The Edda Freya is a state of the art construction vessel suited for operations worldwide and utilising an environmentally friendly, fuel-saving diesel-electric hybrid propulsion system. Edda Freya was designed with a focus on cable laying operations, offshore construction and inspection, and maintenance and repair (IMR) operations, and also with a focus on redundancy, excellent maneuverability and station keeping.

The vessel has 2300m² of deck space and is equipped with a 400 T AHC offshore crane that can lift 600 T in double-fall mode, a 70 T AHC offshore crane which is bolted, and can easily be moved to secondary position, a Huisman 150 T dual tensioner VLS located over the main moonpool, a system for quick mobilisation of reels and reel drive systems, an integrated skidding system for modules, two moonpool launch and recovery system for WROVs and a 3000 T carousel is located below deck.

In addition to the hybrid battery system Edda Freya’s environmentally friendly credentials are enhanced by the adoption of Siemens’ BlueDrive PlusC concept, which was implemented by Siemens in co-operation with Østensjø Rederi. By using variable rotational speed with optimal operation of the diesel generators in combination with the battery system, the system will significantly reduce fuel consumption and the emissions of nitrogen oxides (NOx) and greenhouse gases (CO2 and methane). The use of selective catalytic reduction systems further reduces emissions.
# GENERAL

**OPERATOR** Østensjø Rederi  
Charterer: DeepOcean AS

**SHIP OWNER** Østensjø Rederi  
BUILT BY Kleven verft

**DELIVERED** 2016

**DESIGN** SALT 304 OCV

## MAIN PARTICULARS

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length Overall</td>
<td>149.8 m</td>
</tr>
<tr>
<td>Length Between P.P.</td>
<td>138.3 m</td>
</tr>
<tr>
<td>Breadth Moulded</td>
<td>27 m</td>
</tr>
<tr>
<td>Depth Main Deck</td>
<td>12 m</td>
</tr>
<tr>
<td>Max. Scantling Draught</td>
<td>8.5 m</td>
</tr>
<tr>
<td>Class</td>
<td>&quot;+1A1, SF, ED, DYNPOS AUTRO, COMF C(3), Conf V(3), Clean Design, BIS, ICE IC, DK(+), TMON, CRANE, NAUT OSV(A)-IC5, HELDSK SH (CAA-N)&quot;</td>
</tr>
<tr>
<td>Accommodation</td>
<td>140 persons (64 single cabins and 38 double cabins)</td>
</tr>
</tbody>
</table>

## CAPACITIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cargo Deck Area</td>
<td>2300 m²</td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>2200 m³</td>
</tr>
<tr>
<td>Ballast Water</td>
<td>6800 m³</td>
</tr>
<tr>
<td>Fresh Water</td>
<td>1000 m³</td>
</tr>
<tr>
<td>Deadweight (Max Draught and Open Moonpool)</td>
<td>10000 t</td>
</tr>
<tr>
<td>Deck Strength (Aft of Main Crane)</td>
<td>15 t/m²</td>
</tr>
<tr>
<td>Deck Strength (Fwd of Main Crane)</td>
<td>10 t/m²</td>
</tr>
<tr>
<td>Deck Load Capacity</td>
<td>Approx. 6000 t</td>
</tr>
</tbody>
</table>
| Main Engines & Generator Set  | 2 x Mak BM32E  
2 x Mak 6M32E  
2 x Mak 6M20C |
| Electrical System and Power Management | Siemens BlueDrive PlusC  
4 x 130 kWh Battery banks integrated EMS System |
| Thrusters                     | 2 x 1500 kW Brunvoll Retractable Azimuth Thruster  
4 x 2050 kW Brunvoll Tunnel Thruster |
| Main Propulsion               | Scana Volva CP95/AG TS1000  
Reduction Gear: 2 x AG TS1000 (Twin input-sige output)  
Power: 2 x 4200 kW  
Propeller speed: 145 rpm  
Propeller diameter: 4300 mm |
| Automation                    | Kongsberg K-Chief 700  
Siemens RCS for Thrusters and Propulsion |
| Moonpool                      | 2 x ROV moonpool 6.3 m x 4.2 m net opening  
1 x Work moonpool 7.2 m x 7.2 m net opening |

## DYNPOS, NAVIGATION AND COMMUNICATION

- **Kongsberg Maritime Dynamic Positioning System**
  - 1 off KPOS DP-21  
  - 1 off KPOS DP-31 Class 3 Back-up DP  
  - 1 off c.Joy joystick system  

- **Reference systems installed:**  
  - 2 x DPS 232  
  - 2 x Seapath 330  
  - 1 x CyScan system  
  - 1 x RADIUS 1000  
  - 2 x KONGSBERG Redundant HiPAPI 502 system

## OFFSHORE CRANES

- **Main Crane NOV Knuckle Boom Crane**  
  - Single Fall lift mode: 400 t @ 20m AHC, 150 t @ 40 m AHC  
  - Special Lift Mode: 400 t @ 18 m AHC  
  - Water Depth Main Crane Single fall: 3000 m  
  - Main Offshore Crane Aux hook: 25 t @ 43 m AHC

- **Auxiliary Crane NOV Knuckle Boom Crane**  
  - Single Fall lift mode: 70 t @ 21 m AHC, 14 t @ 45 m AHC  
  - Water Depth Auxiliary Crane: 2000 m  
  - Auxiliary Crane Aux Hook: 10 t @ 50 m

## ROV SYSTEM

- **2 x 220 Hp Kystdesign Constructor W-ROV**  
  - 3000 m water depth rating  
  - MacGregor AHC Moonpool Launching and recovery System  
  - 2 x ROV Handling Cranes  
  - Skidding system

## DECK EQUIPMENT

- **Deck Tugger Winches:** 4 x 10 t CT  
- **Shipboard crane:** NOV knuckle Jib Crane  
- **Main Crane:** NOV single fall: 10 t @ 15 m; 5 t @ 20 m  
- **Helideck:** 26.1 m - 16 t

## VLS

- **150 t Huisman VLS**  
- **2 x 75 t 4-track Tensioners**  
- **Electric Driven Retractable Tensioners**  
- **165 t Below Deck A&G winch**  
- **Service Crane:** 18 t @ 8 m  
- **2 x 10 t Hoisting Beams**  
- **2 x 5 t Moonpool Tugger Winches**  
- **2 x 2 t Product Handling Winches**

## CAROUSEL

- **3000 t IMECA Below Deck Carousel**  
- **6m Ø Core**  
- **24, 3m Ø Overall**  
- **6 m Height**  
- **Spooling arm:** 8 t  
- **SWL Modular partitioning**

## DECK SKID SYSTEM

- **Prepared for Reel Drive system**

## LIFESAVING EQUIPMENT

- **Life Boats:** 2 x Covered Lifeboats with capacity 130 persons  
- **Life boats and rafts:** 100% each side  
- **MOB Boats:** 1 x Weedo 700 FRC  
- **1 x Weedo 17 RB**

## FUEL CONSUMPTIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max Speed</strong></td>
<td>15.5 kts</td>
</tr>
<tr>
<td><strong>Service Speed</strong></td>
<td>13 kts. Helideck: D = 22.8 T = 16</td>
</tr>
<tr>
<td><strong>DP Mode</strong></td>
<td>Approx. 17 m²/24 hrs</td>
</tr>
<tr>
<td><strong>Harbour Mode</strong></td>
<td>Approx. 7 m²/24 hrs</td>
</tr>
</tbody>
</table>

**EDDA FREYA**