

eCSOV OUTLINE SPECIFICATION



electric-Commissioning Service
Operation Vessel

BIBBY
MARINE LIMITED



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A mission to decarbonise offshore wind

While offshore wind delivers substantial carbon savings, the sector still generates emissions, particularly from Service Operation Vessels (SOVs) that burn fuel oil. As global offshore wind capacity grows, these lifecycle GHG emissions risk increasing, unless cleaner alternatives are adopted.

Our E-Mission Zero highlights the role that hybrid-electric vessels, such as Bibby Marine's forthcoming electric-Commissioning Service Operation Vessel (eCSOV), can play in reducing fuel consumption and cost, cutting operational emissions, and improving the long-term sustainability and cost-effectiveness of wind projects.

It's Bibby Marine's belief that reducing the sector's environmental impact must go hand in hand with improving project bankability and long-term performance. By investing in viable, scalable technologies available today, E-Mission Zero seeks to help offshore wind evolve into a cleaner, more resilient sector, ready to meet both climate goals and exceed commercial demands.

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Zero-emission electric CSOV

Designed from the ground up for zero-emission operations:

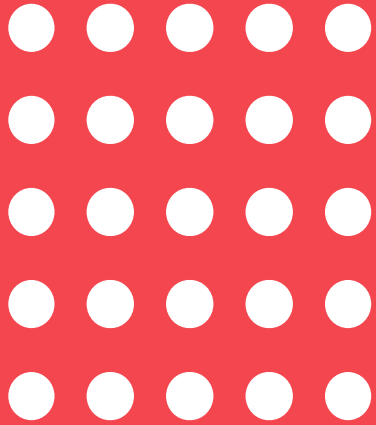
- Large 24.4MWh LFP battery, with a DC power system
- DP2 capability, with closed bus-tie qualifier
- Offshore charging ready
- Methanol fuel system (Commissioned and tested)
- Premium accommodation and outfitting
- Best-in-class mission equipment
- 'Digital ready' with AI integration.



Setting a new benchmark in the offshore Walk-to-Work market.

Delivering unmatched reductions in emissions and fuel consumption.

Equipped with a market-leading battery system and a methanol fuel system, it will be the world's first truly zero-emission CSOV, capable of operating on battery power alone for extended periods.



Key features



Purpose designed dual fuel methanol battery hybrid vessel designed for maximum efficiency and redundancy

Spacious, high-end accommodation for 120 personnel in 84 cabins, certified to DNV Comfort Class COMF (V2, C2).

Large working deck and spacious warehouse with side and top access via hydraulic doors/hatches.

DP2, with closed BUS notation "DYNPOS AUTR-CB" and DC Switchboard solution.

Methanol fuel system

(Installed & commissioned), acc. DNV "LFL Fuelled" notation with two large Wärtsilä dual fuel fixed speed engines for flexible operations.

Large 24,400 kWh LFP ESS

Divided into a three-split system, with offshore and onshore charging capabilities. Full Kongsberg propulsion package, featuring Rim Drive propulsion units for optimal efficiency.

Advanced mission equipment:

- SMST 3D motion compensated gangway
- SMST 3D motion compensated offshore crane 10Te, upgradable to 40Te subsea AHC.

Large Helideck, "T" value - 12.6Te, "D" Value - 21.0m (Sikorsky S-92).

Future-ready, with provisions for:

- Prepared for hybrid daughter craft integration
- Prepared for ROV integration.



