

# HST Ella

## Hybrid Crew Transfer Vessel (CTV)



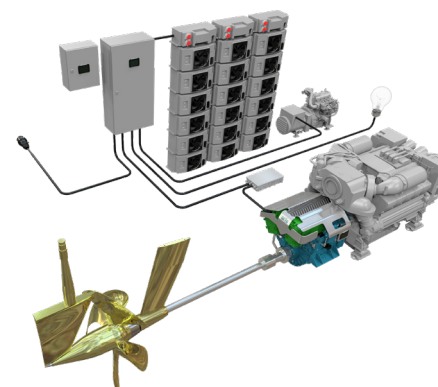
Illustration: Chartwell Marine, UK

### VESSEL INFORMATION

Owner	HST Marine Ltd, UK
Shipyard	Diverse Marine Ltd, UK
Hull Number	2224
Year Built	2021
Ship Design	Chartwell Marine Ltd, UK
Class	BV complete class notation. BV I X Hull. Mach Lightship/Fast Utility Vessel Hybrid ZE Sea Area 2&3
Motor	2x CAT C32 Acert
Gearbox	2x Servogear HD295PTIR
PTO/PTI	2x 200 kW PM EI Motor
Propeller	2x Servogear Ecoflow Propulsor 1200 mm

### BRUNVOLL SUPPLY

Battery System	Corvus Dolphin Power, 185 kWh
Remote Control	Triton CPP
Energy Management	Triton EMS
Steering Gear	Triton SG
Joystick System	Triton JS
Inverters & DC Switchboard	



### Triton Battery Hybrid Propulsion System

Hybrid propulsion systems benefit of the best from two systems - the combination of electric propulsion and conventional diesel drive.

The Hybrid system enables ships with variable power requirements to run at high propeller efficiency. In such a system design the vessel can utilize the power required for the specific operation in pure electric mode, or in diesel mechanical mode, or in a boost mode by engaging both systems.

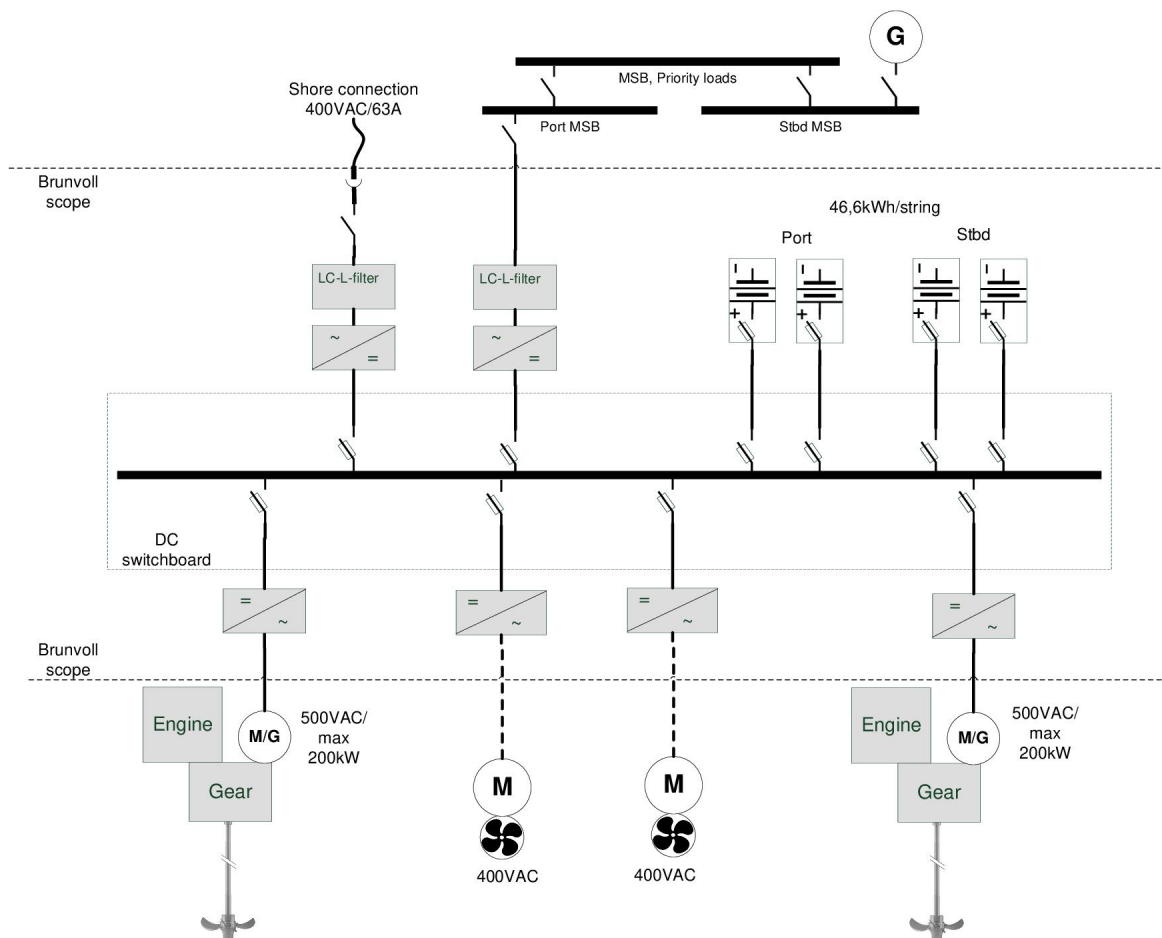
The Hybrid system configuration is an energy efficient and flexible system, with high redundancy.

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## Hybrid Crew Transfer Vessel (CTV)

HST Marine Ltd, has ordered a hybrid crew transfer vessel (CTV) based on the new Chartwell24 design. This innovative vessel will provide support for the offshore wind sector, and comply with air quality legislation for the industry by reducing vessel emission and energy consumption.

**Brunvoll delivery** is a standardized hybrid package for propulsion with hotel load supply and charge interface to shore connection. The system design is compact with focus on weight and volume optimal for high speed vessels. Integrated system design with focus on control philosophy, energy savings and ergonomics.



The hybrid propulsion system allows for flexible operation from silent zero emission operation in Electricbattery mode at low speed powered from batteries, to capably and efficient transit speed in Diesel Mechanical mode.

### Operation modes:

**DM-mode** for diesel mechanical fuel-optimized propulsion of the CP propellers up to design speed. The PTO PM-machine may be used for battery charging at optimal SFOC.

**EL-mode** is electrical propulsion for slow steaming powered from battery. The rpm and pitch are optimized for maximum efficiency.

**Hybrid mode** is a mix with EL- mode on one propeller and DM- mode on the other. It increases the redundancy of the vessel and makes it possible to operate with only one engine available.

The system is optimized for slow speed sailing within the harbour areas and makes it possible to reduce total fuel consumption, noise and local emissions.