Corvus Blue Whale

The Corvus Blue Whale is ideal for large vessels or applications that require a large amount of energy. The design is a result of insights gained from having the largest global base of installed ESS and industry-leading research and development.

The Blue Whale design is optimized for energy density and incorporates the unsurpassed safety features of the industry-leading Corvus Orca ESS. The product has recently been optimized to provide increased energy capacity, higher volumetric energy density and better cycle life than its predecessors.

Applications

The Corvus Blue Whale ESS is designed for use in large vessels and large installations (>10MWh total system energy) where the operational profile calls for slow charge and discharge rates and requires the ability to sail emission-free over longer periods of time, including during emissions-free port stays. Blue Whale is ideal for applications that require a large amount of energy at a cost-effective kWh price.

Typical Vessel Types:

- Cruise Ships
- Ro-Ro/Ro-Pax
- Yachts
- Merchant Vessels
- Workboats
- Inland Vessels

Features

- Industry leading volumetric and gravimetric room energy density
- Designed for voltages up to 1120 VDC
- Low installation and commissioning time
- Very cost-efficient for large installations
- Enhanced reliability with contained power connections
- Weight and volume reduced ~30% and ~50 % compared to Corvus Orca ESS
- Flexible and modularized design
- Service aisles optional
- Passive single-cell Thermal Runaway protection
- Scalable capacity and voltage according to vessel requirements
- Industry-proven Battery Management System (BMS)
- Remote monitoring capabilities
- Enhanced EMI immunity design for maritime environments

Technical Specifications | Corvus Blue Whale ESS

Performance Specifications	
C-Rate - Peak (Discharge / Charge)	1C / 1C for 20 minutes
C-Rate - Continuous (Discharge / Charge)	0,7C /0,7C
System Specifications	
Battery Cell Chemistry	Lithium Iron Phosphate
Single Module Size / Increments	48.23 kWh / 80 VDC
Single Module Capacity	628 Ah
Single Pack Range	336-5472 kWh / 560 - 1120 VDC
Module Dimensions	1165 x 905 x 238 mm (l x w x h)
Module Weight	395 kg
Module Volumetric Energy Density	192 Wh/l
Module Specific Energy	122 Wh/kg
Safety Specifications	
Thermal Runaway Anti-Propagation	Passive cell-level thermal runaway isolation with exhaust gas system
Fire Suppression	Per SOLAS, class and Corvus recommendation
Disconnect Circuit	Hardware-based fail-safe for over-temperature and over-voltage
Short Circuit Protection	Fuses included on the module and string level
Emergency Stop Circuit	Hard-wired
Ground Fault Detection	Integrated
Disconnect Switchgear Rating	Full load
General Specifications	
Class Compliance [Pending]	Lloyd's Register, Bureau Veritas, ABS
Type Approval [Target Q4 2025]	DNV, Lloyd's Register
Ingress Protection	System: IP44
Cooling	Forced air

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