

**UMO GREEN 裕風6號**

**UMO JADE 裕風7號**

*INERTIA M3*





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Suitable for transfer of crew and cargo to wind industry, crew change vessel, survey, ROV, standby rescue and guard duties. The vessel design is a proven concept within support vessels for offshore industry and is 3rd generation of the design.

- Inertia M3 is a combination of the best performances from a trimaran, catamaran and a mono hull
- An adjustable Hydrofoil of 15 sq. m horizontal firm plate is mounted at the bottom of the centre hull, which reduces the heave movements and optimizes trim of the vessel

The hull shape combined with the high speed and seaworthiness performed by the Trimaran hull concept and the Swath technology (Small water plane twin hull) provide excellent seaworthiness and fuel economy when the vessel is in transit speed as a Trimaran.

- Hull form of the Trimaran gives crew and passengers optimal sea comfort and less fatigue, and reduced slamming
- Accommodation and wheel house placed aft on the vessel, to reduce heave and pitch for improved seacomfort for both passenger and crew

### VESSEL ACCOMMODATION

Inertia M3 can transport 24 passengers in business class seats. The design is highly equipped for good comfort for passengers. All seats are business class similar to airplanes, able to adjust sleeping mode, with necessary entertainment, Wi-Fi, etc.

The vessel has 4 single cabins with toilet and shower facilities. The living quarters also incl. galley, mess room, change room, office, saloon and all necessary equipment for living onboard.



- A hull during construction, showing the opening in the centre hull that allows for greatly reduced waterplane area in SWATH mode



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### HYDROFOIL

The hull has a large integrated active hydrofoil which significantly reduces vessel motions. During slow speed maneuvering and approach to the offshore construction, the foil significantly dampens the motions of the vessel, thus increasing the weather window and reducing risk of slippage while pushing towards the offshore construction.

At speed, the motion damping is further enhanced, and the risk of bow diving significantly reduced, by an active flap which acts in the same way as the flap on an airplane wing.

The required flap motions is however very small compared to an airplane wing, and the lift force on the hydrofoil is doubled just by a 10 degree flap angle.

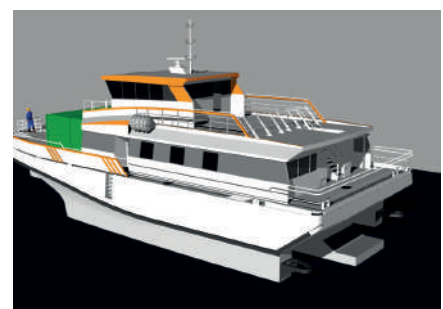
The main part of the hydrofoil is built in solid aluminium and permanently fixed to the hull, whereas the flap is located behind the fixed aluminium part and therefore well protected. No parts of the hydrofoil is submerged below the keel of the hull. In the event that a floating object hits the flap, the flap is designed to "give in" until the object has passed, and then return to normal operating position.

In the unlikely event of complete loss of the flap, or a permanently damaged flap, the fixed aluminium part of the hydrofoil will still produce a positive lift so the vessel can operate as usual, just without the added motion damping. To eliminate the risk of leakage, the servomotors required to move the flap are located in a separate watertight compartment inside the hull.

The flap motion is controlled by the same advanced Active Ride Control System as the Humphree interceptors, and forms an integrated part of the total motion control of the vessel. The flap only works at speed, and has no influence on the zero speed performance that these vessels are known for.

The bow foil on port side of the centre hull with active flap may be seen in the picture below.

The bow foil produces lift forces between 0 and 16 tonnes, with an average of 8 tonnes. This enables great damping of pitch motions during transit.