Helideck

3D motion compensated gangway access

Prepared for ROV light intervention

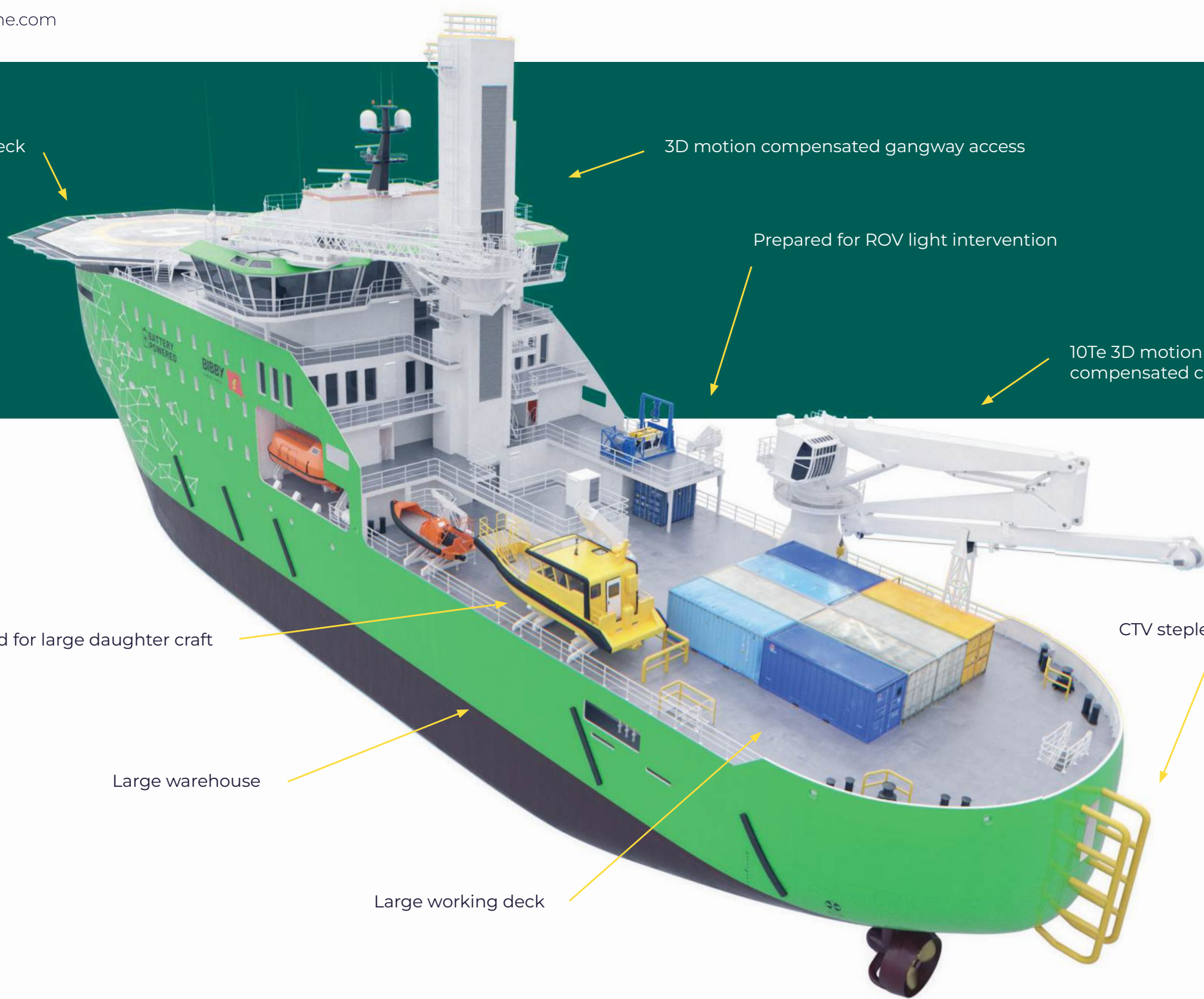
10Te 3D motion compensated crane

Prepared for large daughter craft

Large warehouse

Large working deck

CTV stepless transfer



Mission overview

Prepared for commissioning + O&M

- Helideck 21m/12.6Te (S-92)
- Prepared for large daughter craft battery hybrid option, with onboard charging
- Large environmentally controlled warehouse with side & top loading
- Large working flush deck with dedicated container storage
- 3D motion compensated gangway access port or starboard stepless transfer, remote operation from integrated bridge
- Prepared for ROV light intervention
- 10Te 3D motion compensated crane upgradable to 40Te subsea & remote operation from bridge
- CTV stepless transfer.



Vehicle specification

Main particulars

Length overall	89.63m
Breadth moulded	19.80m
Depth moulded	7.55m
Draught (design)	5.00m
Gross tonnage	6773Te

Capacity

Fuel oil (MGO)	501 m ³
Fuel oil (methanol)	450 m ³
Fresh water	270 m ³
Warehouse area	535 m ²
Cargo deck area	500 m ²
Deadweight	2283 t

Flag	UK
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DNV class notations

+1A Windfarm Service, battery power, E0, LFL fuelled, DYNPOS(AUTR-CB), COMF(C-2, V-2), SPS, Walk-to-Work, Clean (Design, Tier III), Cyber Secure (Essential), LCS, BIS, Strengthened(dk), Smart(EEN), BWM(T), ER(SCR), HELDK(SH), recyclable, shore power, NAUT (OSV)

Expected to meet SILENT E (environmental) & SILENT A (acoustic)

Trial speed

- 13.0 knots at 5.0 m draft in calm weather and with clean hull
- 10 knots at 5.0 m draft, eco speed.

DP capability

- Kongsberg
- DP capability according to DNV-ST-0111 (9,7,8,6).

Engine & propulsion

- Wartsila 6L32, dual fuel methanol
- Main gensets (Fixed speed) 2 off 3480 kw @ 750rpm, 50hz
- Combined power of 6800 kw(e)
- Emergency genset: 1 off ~365 kW.

