

## Standby Generators Liquid-Cooled Gas Engine



### ADVANCE SERIES LPG/Natural Gas STEEL-GRAY



### Features and benefits

#### ■ INNOVATIVE DESIGN AND TESTING

Designed for easy installation with attractive, Compact structure and reliable performance. Commitment to component testing, reliability testing, environmental testing, destruction and life testing.

#### ■ LOW NOISE LEVEL

Quiet operation, critical grade muffler is mounted Inside the unit to lower noise and prevent injuries.

#### ■ LUBRICATION SYSTEM

High-performance oil pump and large capacity oil tank provide long engine life.

#### ■ RADIATOR SYSTEM

Liquid cooled system with large capacity radiator ensure superior working performance, continuous operating above 100hrs at the ambient temp of above 50°C (122°F) .

#### ■ SMARTGEN CONTROLLER

State of the art management system to protect generator and interface with optional cell based monitor. Programmable for your unique needs in a power system.

#### ■ WARRANTY

5 years /1000 hours limited warranty

#### ■ ENCLOSURE

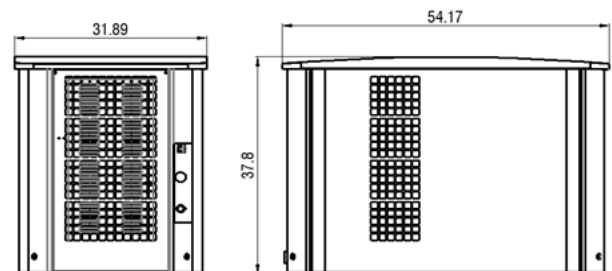
Double wall for increased acoustic protection, gas loaded shocks to secure roof opening and removable rear panel for easier service.

### Weight, size and sound level

**Weight:** 772lbs(350kg)

**Size:** 54.171in×31.89in×37.8in

**Sound:** 72 dB(A) at 23 ft (7 m)



Model	Phase	Voltage (V)	Frequency (Hz)	Rated amps * (NG/LPG Fuel)	Circuit Breaker (Amps)
PD20REG-DB	1	120/240	60	75.0/83.3	84
PD20REG-DB-3	3	120/208	60	62.5/69.5	70

\*Derating guidelines: Engine power available up to 1005m (3300 ft) at ambient temperatures up to 40 °C (104 °F). Above these elevations derate at 4% per 305m (1000 ft) and 2% per 10 °C above 40 °C (104 °F)。

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## GENERATOR SPECIFICATIONS

Rated Power (NG/LPG)	Single	18KW/20KW
	Three	22.5KVA/25KVA
Max Power (NG/LPG)	Single	19.8KW/22KW
	Three	24.7KVA/27.5KVA
Power Factor	Single	1.0
	Three	0.8
Rated Frequency (Hz)		60
Rated Speed (rpm)		3600

## ENGINE SPECIFICATIONS

Manufacturer/Model	GECO
Engine Type	4 Cylinders, 4 Stokes
Displacement	0.998 liters(60.9in <sup>3</sup> )
Bore	65.5 mm(2.52 in)
Stroke	74 mm(2.91 in)
Compression Ratio	9.5:1
Ignition system	ECM
Intake Air System	Naturally Aspirated
Starter motor rated voltage	DC 12V/0.8KW Electrical
Battery charging alternator	DC 14V/70A
Oil capacity	4.0 liters(244.1 in <sup>3</sup> )
Air cleaner type	Dry
Recommended cold cranking amps: (CCA) rating for -18°C (0°F)	550

## GENERATOR SET PERFORMANCE

Governor regulation class	ISO 8528 Part 1 Class G2
Governor type	Electronic
Voltage regulation	±1.0%
Random voltage variation	±1.0%
Frequency regulation	Isochronous
Frequency regulation, steady state	± 0.5% @ 60 Hz

## SOUND EMISSIONS

Sound output in dB(A) at 23 ft (7 m) with generator in exercise mode *	64
Sound output in dB(A) at 23 ft (7 m) with generator at normal operation *	72

\*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.

