# **MOBILE DC POWER SYSTEM**

**Custom Engineered for Maintenance and Emergency Backup** 

# In need of a Mobile DC Power Solution?

Perfect for substation maintenance, NERC compliance testing, and emergency back-up

 Facilitates NERC compliance for battery maintenance and system reliability
 "On Demand" mobile power designed to go where you need it
 100% factory engineered and built for product integrity
 Plug 'n play connections for immediate access
 Patent pending H<sup>2</sup> ventilation system



JF5041



### What is the Mobile DC Power System?

The Mobile DC Power System is a custom engineered, road-capable trailer designed for substation maintenance and emergency power applications. This system is equipped with battery chargers, batteries, ac and dc meters and controls, external power connections and ancillary safety equipment. "Custom engineered" means the ability to offer you a system designed to meet your specific requirements. We offer a host of options including an ac generator and load bank equipment to allow you to test battery capacity. Flexibility in design and versatility of use makes our Mobile DC Power System a "powerful" tool for maintenance and system reliability.

# How does the Mobile DC Power System solve my need for back-up power?

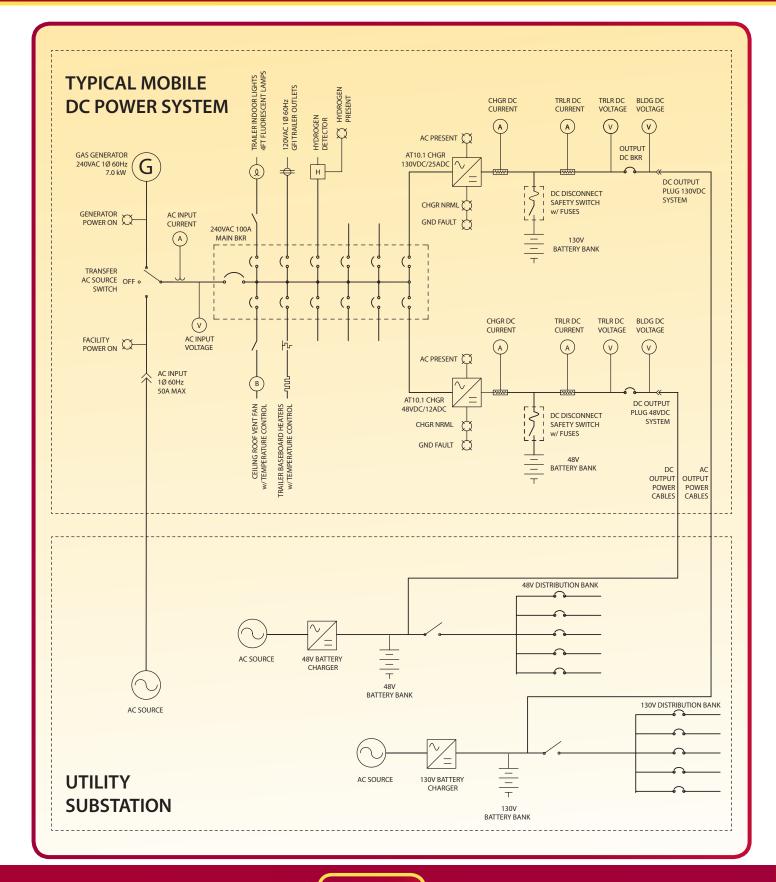
This mobile power unit acts as both an emergency back-up for site failures as well as a temporary power source when conducting required dc system maintenance. With all necessary power and safety equipment engineered and packaged in a "plug and play" fashion, the trailer offers a ready solution to quickly provide power for both planned and unplanned site outages. Industry demands for system reliability can be verified by allowing you to carry out critical procedures in accordance with NERC/FERC maintenance guidelines.

# How does the Mobile DC Power System function and why is it necessary?

The system is fully tested and operational upon start-up. External ac and dc power receptacles allow you to quickly energize and use this system on demand. Externally mounted control panels provide ac and dc metering, along with alarm indicators, to provide real-time diagnostics and power connections.



## SAMPLE ONE LINE DIAGRAM MOBILE DC POWER SYSTEM



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## STANDARD FEATURE HIGHLIGHTS



#### DC Annunciator Control Panel

External wall-mounted panel provides dc power diagnostics and external, weather-proof receptacle for making dc cable connections. Panel includes circuit breaker for dc output protection. DC voltmeters, dc ammeters and alarm indicators in mimic panel format offer quick analysis of dc system functions.



#### AC Annunciator Control Panel

Mounted adjacent to the dc output panel, this external wall-mounted panel offers ac power diagnostics including an external, weatherproof, twist lock receptacle for making ac power connections. Panel includes circuit breaker for ac input protection.



#### AT Series Battery Charger

Versatile microprocessor-controlled, SCR based battery charger designed for stationary power applications. Available in both single-phase and 3-phase ac inputs, with a variety of dc output voltage and current ratings.



