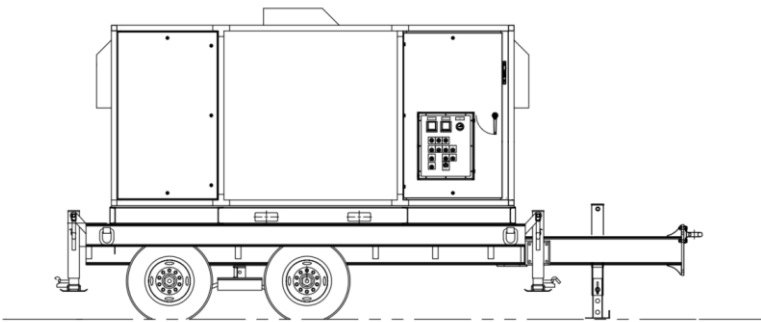


BBG-50RC-CE-S

Motor Generator

Description

The motor generator is trailer mounted and designed to be parked for extended periods. The output frequency is precisely 50 Hz given an accurate 50 Hz input. The BBG-50RC-CE-S motor generator is a direct drive, common shaft unit that utilizes a 6-pole, 1000 RPM, synchronous motor to drive a 6-pole, 1000 RPM, synchronous generator. The Generator output is capable of 380 volts, 3 Phase at 570 Amps.



Applications

- Radar Systems Power
- Frequency Conversion
- Power Conditioning
- Portable Power Conversion
- Many Others

Features

- 425HP Motor
- 50Hz Motor
- 380VAC Motor
- 375KVA Generator
- 50Hz Generator
- AC Brushless Design
- Continuous Duty
- Reduced Voltage Starting Method

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Technical Specifications

Parameter	Value	Units
Motor Input		
Voltage	380	Volts
	3	Phase
Frequency	50	Hz
Type	Brushless Synchronous	
Capacity	425	HP
Full Load Current	500	Amps
Rotor Speed	1000	RPM
Rated Power Factor	1	
Starting Method	Reduced Voltage	WYE-DELTA
Generator Output		
Voltage	380	Y Volts
	3	Phase
Frequency	50	HZ
Type	Brushless Synchronous	
Capacity	375	KVA
	300	KW
Full Load Current	570	Amps
Rotor Speed	1000	RPM
Rated Power Factor	0.8	
Performance		
Voltage Regulation	±0.5	%
Voltage Stability	±0.5	%
Voltage Adjustment	±10	%
Voltage Recovery	350 <i>(After a full load at rated power factor is applied)</i>	milliseconds
Frequency Regulation	Matches Input Frequency	
General Specifications		
Temperature	122	°F
	50	°C
Humidity	95	%
Exciter	AC Brushless	
Drive	Direct, Common Frame	
Duty Cycle	Continuous	
Drive Coupling	Direct	
Size		
Tow Length	19' – 4"	Ft/In
	5.89	M

Parameter	Value	Units
Width	8' – 6"	Ft/In
	2.62	M
Height	9' – 10.5	Ft/In
	3	M
Weight	19,700	Lbs
	8935.77	Kgs
Trailer Specifications		
Hitch	3" Adjustable Pintel	
Wheels	ST235/80R 16 E	
Lights	Military Type NATO 12-Pin	
Brakes	Electric	
Suspension	Spring	
Stand	Drop Leg (4 pl.)	
Deck Height	34	In
Spare Tire	Yes	
Paint	Type – Customer Specified	
	Color – Customer Specified	

DESCRIPTION

The BBG-50RC-CE-S Motor generator is enclosed in a custom NMEA 3R weather-resistant, self-ventilated enclosure. The motor control panel and generator control panel are mounted to the frame of the enclosure. The power transfer control is contained in a free-standing, control enclosure. The MG is designed to handle large voltage spikes encountered in remote unstable utility power.

The trailer provides for easy towing without loading the suspension of the tow vehicle. The trailer uses a rigid tongue to connect to the tow vehicle transferring some weight to the tow vehicle. The trailer has five (5) stabilizer type jack stands allowing the trailer to be jacked up and weight taken off the wheels. The support legs support the weight of the trailer during storage.

MOTOR-GENERATOR FEATURES

MOTOR CONTROLS

- Input circuit breaker, molded case, to protect generator against short circuit or prolonged overload, with through door handle.
- Motor starter, reduced voltage, wye-delta, to limit inrush current to 250% of motor full-load current, with overload and under voltage protection.
- Push-button, start/stop.



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- Power transformer, 120 V, 50 Hz, for control circuit operation.
- Variable transformer for power factor control, with protective relay for motor out-of-step and field failure protection.
- Meter package that includes: AC ammeter to read motor line current and running time meter.
- Pilot lights to indicate "Motor Run", "System In Bypass" and "Input Power On"

GENERATOR CONTROLS

- Meter package that includes voltmeter to read 50 Hz generator output voltage, ammeter to read load current, and frequency meter to read generator output frequency.
- Voltmeter and ammeter phase selector switches to read generator output voltage and load current respectively in each phase.
- Voltage regulator, with automatic buildup and rheostat for control of regulated voltage, three-phase sensing, $\pm 0.5\%$ regulation accuracy.
- Output circuit breaker, molded case, to protect generator against short circuit or prolonged overload.
- Pilot light to indicate "Generator Power On"
- Overvoltage protection package to include overvoltage relay, illuminated alarm light with reset and output circuit breaker shunt trip.