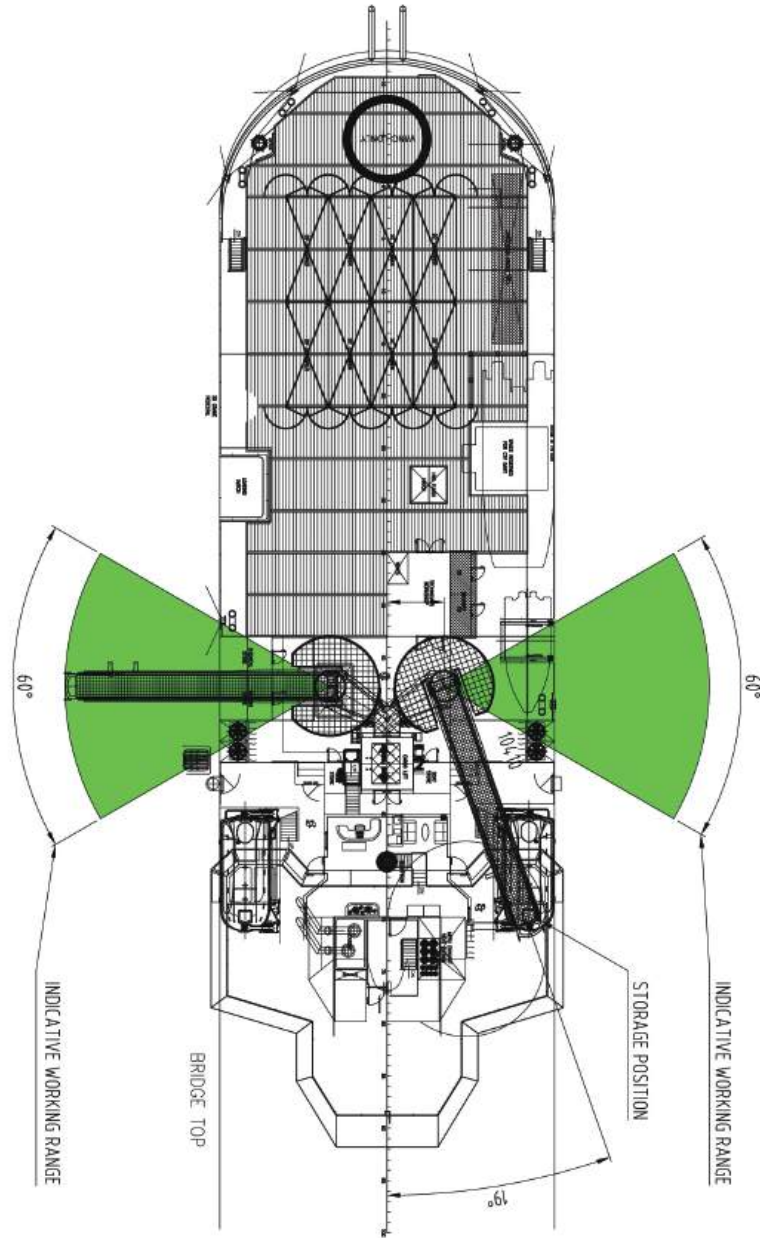
Energy storage system

- Corvus Energy
- Lithium iron phosphate (LFP)
- 24,400 kWh
- Split across 3 compartments
- Offshore charging.

Main propulsion

- Kongsberg
- 2 off 2000 kW RIM Drive Main Azimuth units
- 2 off 1500 kW RIM Drive Tunnel units
- 1 off 1200 kW Retractable unit.





