

TS  Shipping

# MPSV Botnica



PORT OF  TALLINN

# About Us

TS Shipping Ltd. is a provider of escort icebreaking, ice management and offshore services. TS Shipping was founded in 2012 and is 100% owned by the state-owned company Port of Tallinn – the biggest port authority in Estonia, and one of the biggest Baltic Sea ports.

TS Shipping is the owner of Botnica, the well-known offshore support vessel and Baltic Sea icebreaker. The company provides full management services for the vessel, including commercial, technical and crewing.

The company's activities are seasonal. During harsh winters, its activities are concentrated on engaging in safe escort icebreaking operations in the Gulf of Finland and in Estonian coastal waters, while during the summer it renders services to the offshore oil & gas and renewable energy industries throughout the world.

As oil exploration is moving farther north, the capabilities of Botnica form a perfect combination for use in the demanding Arctic environment during its short summers.

Both the onshore personnel and crew on board are committed to working safely and efficiently to complete the vessel's tasks successfully.

## Mission and vision statement

Our policies and principles are aimed at managing the vessel safely and efficiently, by focusing on personnel safety and environmental protection.

We aim to deliver exemplary offshore and transportation services to our customers, and we are constantly improving the quality of our operations.

We are committed to third party personnel safety and our own personnel skills and reliability. We believe that continuous improvement is the key to success.

To reach our goals, we:

- Establish and promote safety practices using our developed Safety and Quality System;
- Ensure the existing system remains up to date with the latest marine and offshore industry standards and practices;
- Ensure our working environment helps personnel develop their skills, positive attitude, work care and the safety of their colleagues.







# Powerful, High-Tech, Multipurpose Vessel

Botnica is a multi-functional offshore vessel based on modified icebreaking design with a diesel electric propulsion system.

Her innovative combination of capabilities – based on extensive design and engineering work – facilitates her use in both arctic and tropical conditions. The vessel is highly advanced, powerful and extremely well designed and built.

The total power output of 15,000 kW of her main engines and generators makes it possible to perform

heavy-duty offshore subsea maintenance tasks without affecting operating ability.

The working deck is nearly 850 m<sup>2</sup> and designed for fast equipment changes. Its additional 160 T active heave compensation (AHC) crane is ideal for the deployment of heavy subsea loads and versatile equipment.

6.5 x 6.5 metre moon pool that runs from the working deck down through the hull of the ship makes her even more suitable for a variety of offshore operations.



# Dynamic Positioning:

Accurate, safe and highly suitable

The vessel is DP Class 3, equipped with a dual Kongsberg K-Pos 22 and K-Pos 12 system as a backup and has five independent operator stations. Its dynamic positioning system is aided by multiple position reference systems including 4D GPS, RADius, Taut wire and 2 HiPAPs.

The DP power management system is also unique, allowing the dynamic positioning team to choose the DP class in which the vessel needs to operate. The power distribution system can be physically split into two independent grids that provide safe conditions for

high risk offshore operations.

Even in a sector where DP equipped vessels are a normal sight, Botnica had performed her tasks exceptionally well in terms of manoeuvrability, accuracy and reliability.

Her unusual asymmetrical and spacious navigational bridge was designed in line with the requirements placed on the ship's multiple applications, both on the open sea and in icebreaking.

## Past Experience & References

After being bought by TS Shipping, Botnica successfully completed her summer offshore campaigns in the North Sea and the Arctic. Our to-date reference list includes oil companies (ExxonMobil, Rosneft), as well as renewable energy operators and contractors (Siemens).

She had been involved in windfarm commissioning, diving & ROV works, ice defence and management,

subsea installations and walk-to-work operations.

Prior to her sale by previous owners, the vessel spent 14 years being contracted to well-known companies in offshore development, construction and IRM, including Statoil, DSND, Subsea7, Micoperi and many others, having embraced most if not all scopes of offshore work.





# Icebreaking

A total Azipod propulsive power of 10MW (5000 kW each) provides Botnica with a high degree of manoeuvrability and accuracy during icebreaking operations.

The maximum flat ice thickness in which vessel is capable to maintain speed is 1.2 m. Botnica can proceed at a speed of 8 knots in 0.8 m of flat ice. The vessel is equipped with a towing winch with a 685 mm wire and the winch's 210 t max brake holding power makes the vessel capable for static notch ice towing.

