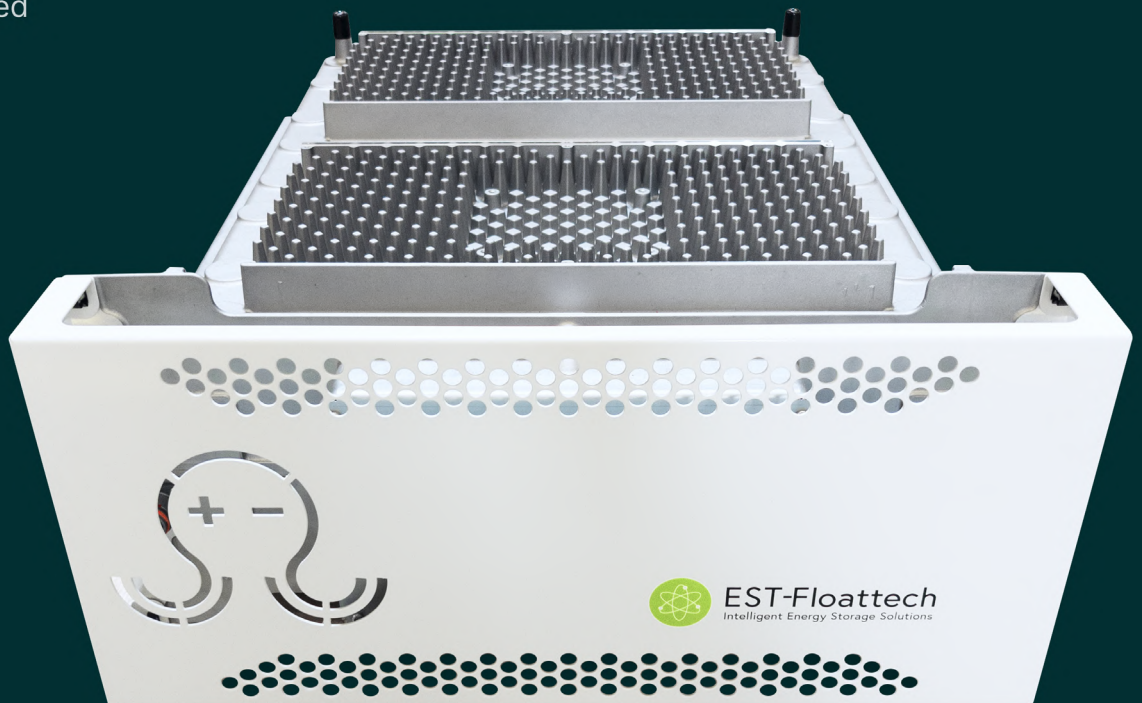




Octopus[®] Series

Modular battery systems for
zero-emission shipping

- ✓ One platform, easy to integrate
- ✓ Scalable to your needs
- ✓ Fully certified



EST-Floattech
Intelligent Energy Storage Solutions



EST-Floattech
Intelligent Energy Storage Solutions

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Design it right, deliver it right, keep it running

EST-Floattech delivers more than a battery system. We support you from the first concept through integration, commissioning and operation, helping reduce project risk and keep your ESS performing throughout its lifetime.

From first concept to years of reliable operation

1

Design it right

Make the right system choices from the start.

- Right-sized ESS for vessel profile, charging windows and power demand
- Clear insight into TCO, energy use and lifecycle value
- Early alignment on PMS/EMS, safety and integration requirements

2

Deliver it right

Reduce project risk and simplify integration.

- Project assurance from engineering through commissioning
- Clear interfaces, documentation and responsibilities
- Support for integration, class compliance and commissioning

3

Keep it running

Keep your system reliable throughout its lifecycle.

- Remote monitoring and system health insights
- Service, troubleshooting, spare parts and upgrades
- Lifecycle support for uptime, performance and long-term value



One platform, four battery types

The Octopus platform gives you the flexibility to use the battery technology that best fits your vessel, while keeping the BMS, interface and integration concept consistent. This makes it easy to adapt, scale and upgrade your ESS as requirements and battery technologies evolve.