Walk-to-Work gangway

Maker: SMST TAB-L1 + access
& cargo tower

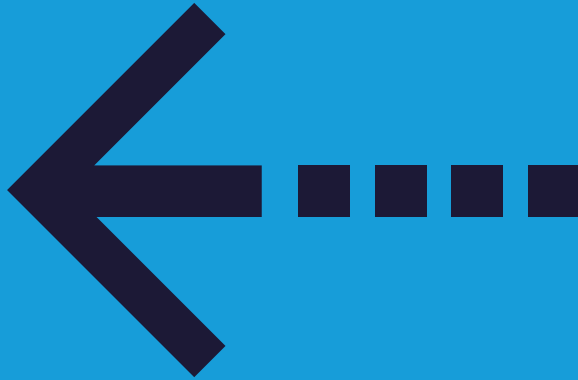
Internal width: 1,200mm

Load capacity: 850kg

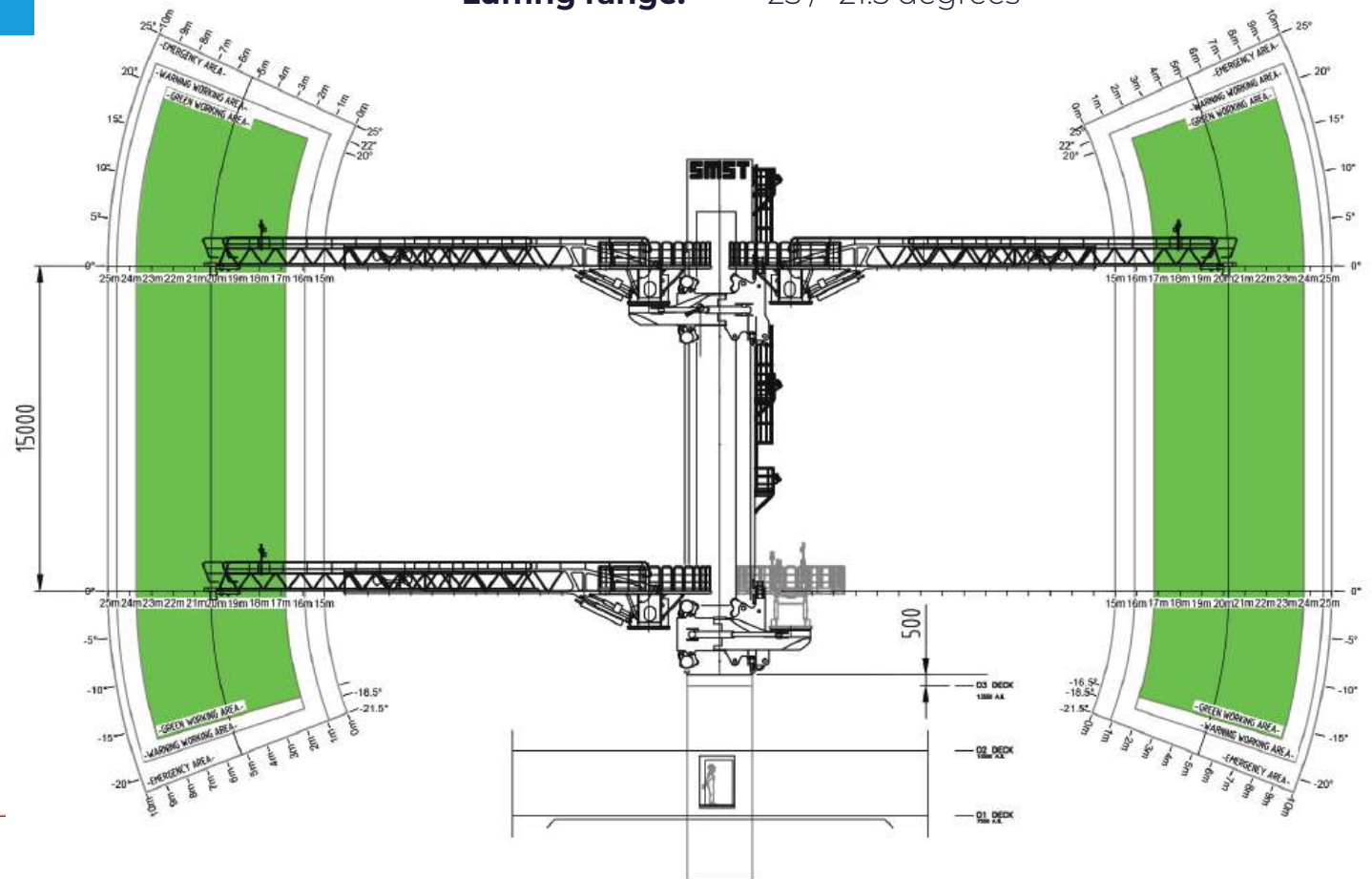
Elevator capacity: 2,000kg

Parking location: Wheelhouse top

Winch at tip: 1,000kg 3D motion
compensated

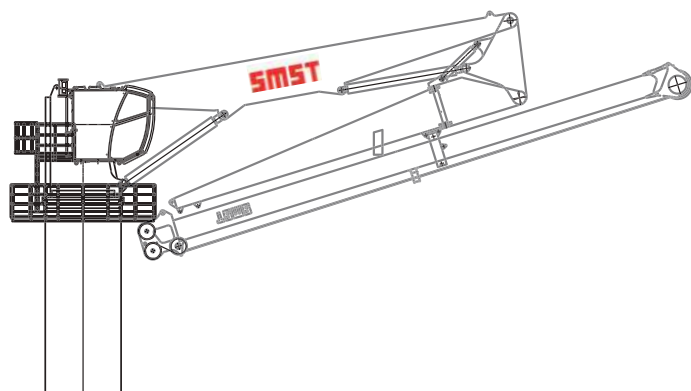


Operation side:	Port and starboard side
Control positions:	Port BW (W2W), Stbd BW (W2W & Crane)
Cursor height:	13 – 28m (horizontal from waterline)
Gangway tip height:	@+/- 5 degrees 30m & 11m
Gangway length:	28.9m from centreline
Slewing range:	+ 240 degrees (with articulating cursor)
Luffing range:	+25 / -21.5 degrees



SMST

3D Crane



SMST

Maker: SMST L Type Knuckle Boom

3D Comp load capacity: 1,000kg - 10,000kg

3D Comp working radius: 10,000kg @ 24.7m
5,000kg @ 30m
3,000kg @ 32.5m

Harbour load capacity: 20,000kg

Harbour working radius: 20,000kg @ 19.5m
6,000kg @ 34.5

Hook travel: 70m

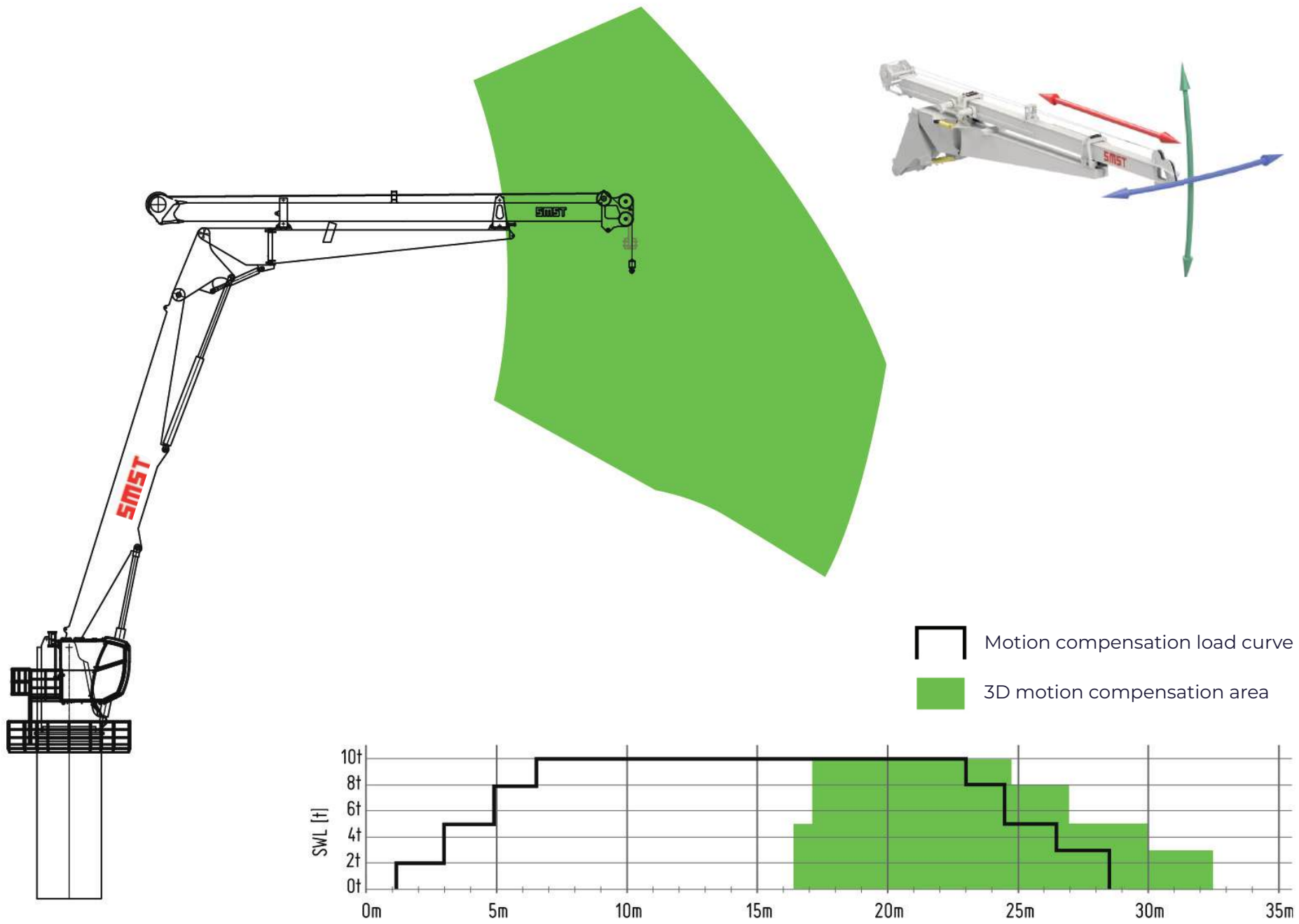
Location: Starboard

Control: Remote from starboard
bridge wing station
(W2W & Crane)
Operators cabin
Remote control

