



科学材料站
SCI Materials Hub

DEFENDER SERIES

D350 FUEL CELL

PORTABLE POWER!



FEATURES

- OPERATES ON LOCALLY AVAILABLE PROPANE FUEL — AVAILABLE WORLDWIDE!
- SIGNIFICANT WEIGHT ADVANTAGE OVER TRADITIONAL PORTABLE BATTERY OPTIONS
- SPECIFICALLY DESIGNED FOR EXPEDITIONARY USES
- FUEL CONSUMPTION RATE DEPENDENT ON LOAD CONDITIONS TO MAXIMIZE MISSION DURATION
- SHOCK RESISTANT

RELIABLE PORTABLE POWER

The D350 system is a backpack-sized 350 Watt Solid Oxide Fuel Cell (SOFC) power generator fueled by propane. The unit electrochemically converts propane into electrical energy. This system is an ideal replacement for additional batteries and battery chargers; especially in advanced ISR or expeditionary warfare applications.

The high energy density of propane results in a significant tactical advantage for the D350 relative to rechargeable batteries. Example: 11 batteries weighing 25 pounds will produce 2.2kWh of energy while a D350 and 13 pounds of propane, also weighing 25 pounds, will produce 13kWh of energy!

SYSTEM DESCRIPTION

Unlike internal combustion generators, which have large moving assemblies and a significant noise signature, the only moving parts in the D350 are the small internal cooling fans. This gives the D350 the noise signature of a computer. The user interface is built into the tethered battery tray (two BB-2590 slots) which can be used as a BB-2590 battery charger and is equipped with a five-way binding post at 14.4VDC for specific applications. A push of a button commands the system to turn on and provide power in a wide range of environments.

APPLICATIONS

- Expeditionary activities
- Remote battery charging
- Unmanned aerial vehicles
- Unmanned ground vehicles
- Unmanned ground sensors



TECHNICAL DATA

POWER

Power Output	350W nominal / 400W peak
Output Voltage	28VDC
Specific Power	70W/kg

ENVIRONMENTS

Operating Temperature	-20 to 55°C
Storage Temperature	-32 to 71°C
Humidity	5%-95%
Operating Altitude	Up to 15,000ft
Non-detect Range	50m
MTBF	30 mission cycles
Rain	Tolerant to light rain (1/4" per hour)
Dust and Sand	Tolerant to fine dust

OPERATION

Weight	5.1kg
Dimensions	6" H x 16" L x 8" W
Fuel	Propane/LPG
Fuel Consumption	134g/hour at 350W; 90g/hour at 180W
Exhaust Temperature	100°C
Noise	60dBA nominal / 70dBA peak at 3ft
Start-up Time	15 minutes
Run Hours	600 hours

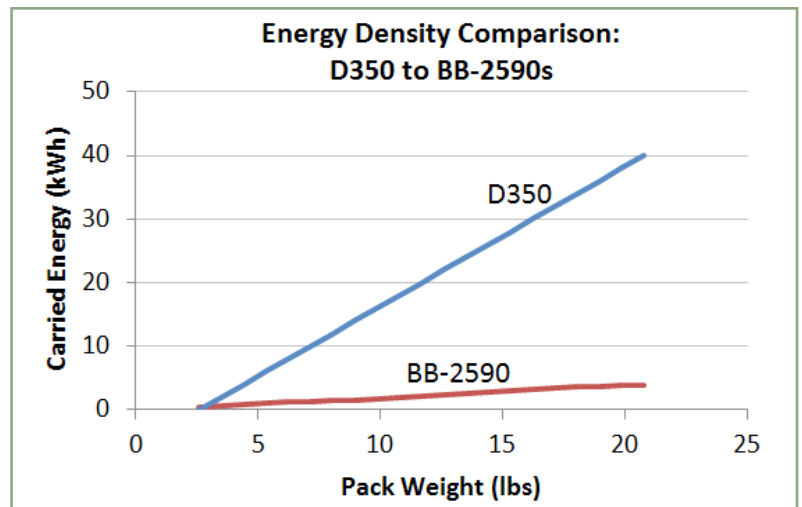


Included

- 2-bay BB-2590 battery tray
- 5-way binding post auxiliary power output cable
- Propane fuel lines
- 20lb propane filter
- POL connection

Accessories

- 5V USB power cable with 4 USB ports
- 12VDC cigarette lighter cable
- 120VAC adapter cable with 2-plug output
- Alternate voltage configuration cables
- Alternate form-factor battery charging
- Hybrid start-up battery cable
- Thales eMUBC/MUBC interface cable



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