- ✓ One platform, consistent interface
- ✓ Flexible across battery technologies
- ✓ Scalable from kWh to multi-MWh
- ✓ Future-ready for new cell technologies



Octopus Platform

• one BMS, every cell technology

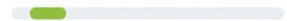


OCTOPUS · LFP

LFP 12

Proven & safe · Long cycle life

Charge & discharge
0.2 – 0.6 C



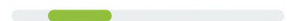
OCTOPUS · NMC

Lite 11.2

Lightweight · High energy density

Standard or Ventilated Racking

Charge & discharge
0.4 – 1.1 C



OCTOPUS · NMC

High Energy 11.2

High energy · Extended range

Passive or Active

Charge & discharge
0.5 – 2 C



OCTOPUS · NMC

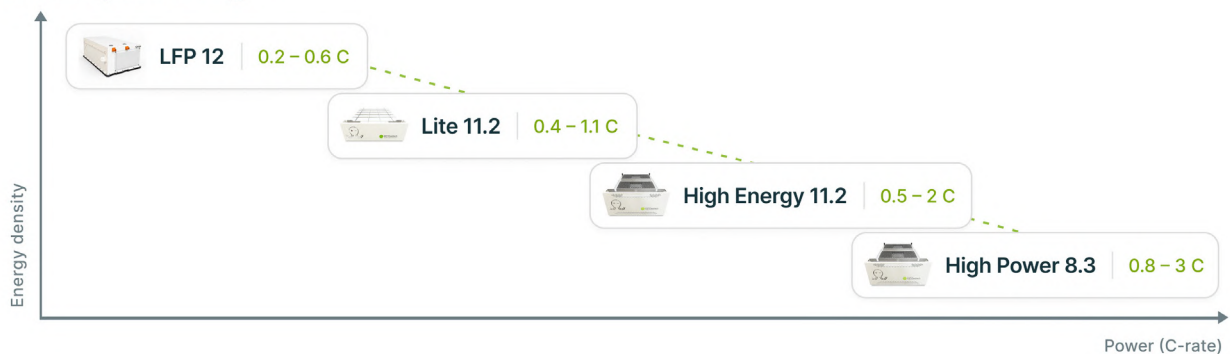
High Power 8.3

High power · Peak performance

Charge & discharge
0.8 – 3 C



Portfolio positioning



From one module to the whole vessel

From individual battery modules to multi-MWh marine ESS, the Octopus platform combines scalable hardware with a European-developed, cyber-secure BMS and software platform, keeping control, integration and the vessel interface consistent as the system grows.

- ✓ One consistent interface to the vessel PMS / EMS
- ✓ Scalable from a single string to multi-MWh systems
- ✓ Secure remote monitoring, diagnostics and support



1 Battery module

Intelligent control starts at module level.

- Cell voltage & temperature monitoring
- Current monitoring
- Continuous cell balancing



2 Battery string

Up to 18 modules form one independently protected battery string.

- Integrated contactors, fusing & pre-charge
- Real-time voltage, current and charge/discharge limits
- Redundant hardware & software fail-safe protection



3 System controller

Multiple strings operate as one unified battery system.

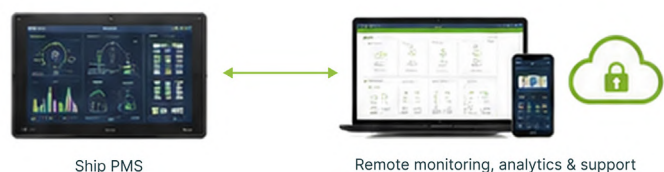
- One Modbus TCP interface to PMS / EMS
- Up to 10 String Controllers per System Controller
- Aggregated SOC, current, power, energy and capacity



4 Remote services

Connected support throughout the system lifetime.

- Remote monitoring & system insights
- Diagnostics and troubleshooting support
- Secure VPN connectivity
- Service and lifecycle support



LFP 12

Cost-efficient energy for high-capacity marine applications.

Octopus LFP 12 is designed for applications where energy capacity, long discharge duration and cost efficiency are key. It is well suited to vessels that charge over longer periods, such as overnight, and discharge steadily during operation.



