MOBIMAR

Marine and Submarine Applications

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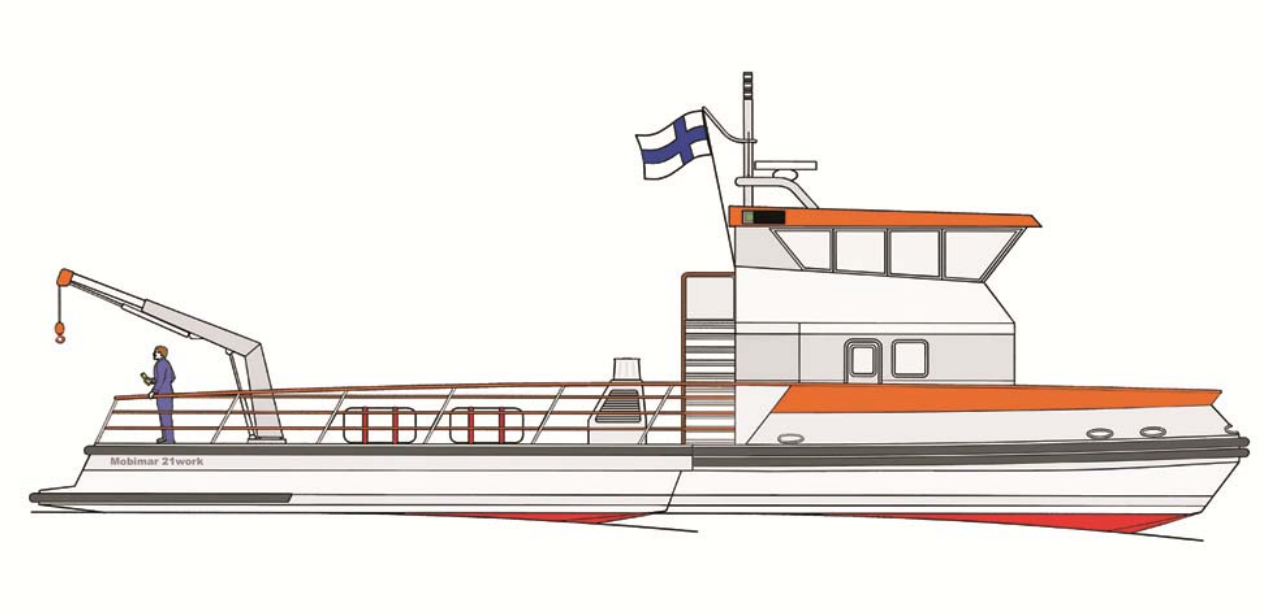


Outline Specification - Mobimar 21 CORS

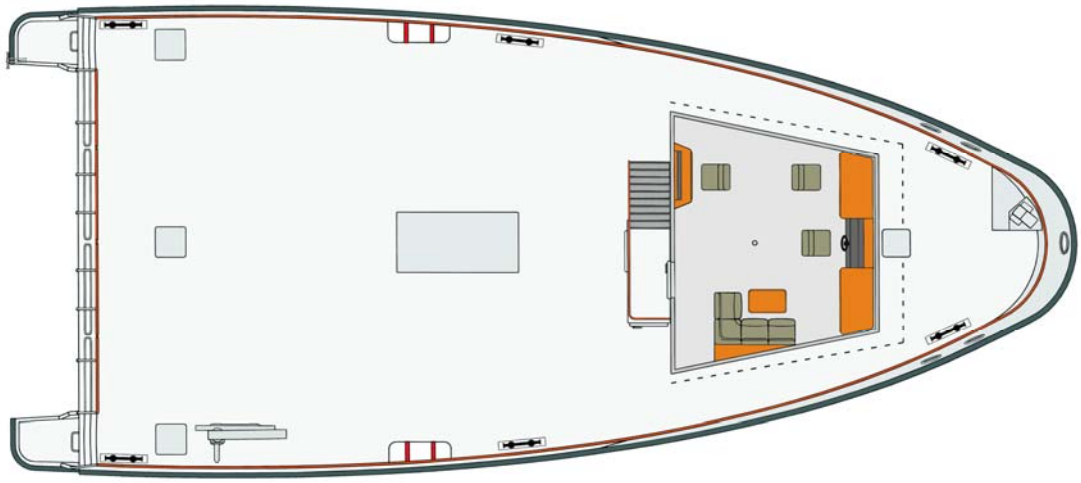
Continuous Oil Recovery Vessel

1 GENERAL DESCRIPTION

Mobimar 21 CORS offers an exceptionally wide and stable working platform. The vessel hull form is a carefully optimised trimaran. Different load conditions have relatively little influence to speed. Fuel consumption is low allowing for smaller fuel tanks and better payload. Smaller operation costs.

Navigation in ice
The basic model of the vessel is not constructed for navigation in ice field. However, we have tested the trimaran hull in arctic laboratory and know that when the hull is properly strengthened, the 21 m version can operate in 20cm solid ice. The shape has been patented for navigation in ice conditions. The navigation ability in Nordic waters will be offered as an option.