Other: MOPS & AOPS

Option: Crane upgradable to
40,000kg subsea AHC





Electric philosophy

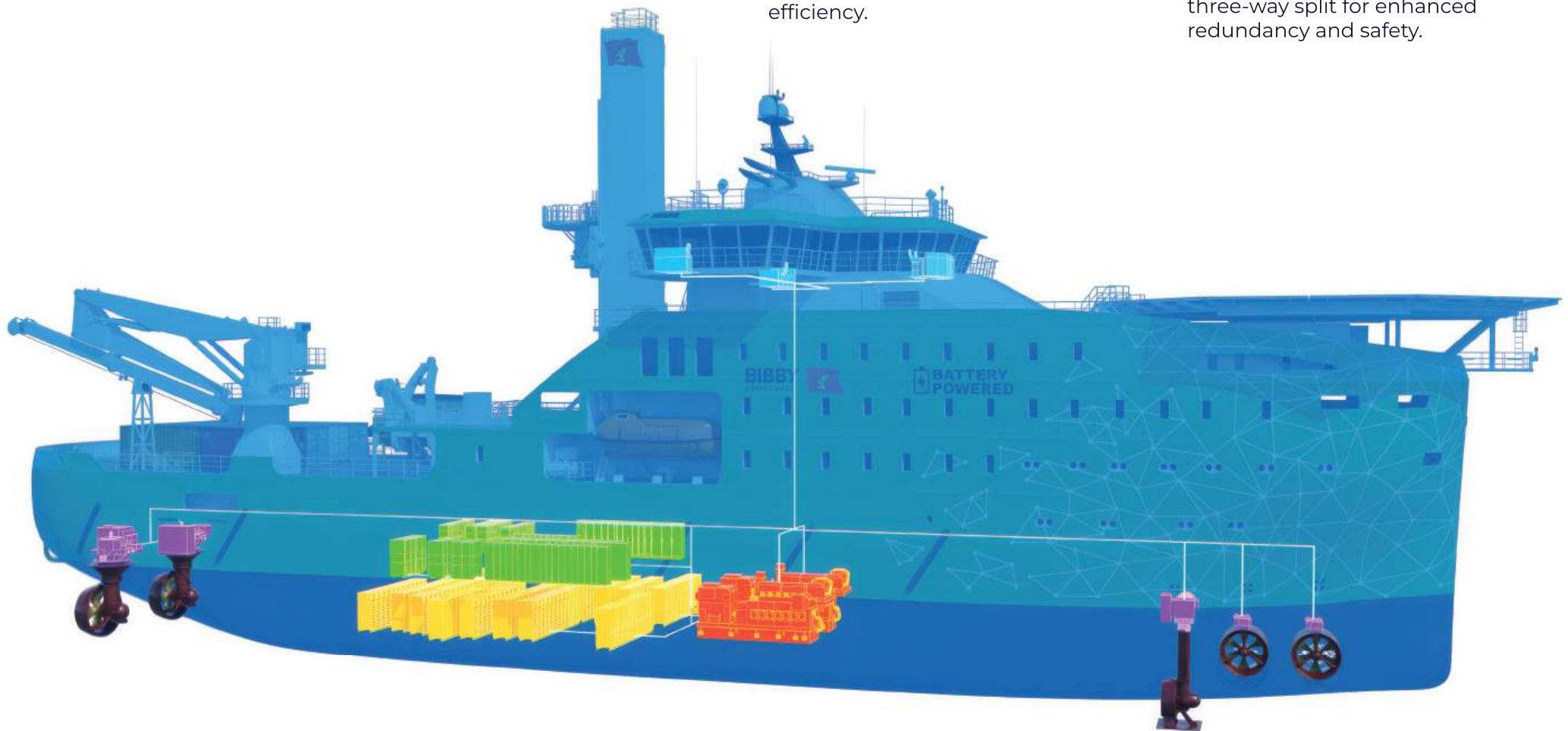
Configuration

Purpose designed power system for maximum flexibility and efficiency

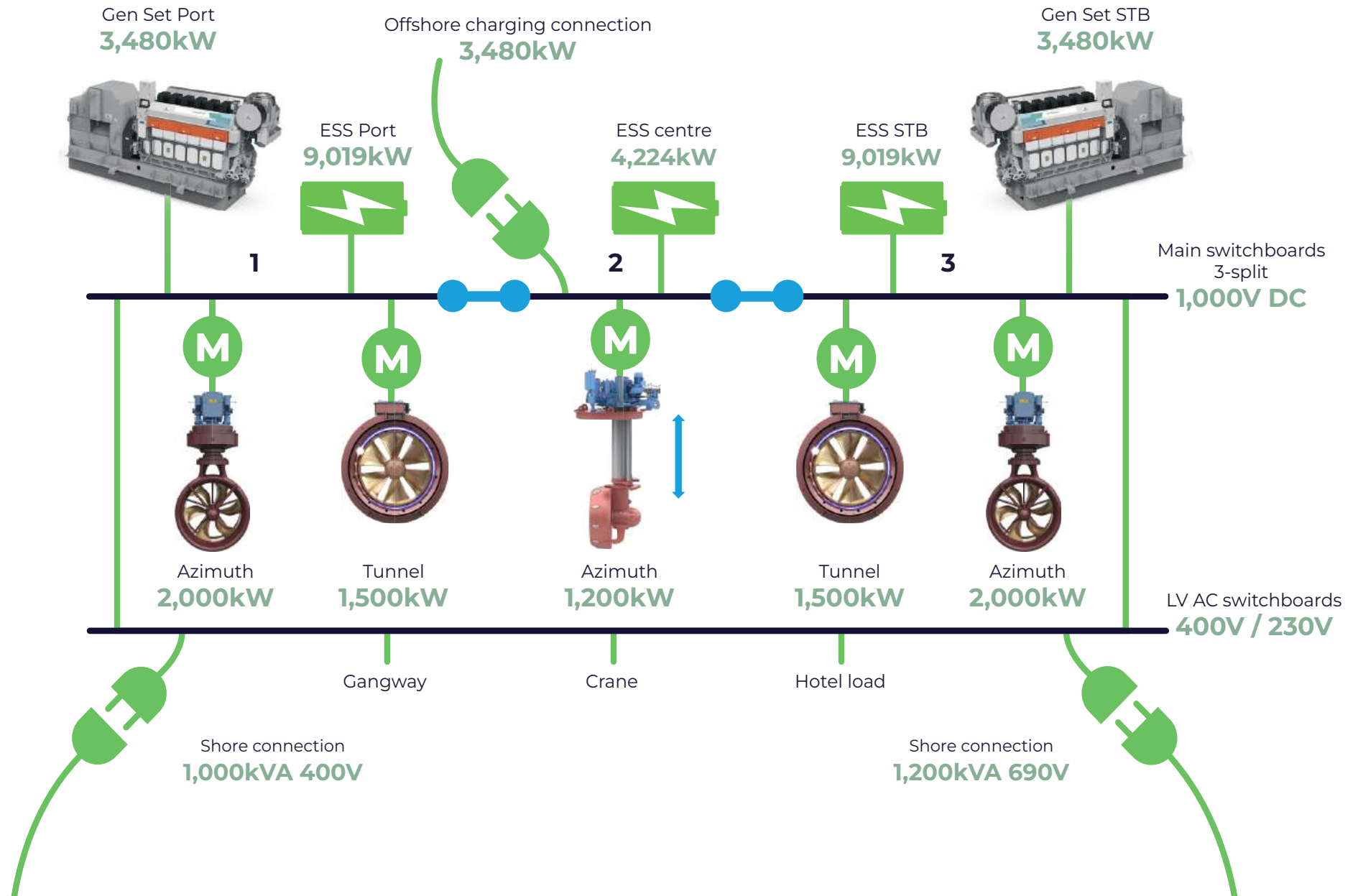
- ESS designed as the primary power source
- Dual fuel methanol gen sets operate at constant speed/load to charge ESS – optimal efficiency.

Designed to operate in a closed bus-tie configuration

- Open bus-tie operation is possible with no loss of capability or fuel consumption
- Battery packs are electrically and physically divided into a three-way split for enhanced redundancy and safety.



Electric architecture



Charging

The vessel can conduct all port and harbour operations on battery, with zero-emissions and low under water noise signature

Shore ready charging

11kv AC

- 690v AC