Since Botnica is capable of operating in icy conditions and arctic areas, her multipurpose capabilities combined with icebreaking performance make her unbeatable for offshore operations in cold polar areas.





# Cranes

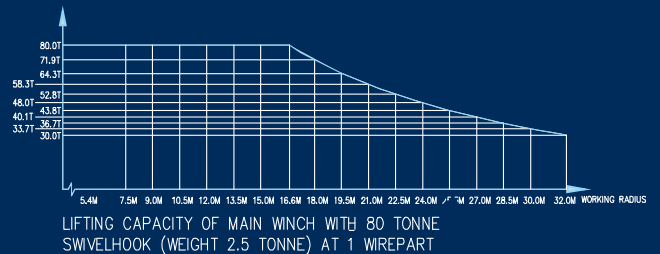
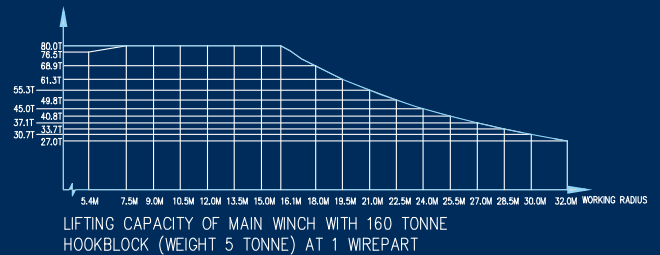
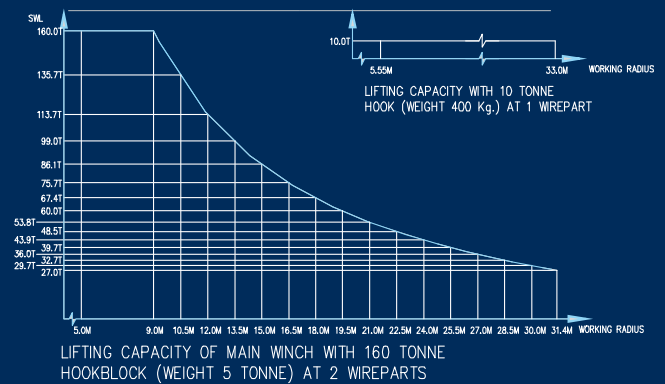
The ship is equipped with three different offshore cranes.

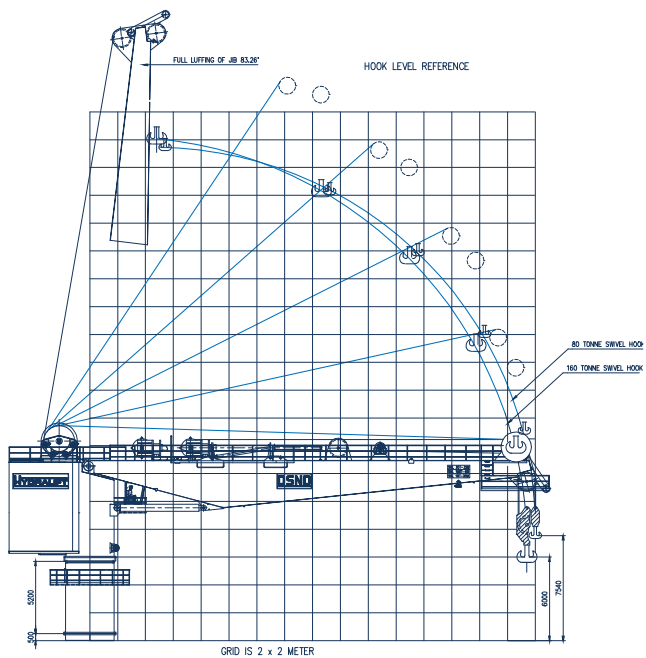
The main crane is a Hydralift OMCVC3447 with 160t SWL. It is an active heave compensated crane, which is ideal for deploying loads and equipment, as well as subsea construction.

The vessel's second crane is a Hydralift with 15t SWL and third is a Hydromega telescopic crane with 5t SWL.

The vessel is also fitted with a 0.5 T Pilot crane, 0.3 T provision crane and 0.3 T telescopic crane.

With the main components such as winches and cranes already installed, a change of function can be achieved rapidly. Botnica meets all the stringent rules and regulations for offshore work, and that makes the vessel suitable for almost all requirements.



