• Sidescan Sonar Survey
• Multibeam Survey
• ROV and Video Survey
• Vibro-Coring
• Bottom Sampling

• Diving Platform
• POD Handling
• Bird Observation
• Trial Fishery
• Guard Vessel
M/V FREDERIK

Specifications:

General:
Name: M/V Frederik
Type of vessel: 24h Survey and support vessel
12 h ROV vessel
DP Capabilities
Home port: Aarhus, Denmark
Builder: Fr. Schweers
Classification: Germanischer Lloyd
Transit: 10 knots

Navigation Aids
Systems: Gyro, GPS receivers, DP system
Marine Echo Sounder
FURUNO Navigational Echo Sounder FE-700

Tonnage & Dimensions:
(GT) Gross Tonnage 258
(NT) Net Tonnage 77
Length: 38.4 m
Breadth: 7.8 m
Airdraft: 14.1 m
Draft: 2.1 m
Deck space: 40 m²

Engines:
Main engines: 1 x 1000 kW CPP MWM TBD 604 V12
Auxillery engines: 1 x 90 Cummins 6875, 9-D
Auxillery engines: 1 x 250 kW Deutz M413FR
Auxillery engines: 1 x 300 Kw Volvo D12
Thruster forward: 70 kw Jastram
Thrusters aft: 2 x 250 Kw Schottel pump jets

Deck Equipment:
A-Frame: SWL 4 tons
Deck Crane: 0.65 t/m

Survey / ROV Equipment
ROV: CTO 102 (Re-configured Sub Fighter 7500)
GPS receivers: 2 x C-NAV 3050, 1 x Astech Proflex.
D-GPS, RTG, RTK modes
Multibeam Echo Sounder: R2Sonic 2024
Motion sensor: TSS DMS-05
Gyro: TSS Meridian Surveyor
Data acquisition: EIVA NaviPac, NaviScan
Data processing: NaviEdit, NaviModel

Northern Survey
t@northern-survey.com : +45 4041 6000
 Specifications:

**ROV Data & Control System:**
- **USBL:** Edgetech BATS
- **Cable Tracking:** TSS 400 and TSS 350
- **Sonars:** Blueview P900-200, Kongsberg MS 1000
- **Cameras:** 2 units

**Capacity:**
- **Tanks:** 23000 L
- **Fresh water:** 10000 L

**Water Depth (LAT):**
- Multibeam (MB): 2.5 m*
- Side Scan
- Sonar (SSS): 5 m*
- ROV Survey: 5 m*
  * subject to seabed and Master's discretion

**Vessel Draft:**
- Multibeam (MB): 2.1 m
- Side Scan
- Sonar (SSS): 2.1 m
- ROV Survey: 2.1 m

**Endurance Statement**
- 10-15 days weather permitting (using ROV)
- 10-15 days weather permitting (MBES/SSS or other survey)

**Fuel Consumption 24 h**
- Transit: 2400 L
- Survey operation: 1000 L
- DP / Rov: 1500 L
- WoW or alongside: 250 L

**Accommodation**
- **Cabins:** 9 single, 1 double cabin, a total of 10 cabins, 11 persons incl. crew
- **TV & internet:** TV lounge, internet in all cabins and public areas
- **For client reps:** 1 cabin
- **Amenities:** Bunk bed, table, closet, internet TV access. Bath and toilet is shared with crew

**Vessel Contact Phone No.**
- Cell No.: +45 4041 6000

**VESSEL OPERATION MAX CRITERIA**
*Indicative criteria only - subject to site specific conditions!

*DP operation*
- Wind: 12-15 m/sec
- Sea state: max 1.7 - 2 m*
- Current: 1.8 - 2.5 knots*
  * subject to site specific conditions

*Survey Operation Max Criteria*

*Launch & recovery*
- Wind: 12 - 15 m/sec
- Sea state: max 1.2 - 1.5 m*
- Current: 1.3 knots
  * subject to site specific conditions

*ROV survey on seabed*
- Wind: 15 m/sec
- Sea state: max 1.5 m*
- Current: 1.3 knots
  * subject to site specific conditions

*Multibeam*
- Wind: 15 m/sec
- Sea state: max 1.5 - 2.0*
- Current: 3 knots*
  * depending on direction

*Side scan sonar*
- Wind: tba
- Sea state: tba
- Current: tba

---

Northern Survey
tr@northern-survey.com : +45 4041 6000