



# STANDBY GENERATORS

# 20 kW

## Air-Cooled Gas Engine Generator Sets

### INCLUDES:

- Two Line LCD Digital Controller
- Electronic Governor
- External Main Circuit Breaker, System Status & Maintenance Interval LED's and GFCI Duplex Outlet
- Flexible Fuel Line Connector
- Composite Mounting Pad
- Natural Gas or LP Gas Operation
- UL 2200 Listed

**Continuous Standby Power Rating**  
 Model ASPDY1XXA020 (Aluminum - Gray) - 20 kW 60Hz



## FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of Carrier®'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 Carrier® with the confidence that these systems will provide superior performance.
- **IMPROVED 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.
- **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 Carrier® 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 Carrier®'s dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **CARRIER® TRANSFER SWITCHES:** Long life and reliability are synonymous with Carrier®. One reason for this confidence is that the Carrier® product line includes its own transfer systems and controls for total system compatibility.



# FEATURES

# Carrier® Standby Generator - 20 kW

ENGINE	<ul style="list-style-type: none"> <li>•Generac (OHVI) Design</li> </ul>	Maximizes engine “breathing” for increased fuel efficiency. Plateau honed cylinder walls and plasma moly rings help engine run cooler, reducing oil consumption. Because heat is the primary cause of engine wear, the OHVI has a significantly longer life than competitive engines.
	<ul style="list-style-type: none"> <li>•“Spiny-lok” cast iron cylinder walls</li> </ul>	Rigid construction and added durability provide long engine life.
	<ul style="list-style-type: none"> <li>•Electronic ignition/spark advance</li> </ul>	These features combine to assure smooth, quick starting every time.
	<ul style="list-style-type: none"> <li>•Full pressure lubrication system</li> </ul>	Superior lubrication to all vital bearings means better performance, less maintenance and significantly longer engine life. Now featuring a 2 year/200 hour oil change interval.
	<ul style="list-style-type: none"> <li>•Low oil pressure shutdown system</li> <li>•High temperature shutdown</li> </ul>	Superior shutdown protection prevents catastrophic engine damage due to low oil. Prevents damage due to overheating.
GENERATOR	<ul style="list-style-type: none"> <li>•Revolving field</li> </ul>	Allows for smaller, light weight unit that operates 25% more efficiently than a revolving armature generator.
	<ul style="list-style-type: none"> <li>•Skewed stator</li> </ul>	Produces a smooth output waveform for compatibility with electronic equipment.
	<ul style="list-style-type: none"> <li>•Displaced phase excitation</li> </ul>	Maximizes motor starting capability.
	<ul style="list-style-type: none"> <li>•Automatic voltage regulation</li> </ul>	Regulates the output voltage to $\pm 2\%$ prevents damaging voltage spikes.
	<ul style="list-style-type: none"> <li>•UL 2200 Listed</li> </ul>	For your safety
TRANSFER SWITCH	<ul style="list-style-type: none"> <li>•Fully Automatic</li> </ul>	Transfers your vital electrical loads to the energized source of power.
	<ul style="list-style-type: none"> <li>•Remote Mounting</li> </ul>	Mounts near your existing distribution panel for simple, low cost installation.
	<ul style="list-style-type: none"> <li>•UL Listed</li> </ul>	For your safety
CONTROLS	<ul style="list-style-type: none"> <li>•Manual/Auto/Off switch</li> </ul>	Selects the operating mode.
	<ul style="list-style-type: none"> <li>•Utility voltage sensing</li> </ul>	Constantly monitors utility voltage, setpoints 65% dropout, 75% pick-up, of standard voltage.
	<ul style="list-style-type: none"> <li>•Utility interrupt delay</li> </ul>	Prevents nuisance start-ups of the engine, adjustable 10-30 seconds.
	<ul style="list-style-type: none"> <li>•Engine warm-up</li> </ul>	Ensures engine is ready to assume the load, setpoint approximately 10 seconds.
	<ul style="list-style-type: none"> <li>•Engine cool-down</li> </ul>	Allows engine to cool prior to shutdown, setpoint approximately 1 minute.
	<ul style="list-style-type: none"> <li>•Seven day exerciser</li> </ul>	Operates engine to prevent oil seal drying and damage between power outages.
	<ul style="list-style-type: none"> <li>•Timed Trickle Battery charger</li> </ul>	Maintains battery charge level to insure starting.
	<ul style="list-style-type: none"> <li>•Main Line Circuit Breaker</li> </ul>	Protects generator from overload.
UNIT	<ul style="list-style-type: none"> <li>•Aluminum weather protective enclosure</li> </ul>	Provides the ultimate 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.
	<ul style="list-style-type: none"> <li>•Enclosed critical grade muffler</li> </ul>	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
	<ul style="list-style-type: none"> <li>•Small, compact, attractive</li> </ul>	Makes for an easy, eye appealing installation.
INSTALLATION SYSTEM	<ul style="list-style-type: none"> <li>•Pre-wired External Connection Box</li> <li>•1' Flexible Fuel Line Connector</li> <li>•Composite Mounting Pad</li> <li>•Pre-wired conduits</li> <li>•UL Listed wire nuts</li> </ul>	Easy Installation - Virtually all hardware included, plus step-by-step photographed Installation Guide.

