

Offshore Oil and Gas Platform Support and Crew Change Vessel

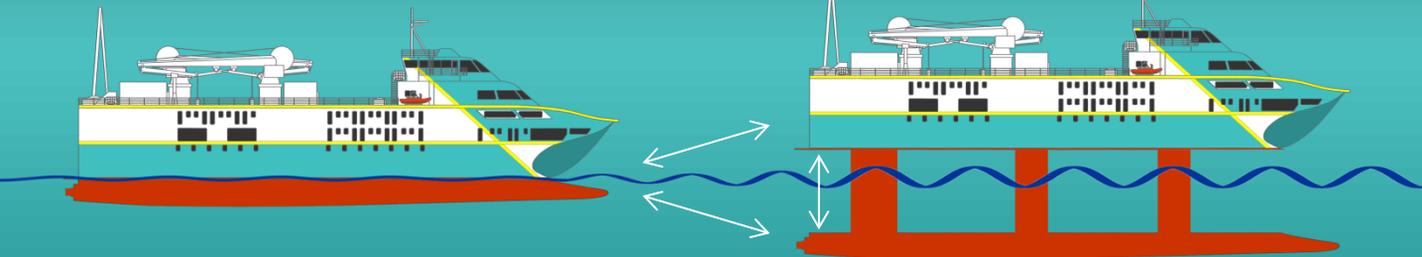
The Submersible Hull Catamaran

A Transforming Vessel

“Designed to work in 4 metre seas!”

From THIS...

...To THIS!



High speed (40k+) wave piercing catamaran, providing reduced transit times in stabilised comfort even in poor weather conditions.

A Semi-Submersible capable of working in up to four metre seas while safely transferring personnel to and from Platforms. Can also conduct surveys and operate ROVs in the same conditions.

General Particulars

Designer	OSSeas Consulting
Length overall	92.56 m
Length hull	88.97 m
Length waterline	79.22 m
Beam moulded	27.40 m
Beam of hulls	5.65 m
Draft	4.18 m
Max deadweight	800 tonnes
Deck loading	400 tonnes
Deck area	1231.5 Sq m
Project workshop area	410 Sq m
Project office area	230 Sq m
Transit lounge area	200 Sq m
Cranes	1x 50 tonne KB HC
	1x 30 tonne KB
Passenger capacity	125 (crew 45)

Operations and Manoeuvring

Hull-up	2 x stern vectored hydrothrust Dual bow vectored hydrothrust
Hull-down	2 x stern vectored hydrothrust 4 x hull-top vectored Hydrothrust
Manoeuvring	DP 3 and manual joystick
Speed hull-up	40 knots +
Speed hull-down	8 knots
Sea state	Max 4.7m, workable 4m (force 6)
Duration	30 days (nominal on DP).
Range	1000 NM at 35 knots 4000 NM (av speed 20 knots)
Trim	Dynamic stabilisers fore and aft
Jacking	2 x 17m hydraulic rams per tower 4 x hydraulic locks per tower
Ballast	Dynamic integrated system
ROV	Extendable gantry launch system

Manning

Total PoB = 125	Project Crew = 13	
Marine Crew = 32	Offshore Manager, Client Rep	= 2
Captain, 1 st Officer, 2 nd Officer, 4x DPOs	Snr Project Engineer, Project Engineer	= 2
Chief Engineer, 2 nd Engineer, 2 x shift engineers	Survey Engineer, 2 x Online Surveyors	= 3
Chief Electrician, 2 nd Electrician	ROV Supervisor, 5 x Pilot Technicians	= 6
Bosun, 4 x ABs/deck hands/crane operators	Transit passengers	= 80
Chief Cook, 2 x Cooks, 2 x Galley hands	Double overnight cabins	= 40
Chief Steward, 4 x stewards	Day trip only	= 40
Cook, 2 x stewards (Crew changes only)		
Medic		

