

Fjordled

Plug-in Hybrid Catamaran

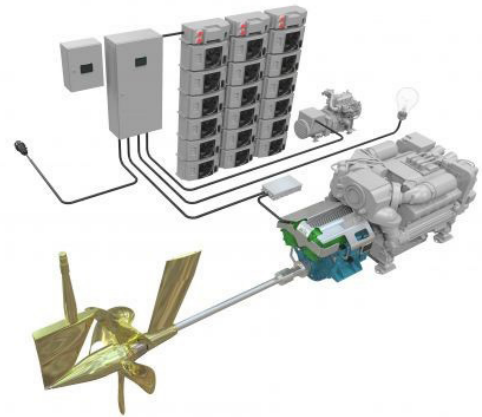


Photo: Norled AS

Owner	Norled AS, Norway
Shipyard	GS Marine, Norway
Hull Number	47
Year Built	2018
Ship Design	Ingebjørn Aasheim Ship Design, Norway
Class	DNVGL HSLC Battery Safety, Battery Power
Engine	2xVolvo DI13
Gearbox	2xServogear HDE220 Hybrid Gear box
PTO/PTI	2x85kW PM EI Motor
Propeller	2 x Servogear Ecoflow 1075 mm

BRUNVOLL SCOPE OF SUPPLY:

Battery System	Corvus Dolphin Power 124Wh/kg, 140kWh
Remote Control	Triton CPP
Energy Management	Triton EMS
Steering gear	Triton SG
Joystick system	Triton JS
Manoeuvre station	Triton CHR



Triton Battery Hybrid Propulsion

Hybrid propulsion systems benefit of the best from two systems - the combination of electric propulsion and 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 a fuel efficient and flexible system, with high redundancy.

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Plug-in Hybrid Catamaran

Norled AS

has ordered two 24 m hybrid catamarans from the Norwegian shipyard GS Marine. This pioneering project from Norled will be the first plug-in hybrid catamarans used in commercial traffic. The hybrid catamarans will use batteries when operating close to shore while the diesel engines will be used to achieve top speed.

The Brunvoll delivery

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

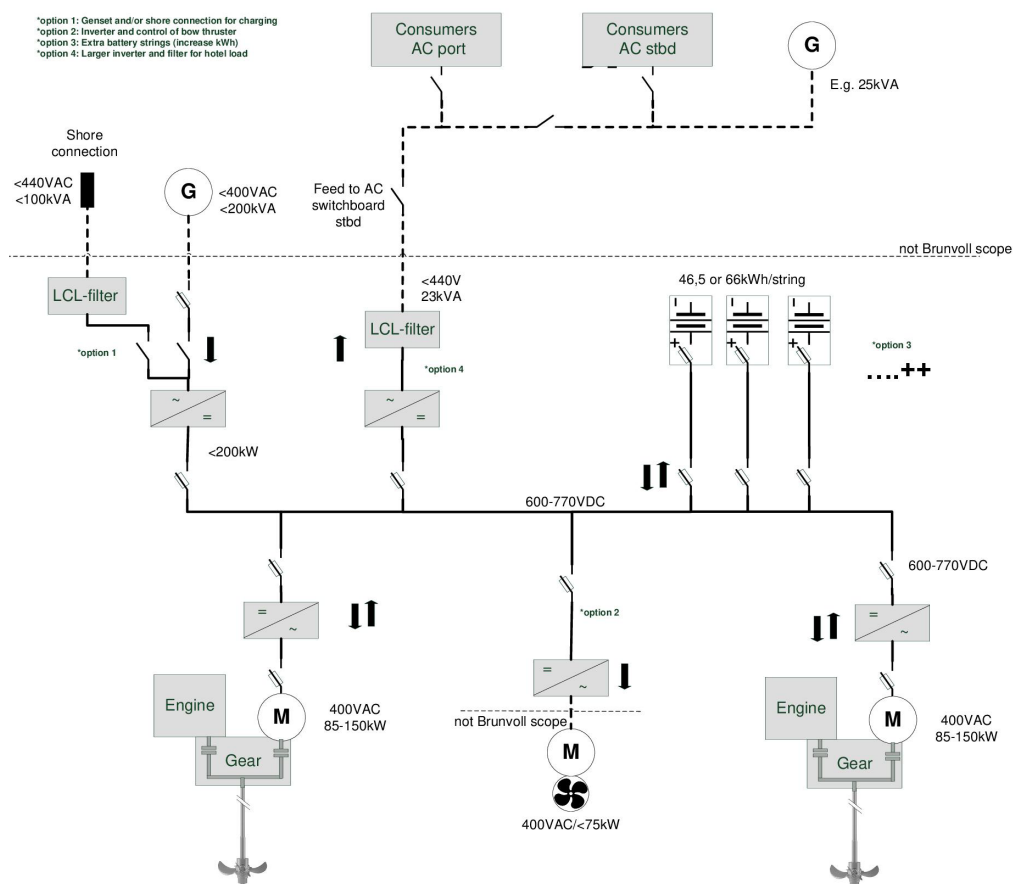
Operation modes:

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.



The Brunvoll delivery includes a Brunvoll Triton Manoeuvre Chair, which is a predesigned chair with all Triton bridge control panels integrated. This ensure easy installation and compact arrangement of the control panels. The chair itself is fully adjustable and ensure ergonomically operation of the vessel.



Photo: Norled AS