- Optional DC connection.

Offshore ready charging

11kv AC charging at up to 6MVA, 50Hz

- Specialised Dynamic Positioning mode for offshore charging
- Option ready for future upgrade to DC charging (floating installations).



Average power required/day 17MWh



24 Hour battery endurance in good weather (1.5Hs)
20 Hours @ 2.5HS
15 Hours @ 3.5HS

Zero-emission operation

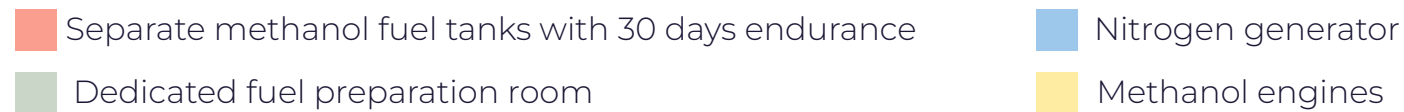
A full charge is equal to:
Transits over 130NM@10kts

Dual fuel engines ready to come online for

- safety
- emergencies
- charging.

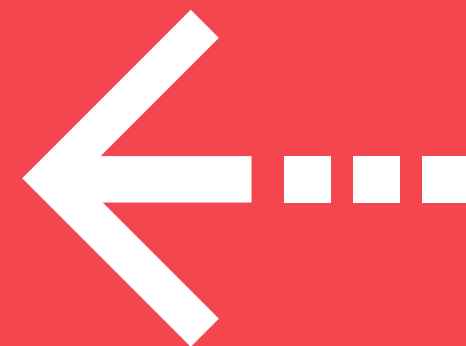
Vessel is fully operational even when offshore charging is not available.

Full charge 4–5 hrs



Methanol

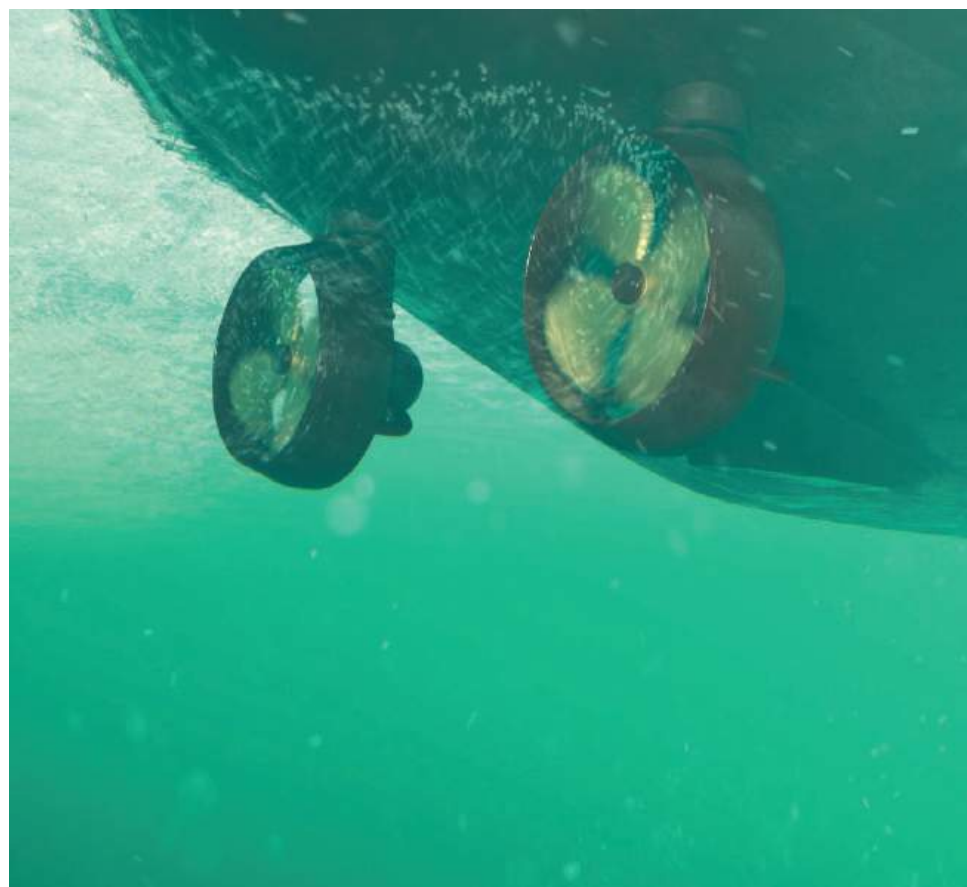
Green methanol extends the zero-emissions operational envelope of the ship where offshore charging isn't available.