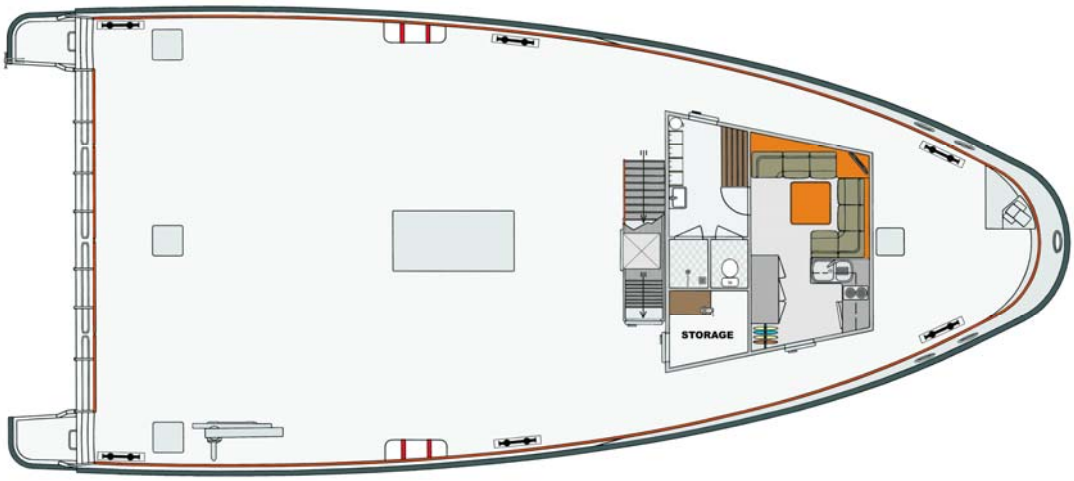
Deckhouse
The deckhouse is in fore ship leaving flush and wide working deck of ~ 120 m2. Mobimar 21 CORS has accommodation arranged so that the expeditions can be longer and part of the crew can rest in the deckhouse. As a standard solution this vessel does not have separate cabins for the crew.



Bridge deck: Control pulpit forward and a small control desk aft. Sofa for planning the operation and standby of crew.

The bridge is designed for single person navigation. There can be a co-pilot sitting next to the helmsman. A small sofa with table is mounted behind the pilots as shown in the GA. A kitchenette is arranged on the bridge. Head is mounted as part of deckhouse with easy access from the work deck.

On main deck level there will be dedicated workshop/deck storage. There is a space for changing clothes and washing in a shower. From this space there is entrance to a separate water closet and shower.
Additionally there will be a small pantry and mess room.



Main deck: Deck house with deck storage for equipment and minor repair works, Mess room with sofas and pantry and cupboards for inventory. Change room for changing the overall and shower and head.

Propulsion system
The propulsion is marine diesel engine with conventional shafting and propeller arrangement.
Controllable pitch propeller is offered as an option for constant low speed working and maximum hydraulic power output in different sea states and load conditions. CP-propeller helps moving the vessel accurately and allowing simultaneous use of the needed hydraulic equipment.
The vessel has low wave making properties. Because of the relatively high speed low-weight materials and constructions are preferred throughout the vessel.
The vessel can be outfitted for many different types of operations with optional equipment. For example the vessel can be turned into an oil recovery version by equipping it with an integrated FinnSweep® brush skimmer. See OPTIONS.

GENERAL ARRANGEMENT

VESSEL DIMENSIONS ~

Length, moulded	21,0 m
Beam	10,2 m
Draft	1,7 m (with fixed-pitch propeller)
Working deck area	120 m²
Speed, service	15 kn
Fuel Capacity	3500 litres
Range	500 nm
Deadweight	Work version 12 tons
Accommodation	Crew 2-4, classified max capacity 8 persons.

Operational requirements

The vessel described in this text is designed for any work operations in ports and coastal waters. The specified operational requirements are as follows:
Special service vessel / Coastal area.
Ambient temperature: + 5 °C - + 28 °C
Sea water temperature: + 5 °C - + 23 °C

The Builder's quality assurance system is based on ISO9001-2003. The whole project will be classified and surveyed by BV, DNV, GL, Lloyds or equal according to rules

I ✠HULL •MACH Special service/Workboat/Oil recovery.

Design Category: Workboat 6 persons, Coastal service.
Work: "Workboat, non-sinking with one flooding department, deck crane".

The Builder will be responsible of the design of the vessel and takes care that the plans are properly approved by Classification Society.

OPTIONS

CP-propeller

In oil recovery mode the speed of the vessel is to be kept low, typically between 1,5 to 2 knots. However, simultaneously the hydraulic systems for the bow thruster, oil recovery system, crane and others must be on. Because the hydraulic pump uses the PTO of the main engine, revs must be kept high. On the other hand, hull resistance of this vessel is low, so typical speed even at idling exceeds the target speed.
Using a fixed-pitch propeller means that speed can be kept low only by switching the clutch on and off. At larger oil spill the recovery time can be days, so control of the vessel becomes straining for both the helmsman and the clutch.
This is why we recommend a CP-propeller for oil recovery application and it is practical to almost any other work also.

Remote control

There will be one control position for the helmsman in the middle of control pulpit and a side steering position at the back of the wheelhouse. In both positions there shall be electric control of rudder, main engine and bow thruster. Additionally the rudder angle indicator shall be at the aft steering position.
Control pulpit shall have all communication equipment, alarm panels, light panel, motor control panel and indicators.

FinnSweep® oil recovery system

The vessel can be delivered with a well proven integrated FinnSweep oil recovery system. There shall be mounted two brush skimmers in a watertight compartment behind the engine room. Under pressure is created behind the brushes and when oily water flows through them oil is separated from the water separated from the brush with the help of a comb. After the comb oil is pumped with a dedicated pump to sacks, a deck container or a rubber container tank floating behind the vessel.
Classification change: "Oil recovery boat, non-sinking with one flooding department, deck crane".

Heating

Heating for Nordic conditions

Air conditioning system

One roof mounted air conditioning unit Aurora EOS 85 or equivalent is mounted on bridge deck.
There is mounted one air-conditioning unit in the mess room

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