Hybrid Power Systems
Battery Chargers

2.0 kW Hybrid Power System

4.5 kW Hybrid Power System

Hybrid power systems allows the user to minimize their reliance on fossil fuel, employ renewable and alternative energy sources to maintain a highly reliable and resilient power source. Dewey Electronics offers a variety of diesel powered, compact, DC generators that form the core of our hybrid systems. These portable 28V DC generators are designed to optimize battery charging and utilizing our unique auto starting generator controllers they conserve fuel by as much as 70%.

The Hybrid Power System consists of the 28V DC current limiting, battery charging generator, a battery storage element and the ability to integrate solar, wind, or other renewable DC power source into the system. Battery chemistry can be selected to suit the user's application. Our system operates with standard lead acid, Hawker AGM or Li-Ion batteries. The addition of solar or wind generated DC power increases the fuel savings to the user.

The battery charging generator provides the proper voltage and current to efficiently charge a pair of Hawker Armasafe Plus AGM 12 volt batteries in a 24V DC configuration in under two hours. DC power is available from the batteries to supply the user's application. The batteries are automatically re-charged by the generator when the renewable power source is unavailable or cannot provide the needed current to sustain charging.

GENERATOR SIZE	BATTERY CONFIGURATION	CHARGING TIME
2.0 kW 28 V DC Current Limiting, Auto Start, Battery Charging	120Ah Hawker AGM (2x12V) 24 V DC	Less than 2 hours
2.0 kW 28 V DC Current Limiting, Auto Start, Battery Charging	300 Ah Li-Ion	Less than 5 hours
2.0 kW 28 V DC Current Limiting, Auto Start, Battery Charging	368 Ah AGM + Li-Ion	Less Than 5 hours
4.5 kW 28 V DC Current Limiting, Auto Start, Battery Charging	120Ah Hawker AGM (2x12V) 24 V DC	Less than 1 hour
4.5 kW 28 V DC Current Limiting, Auto Start, Battery Charging	300 Ah Li-Ion	Less than 2.5 hours
4.5 kW 28 V DC Current Limiting, Auto Start, Battery Charging	368 Ah AGM + Li-Ion	Less than 2.5 hours

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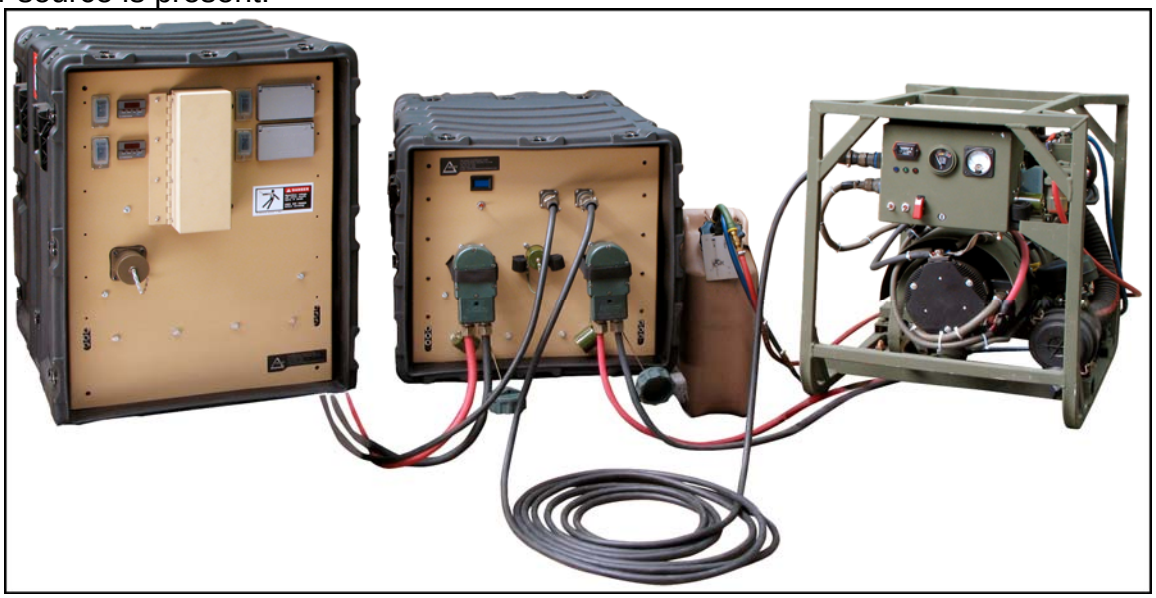
AC power can be provided by the addition of an Inverter to the system. Inverter outputs are available for 230V, 50 Hz or 120V, 60 Hz based on the user's needs. The inverter also allows the user to directly connect to shore/grid power and charge the batteries when this power source is present.



Standard configuration is based on our open frame, air-cooled generators. The batteries and inverter are packaged in portable rugged cases for transportation and use. Custom enclosures are also available for trailer, vehicle, or other applications.

Key features of our battery charging digital generator controller:

- Auto start by user command or battery voltage/state of charge
- Auto stop based on battery charge level
- Battery monitoring algorithm in firmware
- Performance parameters available on industry standard data bus for integration into user's systems
- User defined and adjustable parameters

The Battery Charging Generator features:

- Air-cooled, reliable engine
- Heavy fuel engine (DL-1, DL-2, or JP-8)
- Military design
- Simple maintenance
- Heavy duty alternator

Estimated Fuel Savings per Week

Generator Size	Battery Size	Average System Load	Fuel Savings Average	Fuel Savings w/ 400 Watts Solar Power
2.0 kW	368 Ah	300-400 Watts	15 gals ~ 50%	20 gals ~ 70%