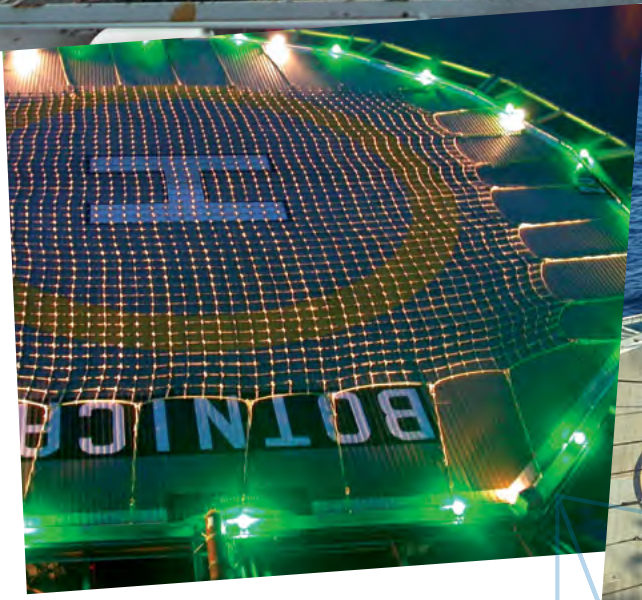
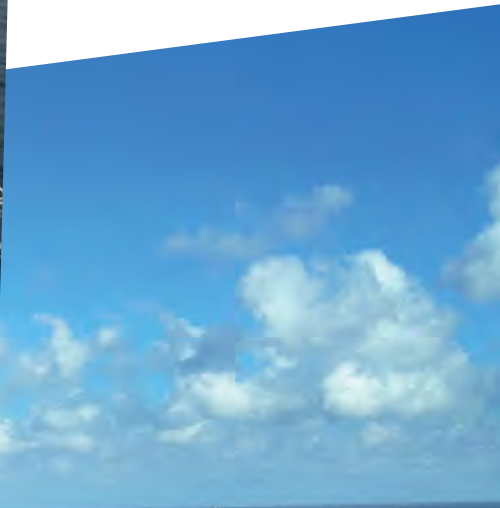




# Helideck

The vessel has a Helicopter Certification Agency compliant and certified helideck with a D value of 19.5 m and an 11.2 t helicopter maximum takeoff weight. The helideck fully meets strict North Sea demands.

Helideck can safely accommodate all medium helicopters comparable to the those of Super Puma AS332/L2 and Eurocopter 225.





