Standby Generators Liquid Cooled 27kW

Gas Engine Generator Sets

Continuous Standby Power Rating:

- EGEN27 (Aluminum) - 27 kW 60Hz
  - Naturally Aspirated
  - Gaseous Fueled
  - Meets 2009 EPA Emission Regulations

Standard Equipment:

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor
- Flex fuel line
- Hour meter

Features:

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with RSeries digital control panel
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion alternator
- Vibration isolated from mounting base
- Matching Eaton transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint

Table 1.

Specifications	
Generator	
Type	Synchronous
Rotor/Stator Insulation	Class H
Weight	891 lbs.
Total Harmonic Distortion	<5%
Telephone Interference Factor (Tif)	<50
Alternator Output Leads 3 Phase	4 wire
Bearings	Sealed Ball
Coupling	Flexible Disc
Excitation System	Direct
NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.	
Engine	
Bore	3.41
Stroke	3.94
Compression Ratio	8.5:1
Intake Air System	Naturally Aspirated
Valve Seats	Hardened
Lifter Type	Hydraulic
Oil Pump	Gear
Oil Filter	Full Flow Spin-On Cartridge
Crankcase Capacity	4 Quarts
Cooling System Type	Closed
Water Pump	Belt Driven
Fan Speed	1980
Fan Diameter	17.75 Inches
Fan Mode	Pusher
Governor	
Type	Electronic
Frequency Regulation	Isochronous
Steady State Regulation	± 0.25%
Fuel System	
Type	Natural gas, propane vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure	5" - 14" H_2O
Voltage Regulator	
Type	Electronic
Sensing	Single Phase
Regulation	± 1%
Features	V/F Adjustable, Adjustable Voltage and Gain LED Indicators
Electrical System	
Battery Charge Alternator	12v 30 Amp
Static Battery Charger	2 Amp
Recommended Battery	Group 26, 525cca
System Voltage	12 Volts

Generator Features:

- Revolving field heavy duty generator
- Directly connected to the engine
- Operating temperature rise 120 °C above a 40 °C ambient
- Insulation is Class H rated at 150 °C rise
- All models are fully prototyped tested

Control Panel Features:

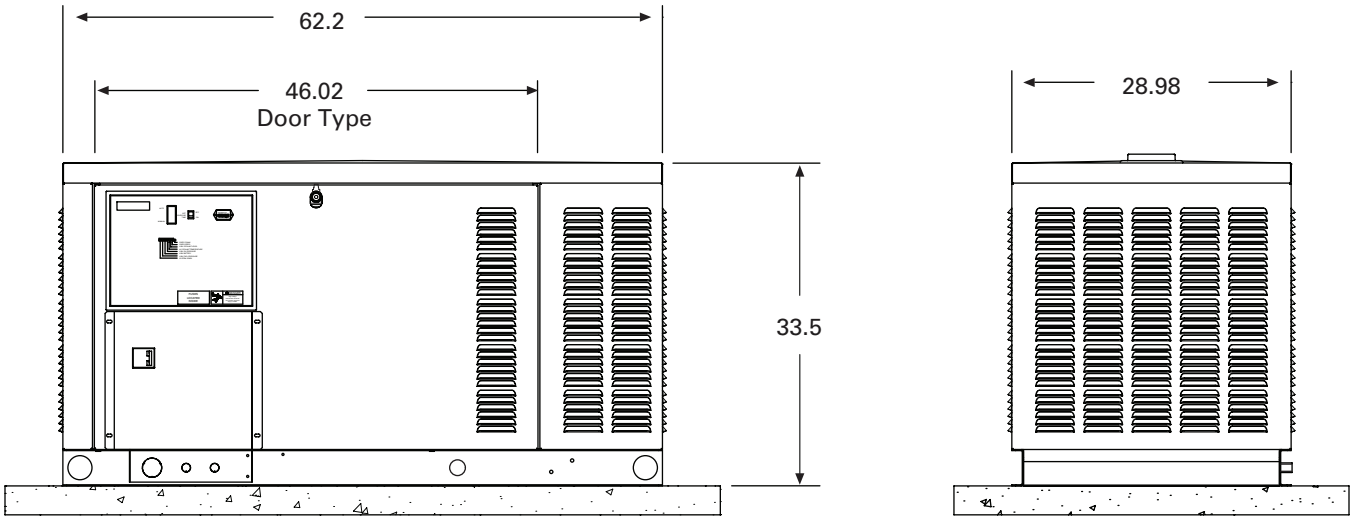
- Seven Led Indicator Lights
  - System ready
  - Low fuel pressure
  - Low battery
  - Low oil pressure
  - High coolant temp/low coolant temp
  - Overspeed
  - Overcrank
- Internal Functions:
  - 3 position switch (auto, off and manual)
  - 2 wire start for any transfer switch
  - Built-in 7 day exerciser
  - Selectable engine speed at exercise
  - Governor controller is built into the master control board
  - Temperature range -40 °C to 70 °C
- Additional Functions:
  - Utility sensing
  - Delay on utility failure for engine start
  - Engine warm-up before transfer
  - Delay to retransfer to utility
  - Engine cooldown timer
  - Exerciser not set
  - Hour meter

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, ISO8528 and DIN6271).

Table 2.

Operating Data					
kW Rating (Load Capacity/Standby Rating)	27				
Engine Size	2.4 Liter Inline 4				
Generator Output Voltage/kW - 60hz	**kW Nat. Gas**	**Amp**	**kW LPG**	**Amp**	**CB Size (Both)**
120/240v, 1-Phase, 1.0 Pf	25	104	27	112	125
120/208v, 3-Phase, 0.8 Pf	25	87	27	94	100
120/240v, 3-Phase, 0.8 Pf	25	75	27	81	90
Generator Locked Rotor Kva Available @ Voltage Dip Of 35%					
Single phase or 208 3-phase	43				
Engine Fuel Consumption	**Natural Gas**		**Propane**		
	(ft^3/hr.)		**(gal/hr.)**		**cu ft/hr**
Exercise cycle	42		0.44		16
25% of rated load	108		1.2		44
50% of rated load	197		2.2		81
75% of rated load	287		3.2		118
100% of rated load	359		4.1		147
Engine Cooling					
Air flow (inlet air including alternator and combustion air) ft^3/min.	2,400				
System coolant capacity US gal.	2.5				
Heat rejection to coolant BTU/hr.	120,000				
Max. operating air temp. on radiator °C (°F)	60 (150)				
Max. ambient temperature °C (°F)	50 (140)				
Combustion Air Requirements					
Flow at rated power 60 Hz cfm	68				
Sound Emissions In Dba					
Exercising at 7 meters	62				
Normal operation at 7 meters	75				
Exhaust					
Exhaust flow at rated output 60 Hz cfm	130				
Exhaust temp. at muffler outlet °F	900				
Engine Parameters					
Rated synchronous RPM 60 Hz	1800				
HP at rated KW 60 Hz	40				
Power Adjustment For Ambient Conditions					
Temperature Duration 3% for every 10 °C above - °C 1.65% for every 10 °F above - °F	 25 77				
Altitude Duration 1% for every 100 m above - m 3% for every 1000 ft. above - ft.	 183 600				
Enclosure					
Material	Aluminum				
Color	PMS 422 (Bisque)				

RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.



Side View **Front View**

Figure 1. Installation Layout

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Printed in USA
Publication No. TD00405007E
August 2009

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