TRAILER FEATURES

- GVWR: 25,900lb (11,748kg)
- Tires: ST235/80R 16 E
- Number of Tires: 4
- Number of Axles: 2
- Suspension: Spring
- Hitch Type: Pintle
- Brakes: Electric
- Max Tow Speed: Limited to specification stamped on tire.
- Jack/Stationary Supports: Drop Legs (4)
- Tongue Jack: Yes
- Safety Chains: $\frac{1}{2}$ ", Grade 70
- Light Connection: NATO-12 Pin
- Lights: LED, Sealed Wiring Harness
- Tie Downs: D-Rings, 1"

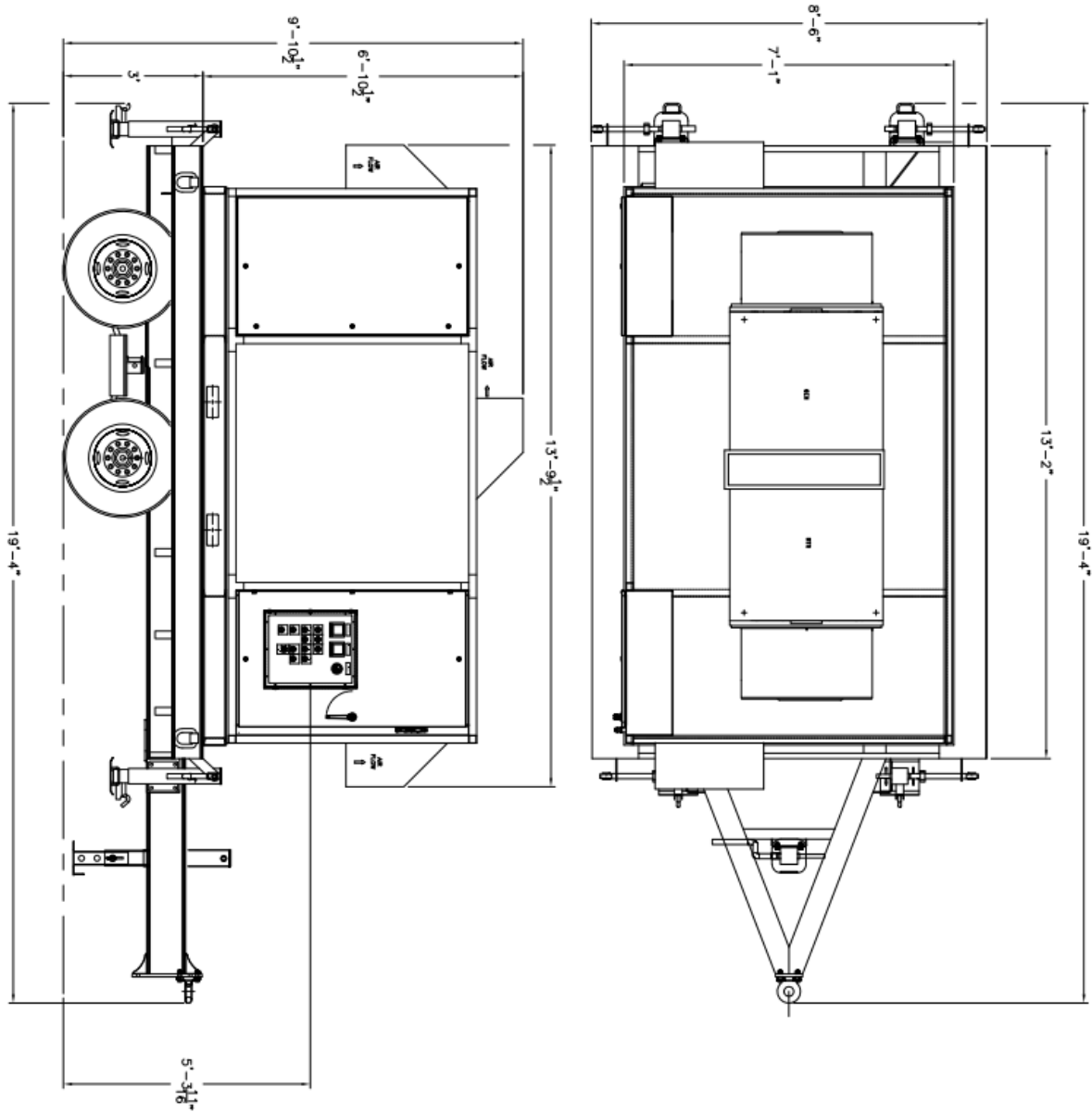


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Figure 1: Trailer Arrangement



NOTES



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