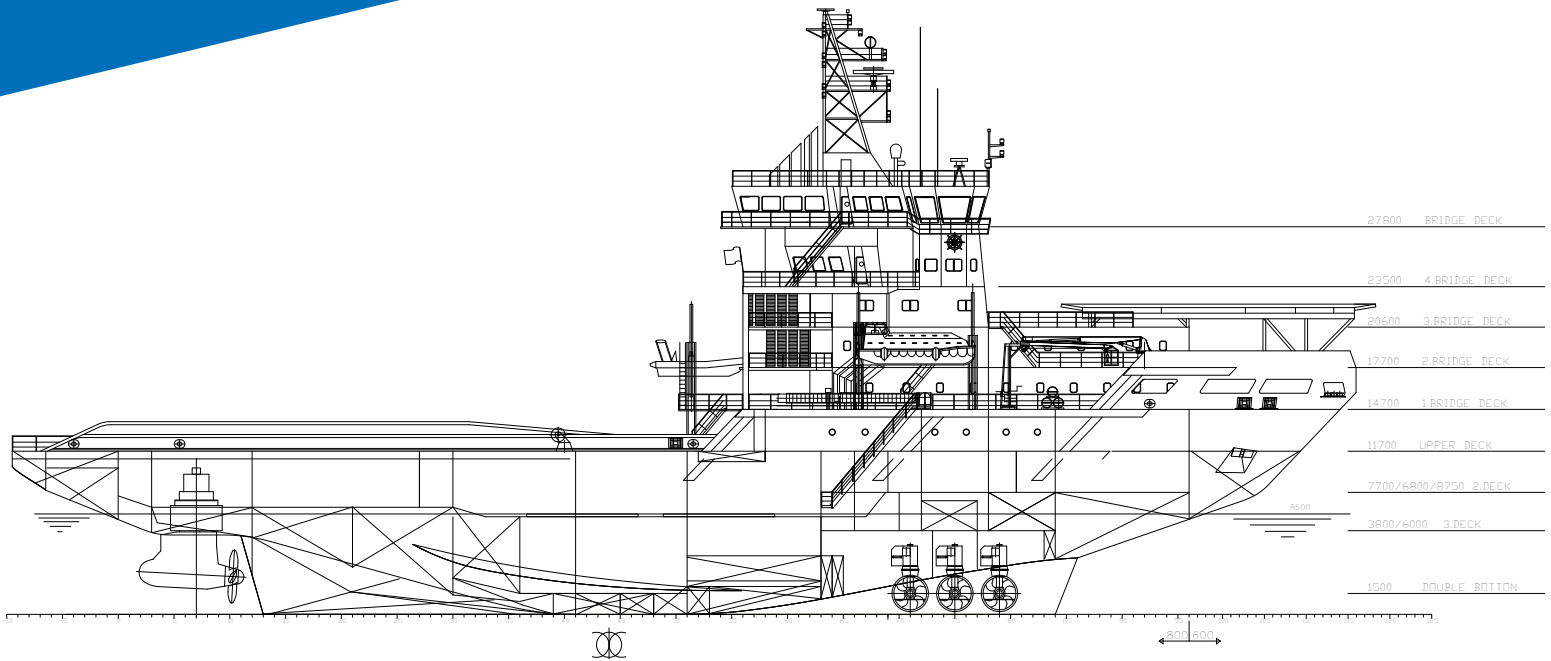
# Accommodation

For crew members, we offer Estonian hospitality with comfortable fully heated and air-conditioned accommodation, client office facilities, conference room,

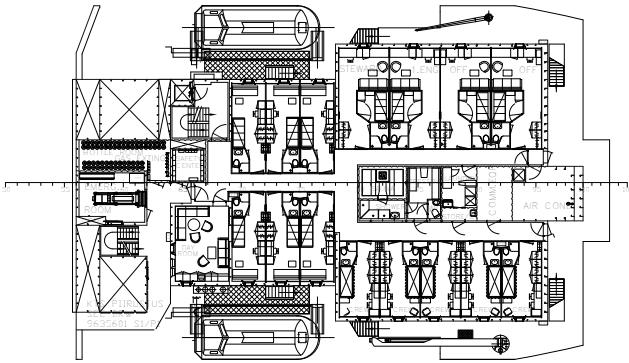
satellite TV, gym, saunas, recreation rooms, laundries on each deck, fully equipped hospital, VSAT with voice and data lines, and good food.



