Standby Generators Liquid Cooled 45kW



Gas Engine Generator Sets

Continuous Standby Power Rating:

- EGEN45 (Steel) 45 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

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			
Туре	Synchronous		
Rotor/Stator Insulation	Class H		
Weight	1,414 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	Precision Ground		
Lifter Type	Overhead Valve Push Rod, Hydraulic		
Oil Pump	Gear		
Oil Filter	Full Flow Spin-On Cartridge		
Crankcase Capacity	4 Quarts		
Cooling System Type	Pressurized Closed		
Water Pump	Belt Driven		
Fan Speed	2060		
Fan Diameter	22 Inches		
Fan Mode	Pusher		
Governor			
Туре	Electronic		
Frequency Regulation	Isochronous		
Steady State Regulation	± 0.25%		
Fuel System			
Туре	Natural gas, propane vapor		
Carburetor	Down Draft		
Secondary Fuel Regulator	Standard		
Fuel Shut Off Solenoid	Standard		
Operating Fuel Pressure	5" - 14" H ₂ 0		
Voltage Regulator			
Туре	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

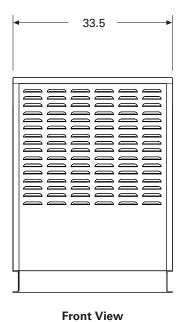
Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

Table 2.

Operating Data				
kW Rating (Load Capacity/Standby Rating)	45	45		
Engine Size	2.4 Liter Inline 4	2.4 Liter Inline 4		
Generator Output Voltage/kW - 60hz	kW	Amp	CB Size	
120/240v, 1-Phase, 1.0 Pf	45	188	200	
120/208v, 3-Phase, 0.8 Pf	45	156	175	
120/240v, 3-Phase, 0.8 Pf	45	135	150	
277/480v, 3-Phase, 0.8 Pf	45	68	80	
Generator Locked Rotor Kva Available @ Voltage Dip Of 35%				
Single phase or 208 3-phase 480v 3-Phase	100 110			
Engine Fuel Consumption	Natural Gas Propane		ane	
	(ft ³ /hr.)	(gal/hr.)	cu ft/hr	
Exercise cycle	102	1.11	40.4	
25% of rated load	194	2.12	77.1	
50% of rated load	373	4.07	148	
75% of rated load	520	5.67	206.3	
100% of rated load	720	7.86	286	
Engine Cooling				
Air flow (inlet air including alternator and combustion air) $\mathrm{ft}^3/\mathrm{min}$.	2,725	2,725		
System coolant capacity US gal.	3.0	3.0		
Heat rejection to coolant BTU/hr.	173,000	173,000		
Max. operating air temp. on radiator ${}^{\circ}\text{C}$ (${}^{\circ}\text{F}$)	60 (150)			
Max. ambient temperature °C (°F)	50 (140)	50 (140)		
Combustion Air Requirements				
Flow at rated power 60 Hz cfm	144	144		
Sound Emissions In Dba				
Exercising at 7 meters	61	61		
Normal operation at 7 meters	73	73		
Exhaust				
Exhaust flow at rated output 60 Hz cfm	429	429		
Exhaust temp. at muffler outlet °F	1150			
Engine Parameters				
Rated synchronous RPM 60 Hz	3600	3600		
HP at rated KW 60 Hz	71	71		
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			

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.

Effective August 2009



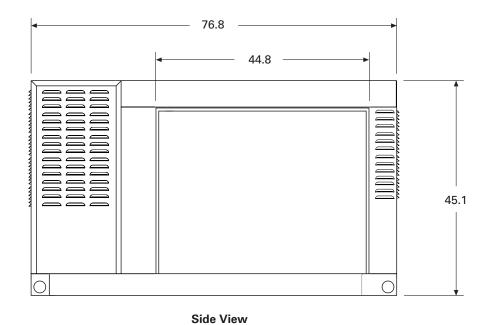


Figure 1. Installation Layout

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