Why LFP 12

- ✓ Cost-effective LFP chemistry for high-capacity systems
- ✓ Optimised for moderate charge and discharge rates
- ✓ Well suited to deep discharge cycles
- ✓ Shared Octopus control platform

Typical applications

-  Fully electric
-  Hotel load

Specifications

Chemistry	LFP
Trade capacity	12 kWh
Capacity	237 Ah
Voltage	42.4 – 57.6 V
Charge & discharge	1C / 230 A
Module dimensions	600 × 440 × 240 mm
Module	83 kg
Cooling options	Racking air cooled
Type approval	DNV

Lite 11.2

Slim by design. Balanced by performance.

Octopus Lite 11.2 combines NMC energy density with a slim, low-profile module design. It provides a balanced combination of energy and power for vessels where installation space is limited and flexible operation is required.



Why Lite 11.2

- ✓ Slim, low-profile design for tight installations
- ✓ Balanced energy and power capability
- ✓ NMC chemistry supports reliable SoC estimation
- ✓ Shared Octopus control platform

Typical applications

-  Fully electric
-  Spinning reserve
-  Hotel load
-  Peak shaving

Specifications

Chemistry	NMC
Trade capacity	11.2 kWh
Capacity	216 Ah
Voltage	44.8 – 56.7 V
Charge & discharge	1.1C / 240 A
Module dimensions	714 × 574 × 176 mm
Module weight	85 kg
Cooling options	Passive & Racking air cooled
Type approval	DNV, BV

High Energy 11.2

High energy with the power to handle dynamic operation.

Octopus High Energy 11.2 combines high energy density with strong power capability. Its NMC chemistry supports accurate SoC estimation and stable current sharing between parallel strings, making it a flexible solution for vessels with varying energy and power demand.



Why High Energy 11.2

- ✓ High energy density with strong power capability
- ✓ Accurate SoC estimation across the operating range
- ✓ Stable balancing between parallel strings
- ✓ Up to 2C for demanding duty cycles

Typical applications

-  Fully electric
-  Performance boost
-  Spinning reserve
-  Hybrid propulsion
-  Peak shaving

Specifications

Chemistry	NMC
Trade capacity	11.2 kWh
Capacity	216 Ah
Voltage	44.8 – 56.7 V
Charge	1.5C / 330 A
Discharge	2C / 430 A
Module dimensions	714 × 574 × 248 mm
Module weight	90 kg
Cooling options	Passive/Active & Racking air cooled
Type approval	DNV, BV

High Power 8.3

Maximum power for fast-cycling marine applications.

Octopus High Power 8.3 is designed for high-power and fast-cycling applications where rapid charge and discharge and peak power capability are essential. Its NMC chemistry combines low impedance with predictable SoC behaviour and strong parallel-string performance.



Why High Power 8.3

- ✓ Highest power capability in the Octopus range
- ✓ Designed for high-current, fast-cycling duty
- ✓ Reliable SoC estimation and string balancing
- ✓ Shared Octopus control platform

Typical applications

-  Fully electric
-  Performance boost
-  Spinning reserve
-  Mission equipment
-  Peak shaving

Specifications

Chemistry	NMC
Trade capacity	8.3 kWh
Capacity	160 Ah
Voltage	44.8 – 56.7 V
Charge & discharge	3C / 480 A
Module dimensions	714 × 574 × 248 mm
Module weight	89 kg
Cooling options	Passive/Active & Racking air cooled
Type approval	Pending

Detailed comparison

Each Octopus module offers a different balance of energy, power and cycle performance. The right choice depends on the vessel's operating profile, charging strategy and required performance, while all solutions share the same Octopus platform and vessel interface.



LFP 12



Lite 11.2



High Energy 11.2



High Power 8.3

Spec

Chemistry	LFP	NMC	NMC	NMC
Cell type	Prismatic	Pouch	Pouch	Pouch
Trade capacity	12 kWh	11.2 kWh	11.2 kWh	8.3 kWh
Capacity	237 Ah	216 Ah	216 Ah	160 Ah
Operating voltage	42.4 – 57.6 V	44.8 – 56.7 V	44.8 – 56.7 V	44.8 – 56.7 V
Min – max voltage	40.0 – 59.2 V	43.4 – 58.0 V	43.4 – 58.0 V	43.4 – 58.0 V