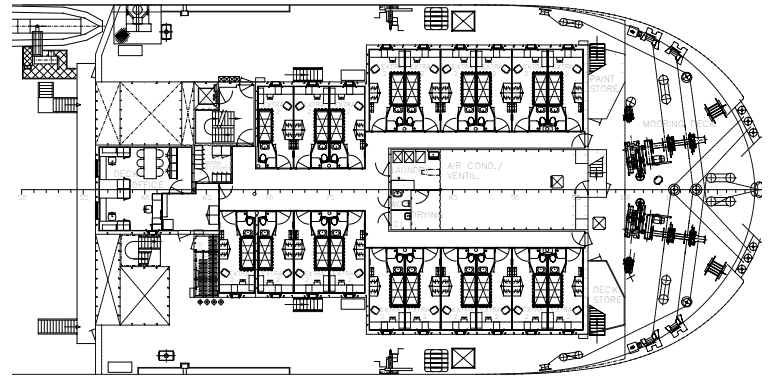
# General Arrangements



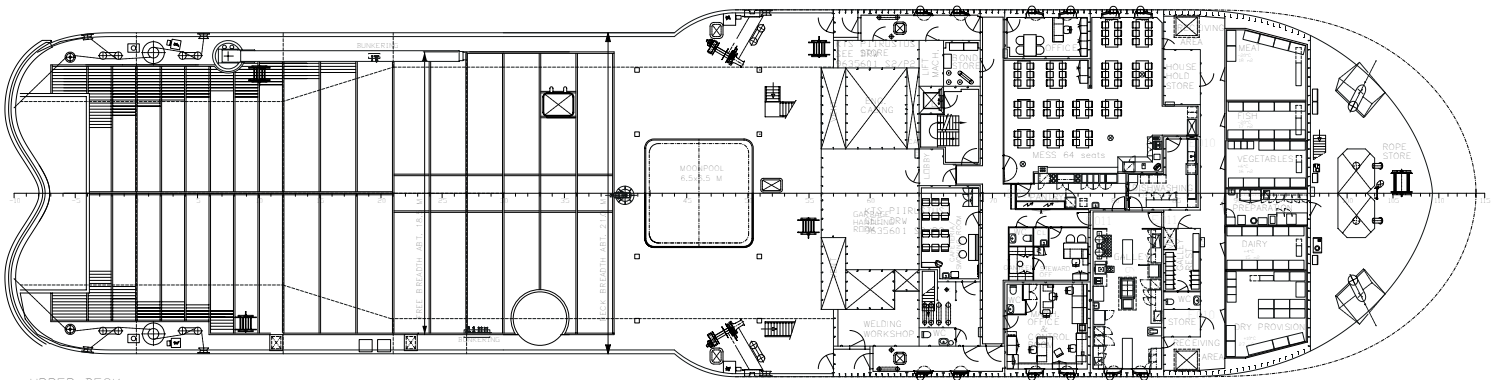




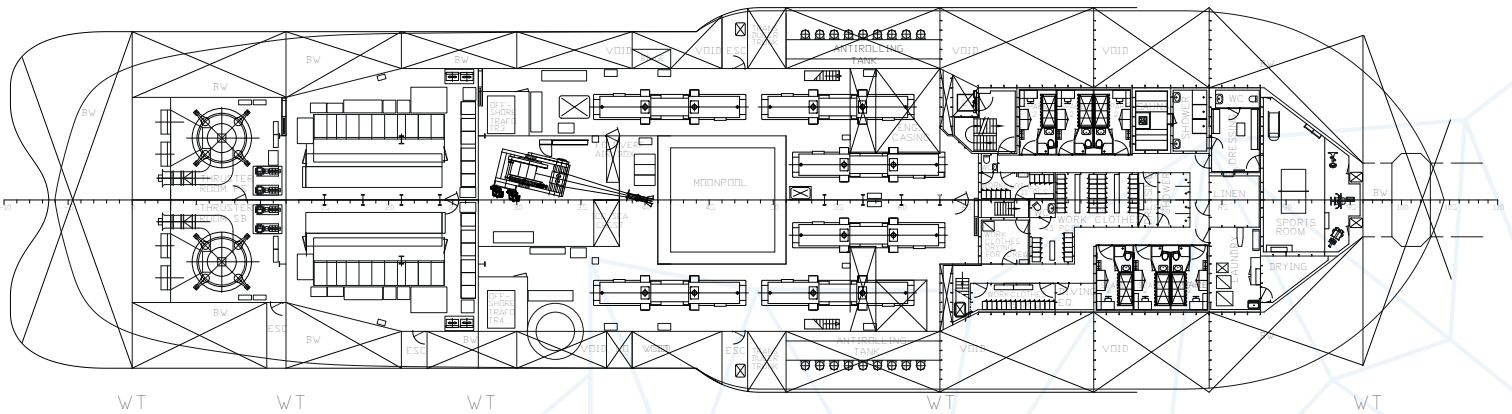
2. BRIDGE DECK



1. BRIDGE DECK



UPPER DECK  
11700 mm FROM BL



2. DECK  
7700/6800/8750 mm FROM BL

## Main Data

Vessel Name	Botnica
Year Built	1998
IMO Number	9165877
Classification	DNV GL 1A1 ICE-10 Icebreaker SF HELDK RPS EO DYNPOS-AUTRO DK (+)
Port of Registry	Tallinn, Estonia

## Features

Accommodation for 72 people, fully heated & air-conditioned. Capability to install ROV and W2W gangway. Survey rooms (online & offline). Client office facilities, conference room, recreation areas, gym, saunas, VSAT voice and data lines, sat TV. Super Puma rated helideck.

Ability to take Client's work & inspection class ROVs, geotechnical equipment or diving spread. Side & moon pool deployment.