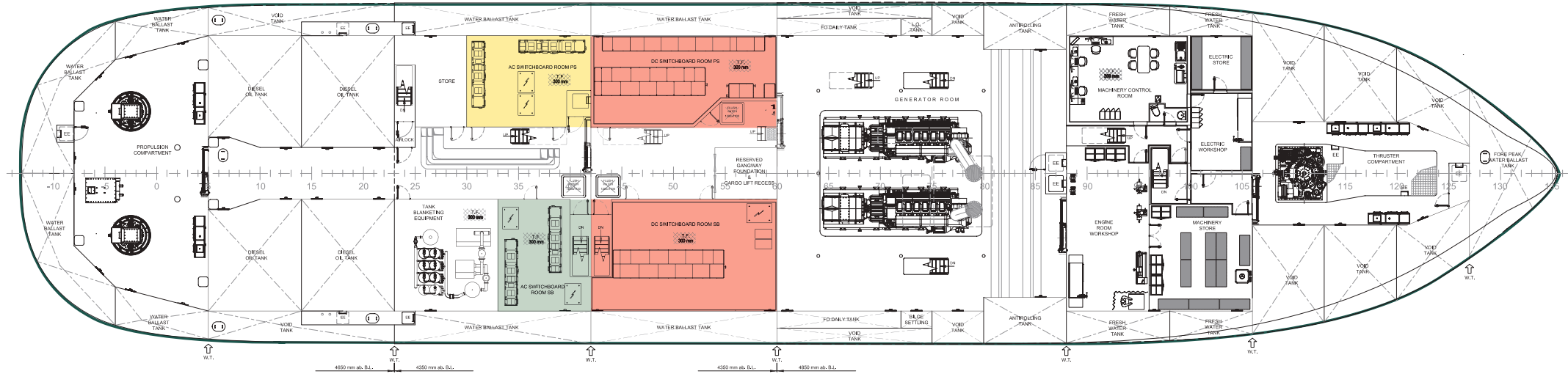
Enabling emission-free operations even without offshore charging

Methanol is a cleaner-burning alternative to traditional marine fuels. By switching to methanol, we can significantly reduce harmful emissions such as nitrogen oxides (NO_x), sulphur oxides (SO_x), and particulate matter, while also cutting carbon dioxide output. Even more promising is the potential of green methanol or eMethanol, a synthetic fuel produced using renewable energy and captured carbon. If sourced sustainably, green methanol can make our operations virtually carbon-neutral, aligning with global decarbonisation goals and setting a new standard for environmentally responsible maritime transport.

Methanol is safely used as a marine fuel thanks to robust safety systems, including fixed foam firefighting systems in bilge areas, comprehensive fire and gas detection, ATEX-certified zones, and double-walled piping to prevent leaks and ensure containment.

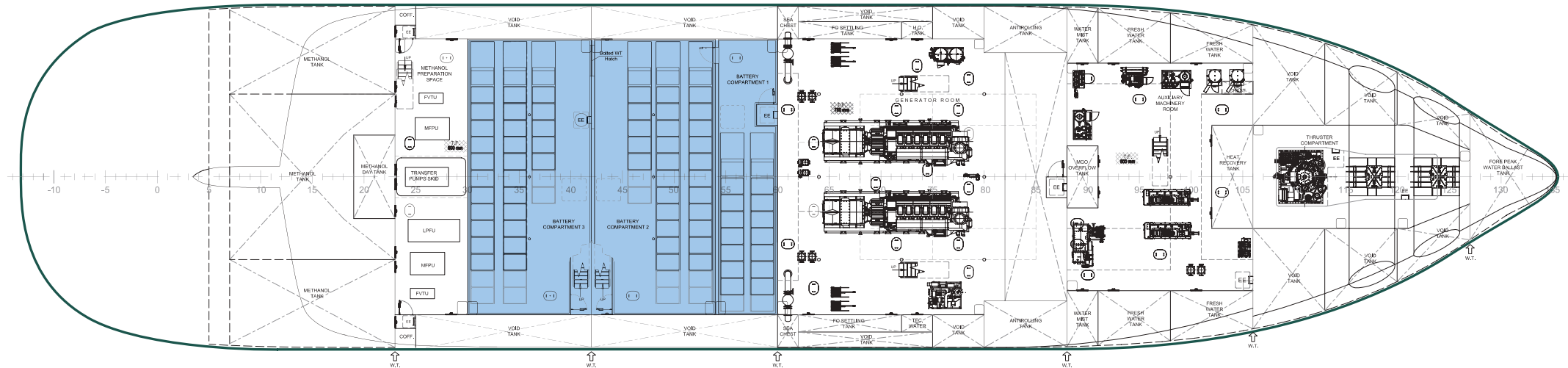


Tween deck



- DC switchboard rooms port & starboard
- AC switchboards

- Transformers
- 3x battery compartments



Tank top

Battery power

Equipped with cutting edge Lithium-Ion Phosphate (LFP) batteries – we are harnessing the best available technology today to deliver safe and efficient offshore operations.