## ALTERNATOR SPECIFICATIONS

Rated Power	20KW
Alternator Type	Synchronous, revolving field
Pole	2 pole
Rotor Insulation Class	F
Stator Insulation Class	F
Protection Level	IP23
Winding Material	Copper
Sea level	≤3280ft
Coupling	Direct coupling

## ENGINE COOLING SYSTEM

Cooling system	Closed Liquid Cooled
Coolant Capacity	5L
Coolant Temp Range	-25°C~106°C
Radiator Fan	7 Blade Φ380

## FUEL SYSTEM

Fuel Type	Natural Gas or LPG
Fuel supply pressure, kPa (in. H <sub>2</sub> O):	NG: 1.2—3.5 (5-14)
	LPG: 1.7—3.5 (7-14)
Fuel pipe Size	G 3/4 pipe
Fuel Pipe Length	<33ft
Fuel consumption @50% (NG)	178ft <sup>3</sup> /h
Fuel consumption @100%(NG)	286ft <sup>3</sup> /h
Fuel consumption @50%(LPG)	92.6ft <sup>3</sup> /h
Fuel consumption@100%(LPG)	147ft <sup>3</sup> /h

Nominal fuel rating: Natural gas: 37 MJ/m<sup>3</sup>(1000 Btu/ft<sup>3</sup>)

LPG: 93 MJ/m<sup>3</sup>(2500 Btu/ ft<sup>3</sup>)

LPG conversion factors: 8.58 ft<sup>3</sup> = 1 lb.

0.535 m<sup>3</sup> = 1 kg 36.39 ft<sup>3</sup> = 1 gal.

## UNIT DIMENSIONS AND WEIGHTS

Unit Weight (lbs)	772
Gross Weight (lbs)	849
Unit Size (in)	54.17×31.89×37.8
Packing size (in)	57.87×35.4×43.3

NOTE: Dimensions are provided for reference only and should not be used for planning installation.

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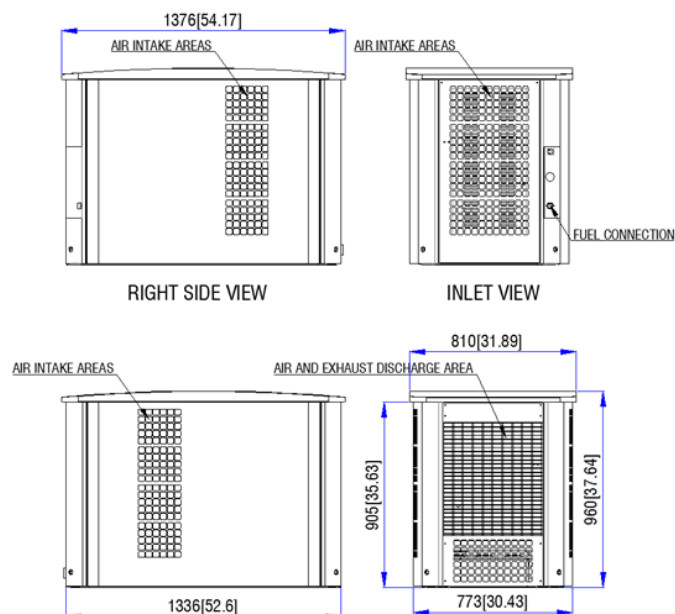


### CONTROLLER FEATURES

- LCD display, easy to operate
- System voltage/ frequency selection and engine configuration
- Maintain steady-state speed (stepping alternator):
- High engine temperature
- Low oil pressure
- Overspeed/underspeed
- Crank cycle status
- Overvoltage/undervoltage
- Charging Fail



### BASIC DIMENSIONS



**Note:** This outline drawing is provided for general reference only and is Not intended for use in design or installation. For more information, see Operators and Installation manuals or contact your distributor or dealer for assistance.

### AVAILABLE ACCESSORIES

● Extreme Cold Weather Package
● Transfer Switches
● Oil Heater
● GSM-3 GSM MODEM ( Upload status of running to mobile and computer )
● RS485 Compatible

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