## Dimensions

LOA	97.3m
LWL	79.1m
GRT	6370gt
Lightweight	5880mt
DWT	2850mt (approximate)
Beam	24.3m
Moulded breadth	24.3m
Moulded depth	11.7m
Operational draught	7.8 / 8.5m

## Propulsion / Switchboards

Stern thrusters	2 x ABB Azipods, 5000 kW each
Bow thrusters	3 x Brunvoll, 1150 kW each
Switchboards	ABB Industries MH12M 2x2000kVA/3300/400V/50Hz 2x200kVa/400/230V/50Hz
Diesel main	12 x Caterpillar 3512B/1250kW/1500rpm
Generator main	6 x ABB Industries AMG 560 4 L 2850 kVA/3.3kV/50Hz
Generators emergency	Caterpillar 3406 230kW/1500rpm SR4B 250kVA/400V/50Hz

## Dynamic Positioning:

DP Class	DP3
DP system	Kongsberg K-Pos 22 with K-Pos 12 as backup
Operator Stations	5 stations
Portable Terminal	2 x cJoy terminals with auto heading function

## Reference systems & sensors

USBL	2 x HiPAP 501
DGPS	4 x Kongsberg Seatex (DPS122/DPS200/DPS132/DPS232)
Taut Wire	LTW Bandak MK15
RADius	RADius 1000
VRS	2 x Seatex MRU5
Gyro	3 x Sea Octans FOG
Windsensor	2 pc
Survey package	QINSy

## Ice Breaking Capabilities

Draft below 7,8 m	Ice class ICE-10
Draft above 7,8 m	Ice class ICE-1A*
Consumption in harbor	3 mt / day

## Bridge Equipment

Radar	3 x Consilium Selesmar MM-950 NAVBAT
ECDIS	2 x Transas Navi Sailor 4000 MFD
DGPS	2 pcs Leica MK10 & Saab R4
Autopilot	EMRI SEM200 Kongsberg K-Pos
AIS	Jotron TR-8000
Navtex receiver	Furuno NX-700A
Echosounder	Skipper GDS101
GMDSS	A4 compliant radio station
Business Comms	Telenor SEALINK 2 C/Ku-band
Searchlight	5 x 2000W Xenon remotely controlled

## Deck Appliances

Clear back deck area	670 m <sup>2</sup> , ex moonpool 50 m <sup>2</sup>
Mezzanine deck	100 m <sup>2</sup>
Deck load	10 T / m <sup>2</sup>
Moon pool	6.5 x 6.5 x 11.7, closed type
Air to back deck	12-16 connection points 500 m <sup>3</sup> /h
Air receiver	1000 l
Sea / Fresh water	4 connection points 45m <sup>3</sup> /h, 4 bar
Electricity on deck	400 V / 63-630 A 230 V / 16-32 A
Towing winch	Aquamaster-Rauma TW 2100/600 H-S, 300m/64m, 210 t max brake holding
Helideck	Super Puma rated, D value = 19,5m
Max take-off weight	11,2 t

## Bunker Consumption & Capacities

Fuel	1050 m <sup>3</sup> D0
Lube Oil	20 m <sup>3</sup>
Fresh Water	270 m <sup>3</sup>
Water ballast	2200 m <sup>3</sup>
Fresh water maker	25 mt / day
Mobilization speed	10 knots
Consumption at 10 kn	14 mt / day
Consumption on DP	10 mt / day

## Deck Cranes

Main crane	Hydralift OMCVC 3447
Main hook	160 T / 9 m, 32 T / 32 m (double fall)
Secondary hook	80 T / 9 m, 32 T / 32 m (single fall)
Winch wire	1100 m of d=66 mm
Heave compensation	0-75 T single line 75-160 T single line 50 % of above
Auxiliary winch	SWL 10 mt / 33 m
Auxiliary wire	110 m of d=26 mm
Secondary crane	Hydralift KMCV 2201
Main hook	15 T / 4-20 m 10 T / 20 m (ship to ship)
Third crane	Hydomega Telescopic 5 T / 14 m 1.5 T / 30 m
Wire	80 m of d=22mm

## Life Saving Equipment

Lifeboats	2 x 72 persons, CLR-T 8,5, L8,5xB2,89xD1,25, 3700 kg full load. Davit type
Rescue boat	6 persons Ernst Hatecke FRB700 GRP (port side)
Life rafts	6 x 25 persons each Viking DKF
Fire alarm	Consilium / Salwico CS3000

## Accommodation and Mess

Total accommodation	72 persons
Cabins	16 x single cabins 28 x double cabins
Facilities available:	
Messroom and coffeeshop, gymnasium, saunas, operations centre, client office, reception office, hospital.	
TV, personal radio / toilets with showers in every cabin.	



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