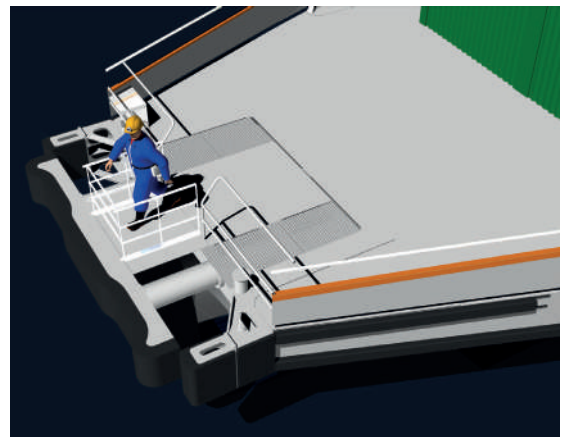
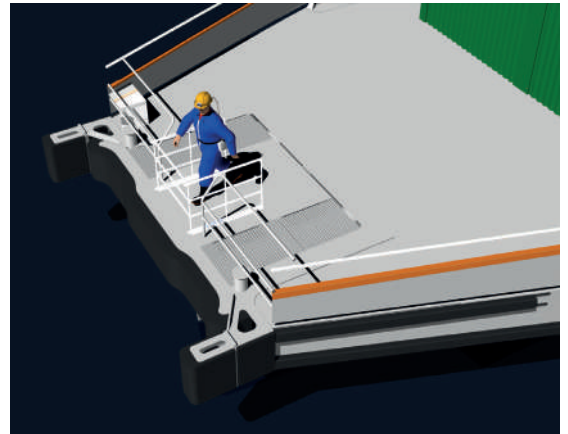


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### SOFT BOW - ACTIVE GANGWAY

The Soft Bow is an active impact reducing system which is built into the hull of the vessel. The Soft Bow is reducing the load impact on the boatlanding system on turbine, offshore vessel/installations by up to 50% and thereby keeping the landing load within the manufactures limitations of the boat landings.

- Reduce the impact load with minimum 50%
- Enable up to 8 times higher approach speed
- Maintaining the impact load inside design criteria.
- Fully automatic system and logging all data.
- Can be integrated to DP system
- Operated by touch screen panel
- Produced as a box system for easy built into the vessel
- Low maintenance cost, due to simple construction
- Safe transfer due to keeping constant contact to the boat landing
- World Patent



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### DATA SHEET

#### MAIN

Design	Inertia M3
Built	2022
Class	CR
Flag	Taiwan
Passengers	24
Crew	7
Cabins	3 double cabins with own toilet and shower + 1 single cabin
Hull	Aluminium
Lenght o.a. (m)	31.3
Beam (m)	10.8
Draught transit/service	1.5/2.5
Bunker capacity (liters)	20,000
Fresh water capacity + watermaker producing 2 tons/day (liters)	2,000
Max deadweight (t)	25
Total forward deck capacity (m <sup>2</sup> )	70
Total aft deck capacity (m <sup>2</sup> )	35
Forward deck dimensions (m)	14.24 x 12
Main engines	3 x MAN D2862 LE489 IMO Tier 3 1066kW
Waterjets	3 x HTX52
Bow thruster	2 x 100 kW
Auxiliary engines	2 x 50 kW
Speed - Sprint / Service (knots)	35/25

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Bunker consumption (l/h at max speed)	450
Soft Bow (active impact force reduction)	Yes

### CARGO HANDLING

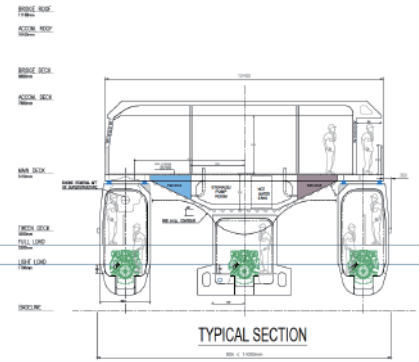
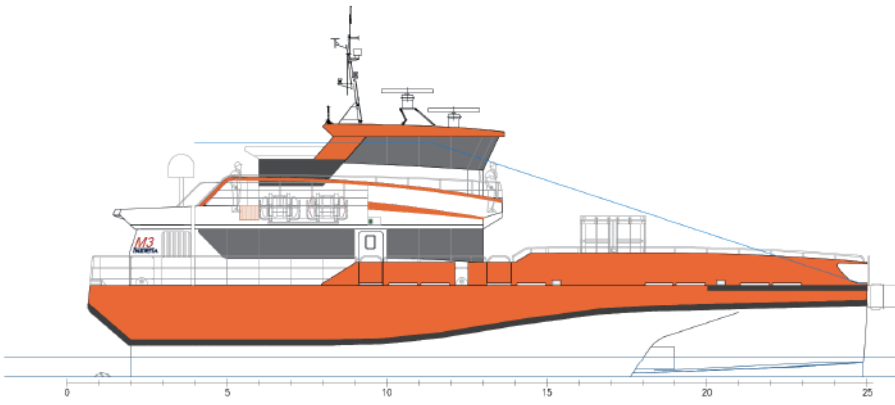
Max cargo capacity on deck (t)	10
Deck strength (t/m <sup>2</sup> )	1.5
Deck crane (option)	TMP900K
Max lifting capacity (kg)	3,000
Max lifting capacity at max outreach	890kg @ 9.3m

