qualified dealer.
- 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 exercise Operates engine to prevent oil seal drying and damage between power outages by running the generator for 5 minutes every other week. Also offers a selectable setting for weekly or monthly operation providing flexibility and potentially lower fuel costs to the owner.
- Smart battery charger Delivers charge to the battery only when needed at varying rates depending on outdoor air temperature. Compatible with lead acid and AGM-style batteries.
- Electronic governor Maintains constant 60 Hz frequency.

**Unit**

- SAE weather protective enclosure Sound attenuated enclosures ensure quiet operation and protection against mother nature, withstanding winds up to 150 mph. 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, as close as 18" away from a building.

**Installation System**

- 1 ft (305 mm) flexible fuel line connector Absorbs any generator vibration when connected to rigid pipe.
- Direct-to-dirt composite mounting pad Complex lattice design prevents settling or sinking of the generator system.
- Integral sediment trap Prevents particles and moisture from entering the fuel regulator and engine, prolonging engine life.

### 20 kW

#### Generator

<b>Model</b>	G007077-0
Rated Maximum Continuous Power Capacity (LP)	20,000 Watts*
Rated Maximum Continuous Power Capacity (NG)	17,000 Watts*
Rated Voltage	208
Rated Maximum Continuous Load Current – 208 Volts (LP/NG)	69.4/59.0
Total Harmonic Distortion	Less than 5%
Main Line Circuit Breaker	80 Amp
Phase	3
Number of Rotor Poles	2
Rated AC Frequency	60 Hz
Power Factor	0.8
Battery Requirement (not included)	12 Volts, Group 26R 540 CCA Minimum or Group 35AGM 650 CCA Minimum
Unit Weight (lb/kg)	466/211
Dimensions (L x W x H) in/mm	48 x 25 x 29/1218 x 638 x 732
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load**	67
Sound output in dB(A) at 23 ft (7 m) with generator in Quiet-Test™ low-speed exercise mode**	58
Exercise duration	5 min

#### Engine

Type of Engine	GENERAC G-Force 1000 Series	
Number of Cylinders	2	
Displacement	999 cc	
Cylinder Block	Aluminum w/ Cast Iron Sleeve	
Valve Arrangement	Overhead Valve	
Ignition System	Solid-state w/ Magneto	
Governor System	Electronic	
Compression Ratio	9.5:1	
Starter	12 Vdc	
Oil Capacity Including Filter	Approx. 1.9 qt/1.8 L	
Operating rpm	3,600	
Fuel Consumption		
Natural Gas - ft <sup>3</sup> /hr (m <sup>3</sup> /hr)	1/2 Load	219 (6.20)
	Full Load	307 (8.69)
Liquid Propane - ft <sup>3</sup> /hr (gal/hr) [l/hr]	1/2 Load	87 (2.39) [9.03]
	Full Load	130 (3.56) [13.48]

Note: **Fuel pipe must be sized for full load.** Required fuel pressure to generator fuel inlet at all load ranges - 3.5-7" water column (7-13 mm mercury) for natural gas, 10-12" water column (19-22 mm mercury) for LP gas. For Btu content, multiply ft<sup>3</sup>/hr x 2500 (LP) or ft<sup>3</sup>/hr x 1000 (NG). For Megajoule content, multiply m<sup>3</sup>/hr x 93.15 (LP) or m<sup>3</sup>/hr x 37.26 (NG)

#### Controls

2-Line Plain Text Multilingual LCD Display	Simple user interface for ease of operation.
Mode Buttons:Auto	Automatic Start on Utility failure. 7 day exerciser.
Manual	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Off	Stops unit. Power is removed. Control and charger still operate.
Ready to Run/Maintenance Messages	Standard
Engine Run Hours Indication	Standard
Programmable start delay between 2-1500 seconds	Standard (programmable by dealer only)
Utility Voltage Loss/Return to Utility Adjustable (Brownout Setting)	From 140-171 V/190-216 V
Future Set Capable Exerciser/Exercise Set Error Warning	Standard
Run/Alarm/Maintenance Logs	50 Events Each
Engine Start Sequence	Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration).
Starter Lock-out	Starter cannot re-engage until 5 sec after engine has stopped.
Smart Battery Charger	Standard
Charger Fault/Missing AC Warning	Standard
Low Battery/Battery Problem Protection and Battery Condition Indication	Standard
Automatic Voltage Regulation with Over and Under Voltage Protection	Standard
Under-Frequency/Overload/Stepper Overcurrent Protection	Standard
Safety Fused/Fuse Problem Protection	Standard
Automatic Low Oil Pressure/High Oil Temperature Shutdown	Standard
Overcrank/Overspeed (@ 72 Hz)/rpm Sense Loss Shutdown	Standard
High Engine Temperature Shutdown	Standard
Internal Fault/Incorrect Wiring Protection	Standard
Common External Fault Capability	Standard
Field Upgradable Firmware	Standard

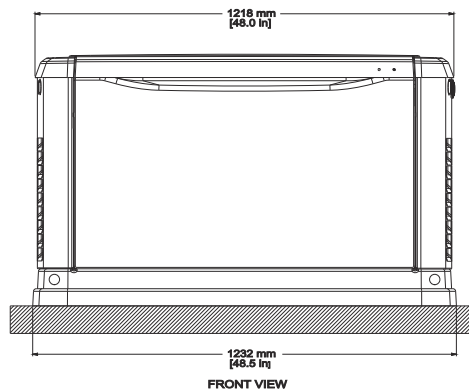
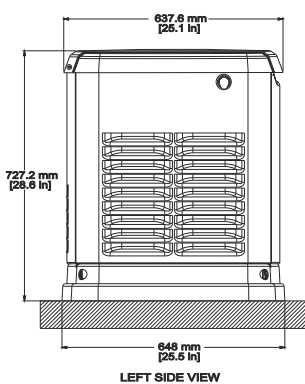
\*\*Sound levels are taken from the front of the generator. Sound levels taken from other sides of the generator may be higher depending on installation parameters. Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). \* Maximum kilovolt amps and current are subject to and limited by such factors as fuel Btu/megajoule content, ambient temperature, altitude, engine power and condition, etc. Maximum power decreases about 3.5 percent for each 1,000 feet (304.8 meters) above sea level; and also will decrease about 1 percent for each 6 °C (10 °F) above 16 °C (60 °F).

Model #	Product	Description
G005819-0	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 (excluding PowerPact®).
G007101-0	Battery Pad Warmer	The pad warmer rests under the battery. Recommended for use if the temperature regularly falls below 0°F. (Not necessary for use with AGM-style batteries).
G007102-0	Oil Warmer	Oil warmer slips directly over the oil filter. Recommended for use if the temperature regularly falls below 0°F.
G007103-0	Breather Warmer	The breather warmer is for use in extreme cold weather applications. For use with Evolution controllers only in climates where heavy icing occurs.
G007027-0 - Bisque	Fascia Base Wrap Kit	The fascia base wrap snaps together around the bottom of 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.
G005703-0 - Bisque	Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
G006485-0	Scheduled Maintenance Kit	Generac's scheduled maintenance kits provide all the hardware necessary to perform complete routine maintenance on a Generac automatic standby generator.
G006463-4*	Mobile Link™ — Cellular	Generac's Mobile Link allows you to check the status of your generator from anywhere you have access to an Internet connection from a personal computer or with any smart device.

\*Mobile Link is only applicable for the United States.

## dimensions & UPCs

Dimensions shown are approximate. Refer to installation manual for exact dimensions. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



Model	UPC
G007077-0	696471002522