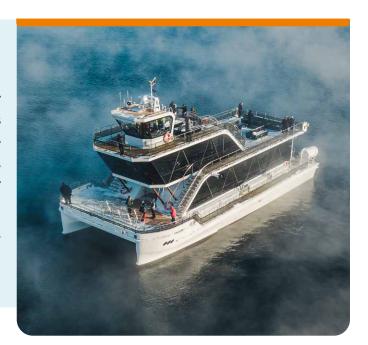
# **Corvus Dolphin Energy NxtGen**

The Dolphin Energy NxtGen ESS is specifically designed for lightweight applications. It combines outstanding energy density and a reasonable power density with the highest level of safety, setting new industry standards for maritime energy storage systems.

The high-energy, compact, rack-free building blocks and the decoupling of voltage and height allow for high flexibility in stacking and full utilisation of available battery room space.



## **Applications**

Dolphin Energy NxtGen is ideal for ships with long, slow charges and discharges where lightweight is essential.

## **Typical Vessel Types:**

- Tourist vessels
- Canal boats
- Yachts

## Sightseeing vessels

Ferries

#### **Features**

- Low C-rate for slow charge and discharge
- Low weight
- Designed for voltages up to 1200 VDC
- Flexible installation
- Low life cycle cost
- Easy and safe plug and play connections
- Very flexible and modularized design
- 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

# **Corvus Energy Safety Innovations**

Passive Single-cell-level Thermal Runaway (TR) Isolation

- · True cell-level thermal runaway isolation
- TR does not propagate to neighbouring cells
- · Isolation NOT dependant on active cooling



# **Technical Specifications | Corvus Dolphin Energy NxtGen**

#### **Performance Specifications**

C-Rate - Peak (Discharge / Charge) 1,0C / 1,0C for 10 seconds

C-Rate - Continuous (Discharge / Charge) 0,5C / 0,5C

## **System Specifications**

Single Module Size / Increments 8,2 kWh / 50 VDC

Single String Range  $33 \pm 197 \text{ kWh} / 130 \pm 1205 \text{ VDC}$  Max Gravimetric Density - **String**  $168 \text{ Wh/kg} \mid 5,96 \text{ kg/kWh}$ 

Max Volumetric Density - **String** 212,5 Wh/l

#### **Example Pack - 24 Modules**

Energy 197 kWh

Voltage Max: 1205 VDC | Nom: 1046 VDC | Min: 864 VDC

Dimensions Height: 2775 mm | Width: 500 mm | Depth: 666 mm | 1163 kg

#### **Example System - 30 Strings**

Energy 3941 kWh

Voltage Max: 797 VDC | Nom: 697 VDC | Min: 576 VDC

Dimensions Height: 1975 mm | Width: 3980 mm | Depth: 4026 mm<sup>1</sup> | 23867 kg

#### **Safety Specifications**

Thermal Runaway Anti-Propagation Passive cell-level thermal runaway isolation

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 cell level

Emergency Stop Circuit Hard-wired
Ground Fault Detection Integrated
Disconnect Switchgear Rating Full load

## **General Specifications**

Class Compliance DNV, Lloyds Register, Bureau Veritas <sup>2</sup>

Ingress Protection IP55

Cooling Forced air

Vibration and Shock UNT38.3, DNV 2.4 EMC DNV-CG-0339

<sup>1</sup> Assuming four stacks deep

<sup>2</sup> Bureau Veritas project approval