### NAVIGATION AND COMMUNICATION

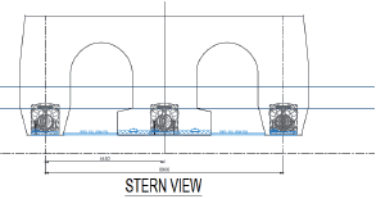
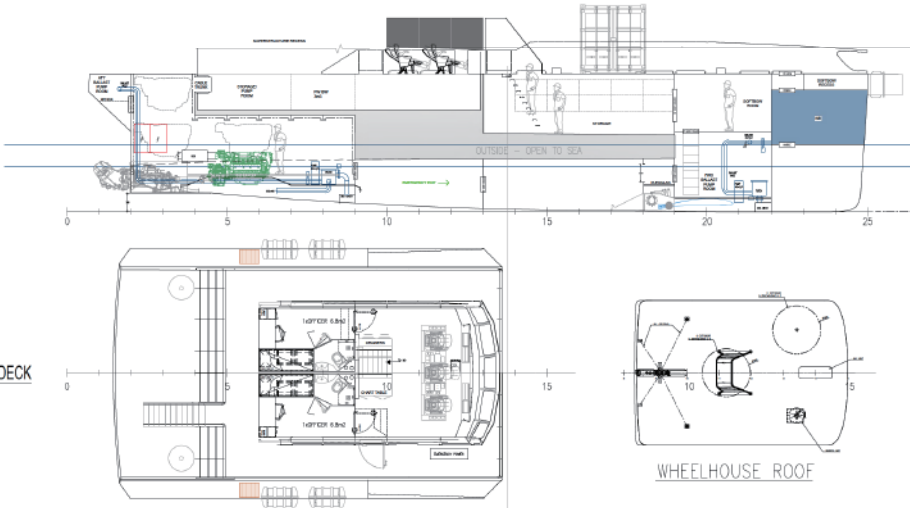
Radar	1 x Sperry X-band 1 x S band
Electronic chart	ECDIS
AIS	Sperry class A
GMDSS	A1/A2
Heading system	Sperry GPS compass Magnetic compass
GPS	Sperry
Depth sounder	Sperry
VHF	1 x Fixed Sailor 3 x Sailor (Handheld)
Navtex	Sperry



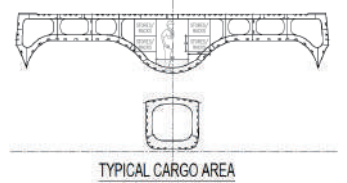
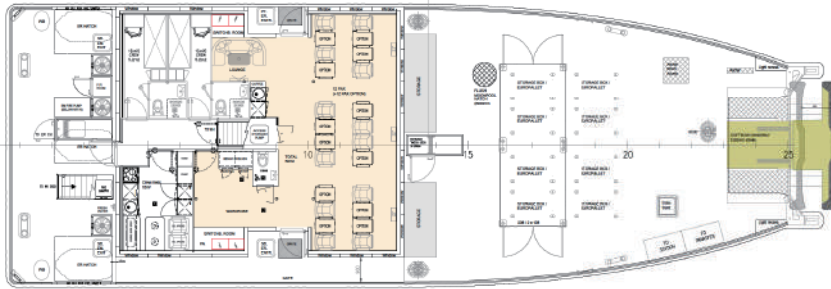
EXTERNAL PROFILE



