



TeeMarine

SES CTV

FIRMUS

Vessel Specification





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The vessel is an air cushion catamaran where an air cushion between the side hulls lifts the vessel out of the water. This allows for low draught and an unchallenged combination of operational wave height and speed:

- Vessel service speed of 40 knots
- Greatly improved seakeeping comfort with reduced seasickness
- Operational towards the turbine in up to 2.5 m significant wave height
- Draught in transit of less than 1 meter
- 25% reduced fuel consumption compared to competing vessels in high speed
- Designed according to high safety standard
- Based on proven concept

The first vessel in the series is built at Umoe Mandal, Norway, which has a track record of more than 20 years in building Surface Effect Ships (SES) for the Royal Norwegian Navy.



PERFORMANCE

To increase operational wave height during access to offshore wind turbines the yard has developed a control system to use the air cushion to counteract wave forces.

All performances has been proven in an extensive model test program as well as with the yards extensive SES experience and track record with the Oksøy-class and Skjold-class for the Royal Norwegian Navy.

The SES concept is famous for its high vessel speed, but most of all its combination of high speed and excellent seakeeping. The excellent seakeeping is due to:

- The vessel is lifted out of the water, making waves impact vessel motions less
- The air cushion functions as a large shock absorber
- A Ride Control System (RCS) damps vessel motions





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DATA SHEET

GENERAL

Hull material	Composite Sandwich Materials
Main operation	Crew Transfer Vessel / Fast Response Vessel
Technicians (pax)	24
Crew	3
Boatlanding	Up to 2.0 m Hs
Built	2015

MAIN CHARACTERISTICS

Length overall	26.6 m
Load line length	23.9 m
Width overall	10.40 m
Draught off cushion	3.1 m
Draught on cushion	0.8 m
Dead weight	15 ton

PERFORMANCE

Max. speed	42 kn
Cruising speed	38 kn
Cruising speed @ 1.5m Hs	30 kn

ECONOMY OPERATION

Economy speed @ 85 % MCR	38 kn
Fuel consumption	21 l/nm
Range @ 14m ³ fuel	600 nm



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MACHINERY

	2 x 1,440 kW
Main engines	2 x 65 kW
Aux. engines	2 x 360 kW
Lift fan engines	Water jets
Propulsion	

CAPACITIES

Fuel oil	10.0 m ³
Fresh water	1.5 m ³
Grey water	1.5 m ³
Black water	1.5 m ³
Ballast (seawater trim)	8.5 m ³
Fuel oil transfer for trimming of vessel	(NA)

DECK

Cargo crane - SWL	480 kg @ 5.7 m
Cargo capacity	4 ton
Deck load	1.0 ton/m ²
Storage capacities on deck	40 m ²

ELECTRONIC AND NAVIGATIONAL EQUIPMENT

AIS	Crewfinder system
Radar X band (x2) ECDIS	CCTV
Electronic chart	Video Screens
Internet	GMDSS A1/A2

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LSA

Sula Rescue sling operated by single person , including mob davit-

Helicopter hoisting recue area

2 x Life raft with 3 years service intervals





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PASSENGER/CREW FACILITIES

The passenger area is separate from crew area and contains:

- Locker room with toilet , washing and shower facilities
 - Lounge for 24 passengers
 - Business class seats
 - Pantry with coffeemaker, water and microwave
 - Internet Wi-Fi access
 - Great view with forward and side looking windows
 - Air Condition
 - 2 information TV screen
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The crew area is separate from the passenger area and includes:

- **Well-equipped pantry**
- **2 x Cabin with bed for 1 crew member with WC and shower facilities**
- **Wheelhouse with office table arrangement and a sofa group arrangement**



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