#### Wire Raceway

All internal wiring routed and organized via wire raceway for ease of installation and organization.



#### Battery Racks

Our custom battery rack design accommodates a variety of battery configurations. Valve-Regulated batteries are recommended in these mobile systems to minimize the risk of electrolyte spillage from wet-cell type batteries while trailers are in transit.

#### DC Disconnects

Rated at 250Vdc with dc current rating from 30 to 1,200 Amperes. Ideal protection for isolation or battery maintenance and replacement applications. These wall-mounted devices are UL-approved.



#### System Documentation

A complete set of system start-up and equipment operating instructions are included with the Battery Material Safety Data Sheet (MSDS).

#### H<sup>2</sup> Venting

H<sup>2</sup> Gas ventilation accomplished by our patent pending two-step design. The "hip" roof design creates a dome effect directing any potential gas to the top of the ceiling. H<sup>2</sup> gas exits via two roof-mounted snorkel vents and a hydrogen sensor controlled ceiling fan.



Safety

Portable eye-wash station and fire extinguisher are included and pre-mounted for quick access. All internal trailer components are clearly labeled with engraved nameplates. Laminated system schematic mounted internally for system identification.



Cable Reels Heavy duty ball-bearing reels for ac and dc power cable storage.



## OPTIONAL FEATURE HIGHLIGHTS



#### NERC Compliant Load Testing

Optional dc power resistive load bank available for conducting NERC compliant battery discharge tests. Various sizes are available; please consult factory.



Curb Side Personnel door Allows quick and easy access to

Allows quick and easy access to trailer without the need to open rear doors.



#### Generator

Portable tongue-mounted gas generator with pad-lockable aluminum enclosure available for independent ac power source. Common sizes include 5 and 6kW. However, a variety of generator outputs are available. Please contact the factory for additional information.



#### Storage/Tool Box

Exterior trailer tongue-mount or interior wall-mount storage cabinet. Versatile steel box for storage of tools and spare parts. Exterior enclosure made of road worthy, rugged, diamond-plate aluminum designed to withstand the elements.



#### **Battery Spill Kit**

Industry standard clean-up kit consisting of neutralizing agent and personal protection gear for use in the event of battery electrolyte spillage.



#### Multiple Input Voltages

Trailers equipped with 240Vac, single-phase input. Optional 120/240Vac or 208/240Vac, single-phase inputs available.



#### DC-to-DC Converters Offer flexibility as an alternative

and charger for 24 or 48 Vdc as a source for continuous dc load requirements.



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#### **Climate Control**

Trailers can be equipped with thermostat controlled convection heating and/or optional roofmounted air conditioning based on application and climate requirements.

# COMPREHENSIVE TRAILER SYSTEM FEATURES

# STANDARD System Equipment Trailer Features

- Hydrogen detector with mitigation system
- AC power annunciator control panel
- DC power annunciator control panel
- Fused safety disconnect switch for battery system isolation
- AC distribution panel rated at 240Vac/100Aac with branch breakers
- AC power cable reel equipped with 75 ft of 4 wire SO #6 AWG cable
- DC power cable reels equipped with 75 ft of 3/0 AWG cable each positive (red) and negative (black) dc cable on reel
- First aid kit and eye wash station
- Fire extinguisher (10 lbs)
- Interior 120Vac lighting
- Ventilation fan, thermostat controlled
- External stainless steel ground plates welded to trailer
- 5-year standard battery charger warranty
- Complete set of electrical and mechanical drawings
- On-site system orientation and start-up services by factory personnel

- 100% steel frame construction with aluminum exterior
- Dual-axle with Torflex<sup>®</sup> Suspension
- Spray on blended polyurethane floor coating
- Pintle-hitch with adjustable pintle eye
- Rubber wheel chocks
- Limited 10-year trailer warranty
- Side-mounted air vents
- Rear stabilizing jacks for added stability
- Utility grade breakaway switch
- Customer specified tow vehicle connector
- Interior 12 Vdc lighting powered by tow vehicle
- External LED lighting
- Side hinged rear doors
- Trailer breakaway battery with trickle charger

Typical trailer weight, equipped with a 200AH battery, ranges from 5000-8000lbs (weights listed are approximate and may vary).

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### **OPTIONAL**

- Dual battery charger configuration to provide redundancy
- Additional 120/240V single-phase trailer ac inputs
- Battery spill
   containment system
- Tongue-mounted, gaspowered ac generator
- Curb-side personnel door (only available with 14 foot trailer option)
- Storage/Tool Box mounted on trailer tongue or interior wall mount
- DC-to-DC Converters\*
- Dual battery systems
- Thermostat controlled roof-mounted air conditioner
- Thermostat controlled, convection heater
- Battery load bank
- Small interior work surface
- NiCad Battery Bank

\* Generates 24 or 48 Vdc from 130V Battery. Tapping the 130V battery is not recommended.