Performance & Limits @ end of life 80% SoH

Continuous (24/7)	0.2C / 45 A	0.4C / 85 A	1C / 210 A	1.6C / 260 A
Full cycle (charge & discharge, 70% DoD)	0.3C / 75 A	0.8C / 170 A	1C / 225 A	1.5C / 250 A
Max. discharge	0.6C / 145 A 20 min	1.1C / 240 A 35 min	2C / 430 A 13 min	3C / 480 A 10 min
Max. charge	0.6C / 145 A 20 min	1.1C / 240 A 27 min	1.5C / 320 A 18 min	3C / 480 A 8 min

Mechanical specifications

Dimensions L × W × H (mm)	600 × 440 × 240	714 × 574 × 176	714 × 574 × 248	714 × 574 × 248
Module weight	83 kg	85 kg	90 kg	89 kg
Ingress protection	IP65	IP65	IP65	IP65

Containerized ESS, configured for your vessel

Available with



High Energy 11.2



High Power 8.3



LFP 12



Lite 11.2

For projects where a ready-to-integrate battery room is preferred, the Octopus Series can be delivered as a complete containerized ESS. Battery system, power conversion, thermal management, safety systems, control and vessel interfaces can be combined in one engineered package, configured around the vessel and project requirements.

- ✓ Complete marine battery room
- ✓ Integrated safety, cooling and control
- ✓ Engineered around vessel and class requirements

Flexible configuration

- 10–40 ft container concepts
- Battery-only or integrated ESS configurations
- Layouts optimized for available space, access and serviceability
- Suitable for retrofit and newbuild projects

Integrated auxiliaries & safety

- HVAC and battery thermal management
- A60 insulated enclosure
- Fire detection and suppression
- Smoke, heat and gas detection
- Thermal runaway off-gas system
- Emergency stops and leakage monitoring

Control & vessel interfaces

- Octopus BMS with PLC-based system control
- Local HMI and secure remote diagnostics
- Modbus TCP interface to PMS / EMS / IAS
- Battery-only, DC/DC or AC/DC integration concepts
- Defined DC, AC and auxiliary vessel interfaces



Modular racking system

The Octopus rack is a scalable racking system for the safe installation of Octopus modules. Column heights can be mixed to fit the available space, and every rack has an integrated off-gas duct that guides gases away in the unlikely event of a thermal runaway.

NMC

Octopus Lite · High Energy · High Power
— fully modular

- Any module can belong to any string, regardless of its position in the column
- Several strings can share one column
- Standard racks up to 9 modules high for High Energy and High Power, up to 12 for Lite
- Optional forced-air cooling



LFP

Octopus LFP — one string per column group

- All modules of a string sit in the same column or in adjacent columns
- A string can be split over several columns, for example 12 modules as 2×6
- Column heights can differ within one installation
- Forced-air cooling built into the rack



Why EST-Floattech

More than a battery supplier

EST-Floattech has been building maritime energy storage for more than fifteen years, with over three hundred projects delivered. We reduce technical risk, simplify integration and keep the system performing throughout the life of the vessel.

✓ One partner, start to finish

Design, delivery and service sit with one team. From the first concept to years of operation.

✓ Engineering, not just supply

We do the integration work with you: interfaces, commissioning and the documentation that goes with it.

✓ Class and certification support

We prepare the drawings, interface descriptions and test documentation, and support the submission to DNV, Bureau Veritas, Lloyd's Register or RINA.

✓ Honest sizing up front

We size on your route and duty profile, and show expected performance, lifetime and cost of ownership before you commit.

✓ Our own service organisation

A dedicated service team — still servicing packs on vessels more than ten years after installation.

✓ Responsible to the end of life

When a system retires we look for a second use first, and hand over to a qualified recycler when that is not possible.





15+

Years of experience

300+

Successful projects

166M

Liters of diesel saved

600M+

kg CO₂ emissions avoided



SEE OUR PROJECTS

www.est-floattech.com/projects

Scan the code to see the vessels we have equipped,
from inland pushers to sea-going ferries.



Question? Call us!

Whether you are a system integrator, shipyard, design agency or ship owner, we help you understand, choose, purchase and install the right battery system.

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