# SPECIFICATIONS

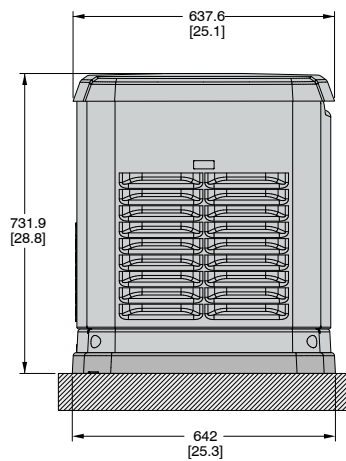


GENERATOR		Model ASPDY1XXA020 (20 kW)
Rated Maximum Continuous Power Capacity (LP)		20,000 Watts*
Rated Maximum Continuous Power Capacity (NG)		18,000 Watts*
Rated Voltage		120/240
Rated Maximum Continuous Load Current		
240 Volts		83.3 LP/75 NG
Total Harmonic Distortion		Less than 5%
Main Line Circuit Breaker		100 Amp
Phase		1
Number of Rotor Poles		2
Rated AC Frequency		60Hz
Power Factor		1
Battery Requirement (not included)		Group 26R 12 Volts and 525 Cold-cranking Amperes Minimum
Unit Weight		451 Pounds
Dimensions (L" x W" x H")		48 x 25 x 29
ENGINE		Model ASPDY1XXA020 (20 kW)
Type of Engine		GENERAC OHVI V-TWIN
Number of Cylinders		2
Rated Horsepower		36 @ 3,600 rpm
Displacement		999cc
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. 1.7 Qts.
Operating RPM		3,600
Fuel Consumption		
Natural Gas	cu.ft./hr.	
	1/2 Load	206
	Full Load	294
Liquid Propane	ft <sup>3</sup> /hr (gal/hr)	
	1/2 Load	69 (1.89)
	Full Load	106 (2.90)
Required fuel pressure to generator fuel inlet at all load ranges - 5 to 7 inches of water column for natural gas, 11 to 14 inches of water column for LP gas		
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.
Engine Start Sequence		Cyclic cranking: 16 sec. on, 7 rest (90 sec. maximum duration)
Engine Warm-up		10 seconds
Engine Cool-Down		1 minute
Starter Lock-out		Starter cannot re-engage until 5 sec. after engine has stopped.
2.5 Amp Timed Trickle Battery Charger		Standard
Automatic Voltage Regulator w/Overvoltage Protection		Standard
Automatic Low Oil Pressure Shutdown		Standard
Overspeed Shutdown		Standard, 72Hz
High Temperature Shutdown		Standard
Overcrank Protection		Standard
Safety Fuse		Standard

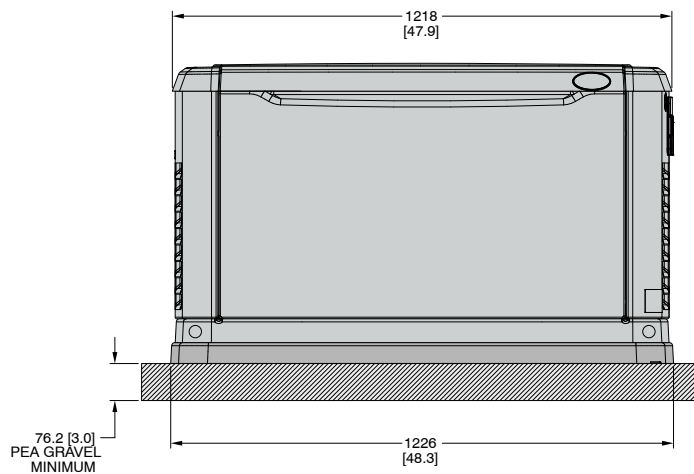
Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). \* Maximum wattage and current are subject to and limited by such factors 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 12° C (10° F) above 15.5° C (60°F).

# Carrier® Standby Generator - 20 kW

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Carrier dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



LEFT SIDE VIEW



FRONT VIEW