Capable of a full day of operations on battery power alone

The eCSOV is equipped with cutting-edge lithium iron phosphate (LFP) battery technology, delivering a total installed power of 24.4 MWh. Chosen for its superior safety, energy density, long lifespan, and environmental performance, the LFP chemistry ensures reliable and efficient energy storage.

The battery system is designed for a guaranteed operational life of 15 years, with expectations to exceed this based on daily usage and charging cycles.

This robust, future-proof energy solution underpins our commitment to delivering clean, zero-emission maritime operations.



Accommodation design

Focus on:

- Transfer of technicians to/from CTV
- Transfer of technicians to/from gangway
- Flow through accommodation
- Handling of cargo onboard, side and top loading into warehouse via hydraulic hatches
- Separated working and living zones, minimising noise.

Designed to focus on comfort for technicians and crew

- High-end outfitting standard
- Open and bright spaces and recreation
- Ergonomics and flow
- Minimising noise & vibration comfort C(2)V(2)
- Separation of working areas from sleeping and social spaces
- High speed internet & cabin entertainment system.



Persons on board (POB)

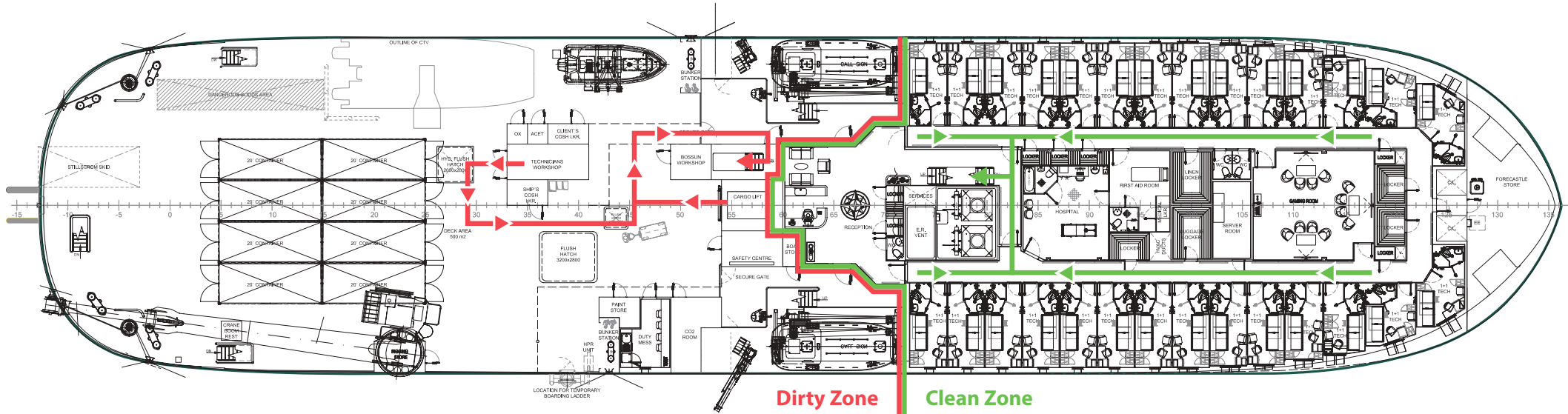
Max 120 Persons onboard with maximum flexibility in configuration:

- Single occupancy: 84 Persons
- Single and double occupancy: 120 Persons
- Crew capacity: 24
- 2 x single senior officer suites
- 22 x single crew
- Client capacity: 60/96
- 2 x single client rep suites
- 58 x single client cabins.

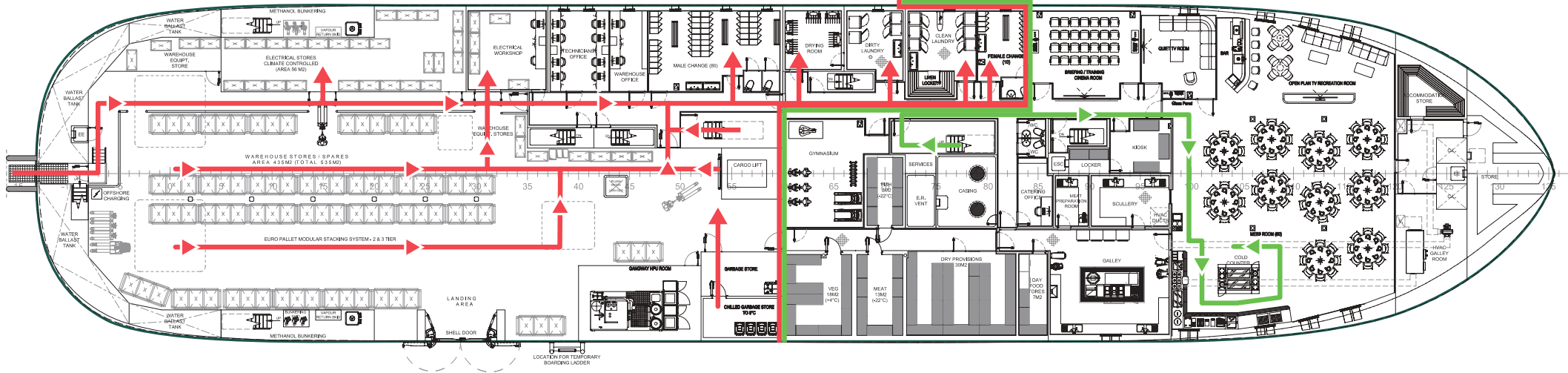
OR

- 2 x single client rep suites
- 22 x single client cabins
- 36 x double occupancy cabins (Pullman bunk style).

02 Deck



01 Deck



Everyone's Looking



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