# HOW TO DESIGN AND SPECIFY YOUR MOBILE DC POWER SYSTEM

TR											
A	В	С	D	E	F	G	Н	J	K	L	М
STANDARD FEATURES				ADDITIONAL FEATURES							

	DESCRIPTION	CODE	FEATURE		DESCRIPTION	CODE	FEATURE		
Α	SERIES	TR	MOBILE DC			Н	HEATING		
			POWER SYSTEM	G	HVAC	С	AIR CONDITIONING		
	TRAILER LENGTH	08	8 FOOT TRAILER	0	IIVAC	В	BOTH HEATING &		
В		10	10 FOOT TRAILER				AIR CONDITIONING		
		14	14 FOOT TRAILER	н	GENERATOR	Х	NONE		
	OUTPUT VOLTAGE I	024	24V			1	5 KW		
С		048	48V			2	6.5 KW		
		130	130V		LOAD BANK	L	YES		
	OUTPUT VOLTAGE II	XXX	NONE	J		Х	NO		
D		024	24V	к	CURB SIDE PERSONNEL DOOR (only available with 14 foot trailer option)	D	YES		
		048	48V	n.		Х	NO		
		130	130V		TOOL STORAGE	Т	YES		
E	CONVERTER	С	YES			Х	NO		
		Х	NO	м	BATTERY SPILL CONTAINMENT	S	YES		
F	INPUT VOLTAGE	120	120V		BATTERT SPILL CONTAINMENT	Х	NO		
		204	240V	*No	*Note: Our standard battery charger offering is an AT10.1 25Adc output for a 130Vdc battery and a 12Adc output for 24/48 Vdc batteries.				
		MUL	120/208/240V						

### **BATTERY SELECTION**

Battery Selection is a unique choice usually determined by customer performance, current supplier, and past experiences.

We can accommodate virtually any type of battery. Our racking system and spill containment (if required), is custom designed based on battery type and configuration.

We recommend using a **Valve Regulated Battery**. Additionally, we can assist you in specifying batteries if desired.

\*Note: Physical battery dimensions may dictate trailer size.

### Specify Your Battery

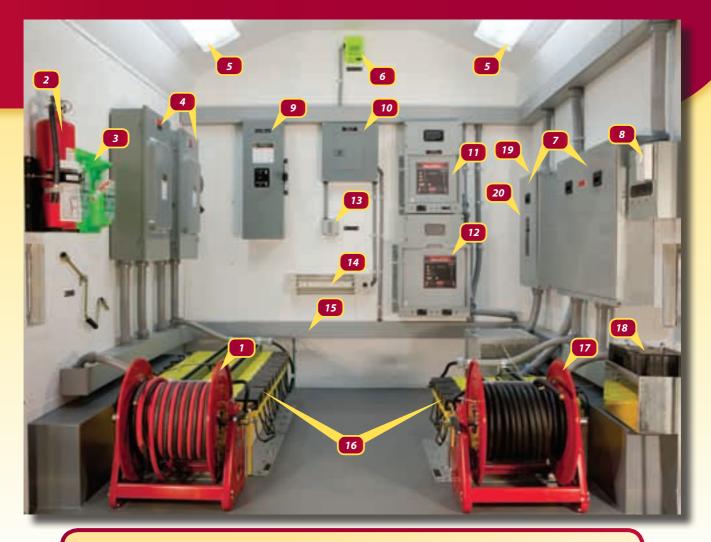
Battery Type:

No. of cells:

### Your Tow Vehicle Electrical Connection Type

Please specify your tow vehicle's 12Vdc electrical connection to the trailer for brake and signal light operation.





- DC cable reel 1.
- Fire extinguisher (10 lbs.) 2.
- Portable eye wash 3.
- 4. Battery disconnect
- 5. Fluorescent lighting
- 6. Hydrogen Sensor
- AC/DC control panels 7.
- 8. Environmental
  - **Controls & Switches**
- 9. Generator Transfer Switch
- 10. AC distribution panel
- 11. 48V battery charger
- 12. 130V battery charger
- 13. GFI Service outlet
- 14. Convection Heater

- 15. Wire Raceway
- 16. VRLA Battery
- 17. AC cable reel
- 18. Rubber wheel chocks
- 19. Mounted Engraved System
- Schematic (not visible) 20. Wall mounted manual pocket (not visible)

#### Other Products Available from HindlePower:

AT10.1 Microprocessor Battery Charger	JF5006
AT30 Microprocessor Battery Charger	JF5018
AT Series Options & Accessories	JF5020
AT Series Communications Module	JF5014
AT-DC Series Distribution Panel	JF5032

SCR/SCRF Series Utility Battery Charger JF5010 **UMC Universal Maintenance Charger** JF5008 JF5007 **Single Cell Charger EPIC Console** JF5043 **Best Battery Selector** JF5048

This product distributed by:



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