Specialist Equipment

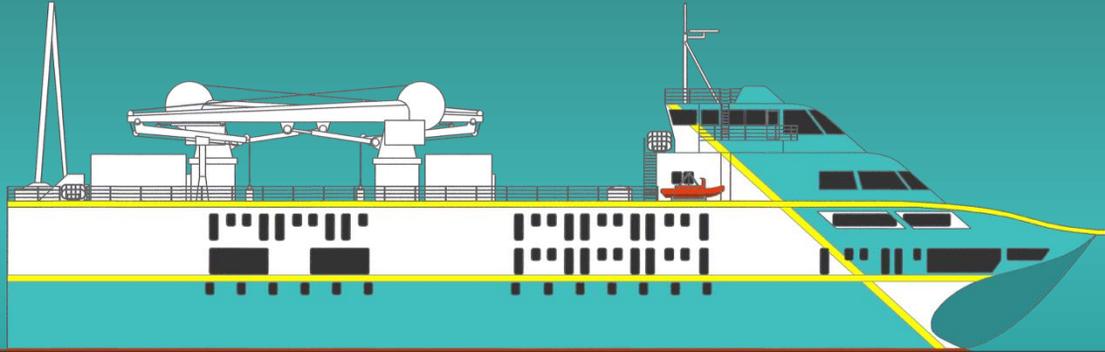
Positioning	Integrated dGPS Nav
Survey	2 x Swathe Multibeam 2 x Sub-Bottom Profilers 2 x Fwd Scanning Sonars
ROV	1 x WROV 1 x Observation ROV
Personnel transfers	Dynamically stabilised fully enclosed transfer system

Safety & Evacuation

Emergency muster station aft of bridge
10 x 25 man life rafts, 6 fwd, 4 aft.
2 x FRC and launching davits
Firefighting monitors on top of each after tower

Class & Notation

Meets SOLAS Requirements.
Cabins ILO certified
Classified as SPS
Classified as HSC for safety systems



Operational Envelope

In Hull-up mode	High speed up to sea state 4-5, above 5, 10 knots transit.
In Hull-down mode	Maintains station with less than 1.5m of pitch or heave in up to 4m seas (force 6) and 40 knots of wind on the bow or stern, or 25 knots on the beam.
Transition	Fully integrated and computer controlled jacking and ballast system .

Platform Transfers

Muster room for personnel changes with access to an upper deck reception room via a lift. Enabling dry and safe transfers via the upper deck personnel transfer system. Separate lounge, galley and day cabin facilities for transferees.

Specialist Facilities

Dynamic Transfer System

Dynamically stabilised spatially referenced transfer system that remains aligned with the platform deck if the vessel beneath moves. Maximum reach of 28m enabling transfer cycles of about 4-6 minutes for up to six persons.

ROV Launch and Recovery

On the centreline aft, 4 deck through 3 deck. Under superstructure opening 3m x 5m minimum with 4m landing area each side. Doors under superstructure base close to make a smooth surface. Extendable launch and recovery gantry fixed to the deckhead of 2 deck enables operations in 3-4m seas by controlling the descent of the TMS/ROV through the wave zone. ROV control room on 4 Deck fwd of launch space.

Design

Hulls

Slender wave piercing hull form containing main propulsion and manoeuvring systems, fluids and ballasting, joined by a bridging structure which fits into the underside of the superstructure in hull-up mode.

Each hull is divided into 10 compartments with full water tight integrity. Each hull has eight longitudinal bulk flood ballast tanks, four each side plus two trim tanks fore and aft.

Six vertical ovoid 16m towers rigidly connected to the hulls extend up as a structural lattice, fully encased and watertight. Two, 17m hydraulic rams in each tower for lifting the superstructure. Each tower has four locking pin systems, two at the base of the superstructure and two at the top.

Materials - Primarily aluminium but may contain some steel.

Superstructure

The first 2.8m from the separation point is a structural base providing lateral strength and absorbing torsional forces. This includes the centre 'V' hull form up to the bow. Contained in this are tank spaces, primarily along the vessel centreline.

On the structural base rests the main superstructure containing accommodation, recreation, offices, stores and working spaces. This part of the superstructure is interchangeable with other superstructures for different purposes.

Materials - Superstructure Base primarily aluminium but may contain some steel. Upper Superstructure primarily composite materials.