Dragon Q Energy BESS

7.5 kWh - 48VDC - 154 Ah

Dragon Q Energy

About us

Dragon Q Energy (DQE) is a battery energy storage innovator based in Santa Barbara, CA focused on pioneering robust, safe, and efficient Battery Energy Storage Systems (BESS) that redefine how energy is stored, installed and managed. DQE's core technology innovations centers around a unique direct-burial system design that optimizes thermal management via geothermal cooling, operational safety, and installation efficiency, positioning it as a leader in energy storage for the battlefield .

Safety:
Our 7.5 kWh battery pack features multiple layers of protection designed to contain, mitigate, control, and direct thermal runaway events at both the cell and pack levels. Our simplified design can contain smoke and hazardous gases while venting pressure through engineered pathways to control the event, ensuring that even in worst-case scenarios, the system does not explode or deflagrate.

Direct Burial Thermal Management:
By installing the BESS underground, our design minimizes thermal exposure and harnesses the regulated temperatures below the surface of the earth to ensure the battery stays a consistent temperature. This burial approach not only keeps the system discreet but also enhances safety and reduces the likelihood of external threats from war.

Enhanced Efficiency: Dragon Q Energy's direct burial BESS uses passive thermal regulation to maintain optimal battery temperature, eliminating the need for HVAC systems and reducing both OPEX and CAPEX. This design improves efficiency, extends cell life, and minimizes energy loss, offering a streamlined, cost-effective solution compared to conventional containerized systems.

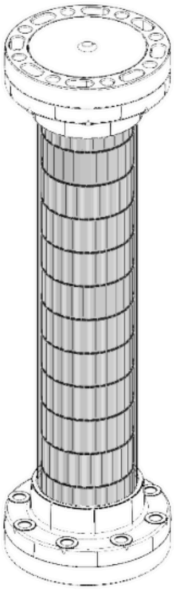
Scalable: Our technological approach and pack architecture are scalable from moderate kWh ranges to 1 MWh capacity, capable of powering operating bases, submarine and marine assets and classified data centers discreetly buried underground.

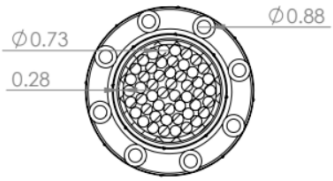
Military Applications

- Small troop encampments
- Datacenters
- Telecom & 5G Infrastructure
- Drone & UAV Support
- Surveillance and Monitoring

Data Sheet

Dragon Q Energy





Performance Specifications

Chemistry	Li-Ion (NMC)
DC Voltage - 14S (Nominal)	51.8VDC
Cell Voltage (Nominal)	3.7V
Cell Capacity	3.2Ah
Pack Capacity - 48P	154Ah
Total Energy	8000Wh
Useable Energy (Derated)	7500Wh
Overcurrent Protection Device	91A
Internal Battery DC Voltage	51.8V
Internal Battery Capacity, Amp/hours (Ah)	182Ah
Temperatuture Regulation	Passive Geothermal
System Round Trip efficiency	0.99
Battery Management System (BMS)	Active Balancing, UART/CAN Bus
Warranty	10 Years*

Safety Specifications

Pack Thermal Runaway (TR) Mitigation	Positive Argon pressure keeps TR in cell casing. Hermetic environment starves initial fire of oxygen*
Pack TR Propagation Prevention	Pressurized Argon extinguish flames from ruptures cells*
Primary TR Control (Retention)	Pack can retain smoke, gases, chemicals of cell TR, while venting the pressures to prevent pack explosion and deflageration*
Secondary TR Control (Retention)	Pack can retain smoke, gases, chemicals of 2nd cell runway, while venting the pressures to prevent pack explosion and deflageration*
Tirtiary TR Control (Release)	Pack can release smoke, gases, chemicals of cell TR overboard though a port and customer conduit, to prevent container explosion and deflageration*

Environmental Information- Direct Burial

Pack Operating Temperature (Max Permissiable)	-20°C to 55°C (-4°F to 131°F) Discharge 0°C to 45°C (32°F to 113°F) Charge
Pack Operating Temperature (Max Cycle Life)	0°C to 30°C (32°F to 86°F) Charge/Discharge
Recommended Tempurature (Air)	-73°C to 76°C (-100°F to 170°F)
Recommended Tempurature (Soil)	0°C to 37°C (32°F to 100°F)
Humidity	Up to 100%, condensing, standing water
Storage Conditions	0°C to 30°C (32°F to 86°F) 0% to 100% Relative Humidity, condensing State of Charge (SoC): 20% - 30% (Initial)
Maximum Elevation	18,288 M(60,000 ft)* Max Civial Aviation Altitude (Space, lunar and mars specs avaliable)
Environment	Underground, (Indoor & outdoor cooled)
Pack Enclosure Type	C1D2/ATEX (Anticipated)
Ingress Rating	IP68 (Pack and BMS Enclosure)*
Wet Location Rating	Yes

Compliance Information

Certifications	IEC62133-2 UL 1973 UN38.3 IEEE 1547 UL174 UN1642, IEC61960 *
Emissions	FCC Part 15 Class B, ICES 003 *
Environmental	RoHS Directive 2015/863/EU *
Seismic	AC156, IEEE 693-2018 (High) *

Mechanical Specifications

Height	39.7"/100.8cm
Flange Diameter	11"/28cm
Container Diameter	6.5"/16.5 cm
Weight	87 lbs/39.5 kg
Mounting Options	Direct Burial, Vault, Interior
Bolt Pattern	9.5"

*Q1 2025