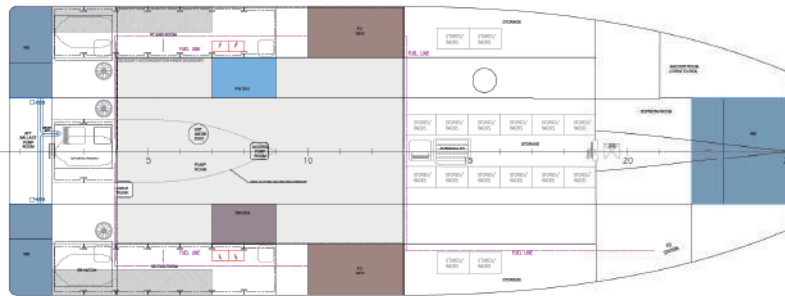
WHEELHOUSE DECK



MAIN DECK



BELOW MAIN DECK



DIMENSIONS	
Length of machine	27.65 metres
Beam (max)	11.00 metres
Beam (max) approx.	13.60 metres
Beam (max) at deck	5.15 metres
Max. draught @ lightship	3.00 metres
Max. draught @ full load	3.50 metres

GLASS AND FLAG	
Class	CE + BV
Flag	TANZANIA / BANGLA

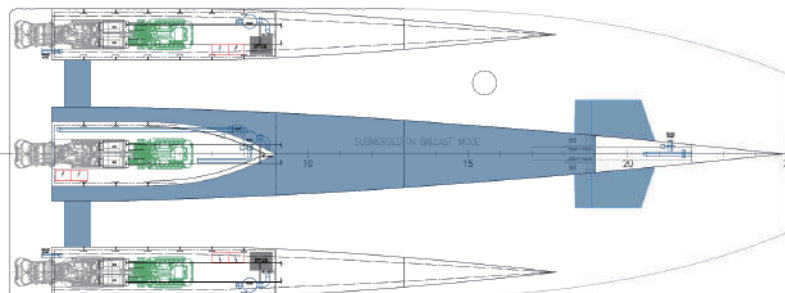
POWER/PROP	
Main engine	3 x MAN ES600 LE480 90 kW/1200HP
Generator	3 x 750KVA
Waterjets	3 x HDX32

PERSONNEL AND PASSENGERS	
Crew (with cabin)	2 OFFICER + 2 SINGLE (2 DOUBLE COCK)
Passengers	12 + 12 OPTION
Deck cargo	1200 (2400)
Deck load capacity	1.20 t/m <sup>2</sup>
Cargo deck area	150 m <sup>2</sup>
FUEL	20 m <sup>3</sup>
FRESH WATER	2 m <sup>3</sup>
BALLAST	50 m <sup>3</sup> (2 x 25 m <sup>3</sup> tanks)
MAXIMUM DISPLACEMENT	180 t

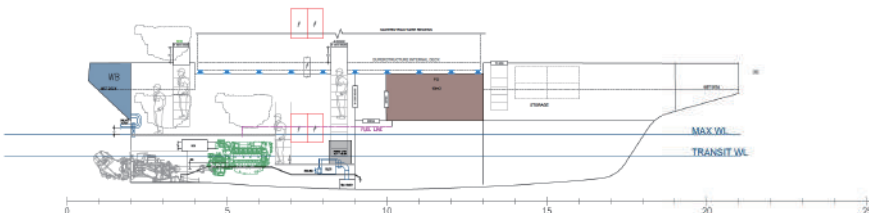
PERFORMANCE	
Speed (max)	20kn @ 100 displacement
Service speed (ECONOM)	22kn @ 100 displacement
Bested point	20kn / Fuel 13.5/15%

FEATURES	
Raw tender	SOFTWARE Hydraulic Transfer
Wave damping device	3 x HULLBOW (14000) - 150kn
Water control system	2 x HULLBOW (14000) - 150kn
Water machinery	2 x HULLBOW (14000) - 150kn
Noise and vibration	HUMPHREY Active Noise Control
Stability	RECSTAR Stability
Structure	Superstructure on resistant moulds
Weight	48 tonnes @ 200kn @ 200kn
Capacity	near 300 kg

LOWER HULL



SIDE HULL



REV	DESCRIPTION	DATE	BY
1	AS SHOWN TO CLIENT	26.07.2018	ING

GENERAL ARRANGEMENT M3 CTV

WIND World Inertia Naval Design  
Contact: +31 (0) 20 674 4444  
www.wind.nl

INERTIA M3  
SE1053-100-001

Scale: 1:1  
Sheet: A1  
Total: 1:100



# 裕民風能航運

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