



MARIP-12

Work Class Robotic USV

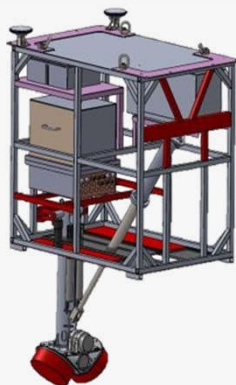
'MARIP-1201' is a offshore classed Marine Autonomous Robotic Intervention Platform, measuring 12 by 6 meters. The platform can launch and recover ROV's and features two large moonpools for multiple survey sensor deployment. MARIP is fitted with a proven control & command system for over-the-horizon unmanned operations. MARIP can be used to complete tasks such as ROV inspection and repair work, subsea positioning, surveying, MCM and coastguard monitoring without the need of a ship on station or sea-bed anchoring. MARIP-1201 modular design provides a wide range of industry tasks within the energy sector and others. It's a solution for both nearshore and over the horizon operations.

KEY FEATURES



- 2 large moonpools for maximum sensor deployment
- ROV Launch & Recovery capability
- Improved safety of offshore survey operations
- Long endurance, full ocean capability
- Fully launch & recovery of underwater vehicles
- Highly configurable
- High payload capacity up to 5 Ton's
- Ultra-low operational carbon footprint
- Unmanned operations with onshore CCR 24/7 in command.
- COLREG compliant and Class certified for unrestricted navigation
- Mobilization by using standard (3) 40ft. containers

SURVEY APPLICATIONS - Moonpool Blank Canvas Approach



- Marine construction survey: USBL, DGNSS
- Metocean data collection: ADCP, weather station, CTD
- Environmental: Passive Acoustic Monitoring (PAM)
- Hydrocarbon detection, skimmers, dispersants
- Seismic support: CTD, USBL, PAM, ADCP
- Site survey: multibeam sonar, motion sensors, CTD
- Sidescan sonar,
- Security and surveillance: cameras, video, infrared sensors

BENEFITS

- Reduced HSSE exposure and risk -
- Increased sustainability by reducing fuel consumption up to 95% of conventional vessels -



Europe's largest USV to date

APPLICATIONS - ROV / MCM OPERATIONS



- Remote controlled ROV deployment capability
- Survey limit: 1.5m H(s)
- DP Station holding: 30 days
- Working depth: 250 meters
- Autonomous ROV winch
- Light weight LAR system
- Holding up to 300 meter umbilical length

24/7 SUPERVISED OPERATIONS



- MARIP sends real time images, RADAR information and situational awareness data over satellite and 4G to a team of operators keeping watch and controlling the vessel remotely 24/7 from its IJmuiden based control room.
- MARIP uses control software with autonomous obstacle avoidance capability and radar repeater including FLIR night vision system

REMOTE OPERATION CENTRE



- Onshore 24/7 Human Supervision
- Following International regulatory for unmanned USV operations.
- Ensuring robust vessel behaviours, reliable communications, situational awareness, and a strong safety case.
- Real-time insights, faster data-processing and data delivery, leading to more efficient decision-making

SAFER AND MORE SUSTAINABLE

As an unmanned vessel, it eliminates the risks associated with human involvement in offshore operations. With an up to 95% reduction in fuel consumption compared to conventional vessels, it also lays the foundations for more sustainable inspection and survey operations.

Modular designed allowing for containerised mobilisation



TECHNICAL SPECIFICATION

MARIP-1201	
Length	11.5m
Beam	6.41m
Draft	0.76m
Height	5m
Displacement	20 Ton
Payload	5 Ton on transfer beams between hull sections at deck level
Hull material	Hybrid construction with HDPE hull plating connected to aluminium subframe
Propulsion	2 x Independent commercial rated diesel engines connected to waterjets
Fuel (EN-590, HVO or 100% Bio-fuels)	2 x 3.400 litre (without range extenders)
Average fuel consumption (combined)	13.5 ltr/hr
Transit Speed	< 10 knots
Endurance	21 days at 5 knots survey, 30 days at DP
Range	2.000 NM
Loitering capability	Force 10 Beaufort
Station-keeping (Significant wave height)	7m H(s)
Station-keeping (Wind)	> 25 Knots
Station-keeping (Current)	> 3 knots
Survey limit (Multibeam)	1.5 - 2.5 H(s)
ROV Launch and Recovery Wind	< 25 Knots
ROV Launch and Recovery Wave height	1.5 - 2.5 H(s)
Control, Command and monitoring	24/7 manned control room with over the horizon operations via satellite
Situational Awareness System	ARPA-RADAR, FLIR IR/OR camera, 360 HD camera, 8 x camera, 2-way load hauler
Obstacle avoidance	COLREG compliant
Safety	Fully redundant propulsion, communication, control, voyage data recorder
Notation Manned operation A1 area	C ∇ HULL+ RES22- RES27 Machinery
Notation Unmanned operation	Pending
MMSI	245855000
Flag	Dutch
Communications	VSAT, Iridium Certus, 4G, UHF and VHF (bridge to bridge over IP)
Power generation	2 x 24V @ 220 Amp, 48V, 220-230V, 400V@60Kva (Genset)
Server rack and compartment	1 x 21u + 1 x 15u, temperature controlled compartment with backup AC systems
Mobilisation	3 x ISO standard 40ft. Containers suitable for road and sea transport worldwide

MORE EFFICIENT

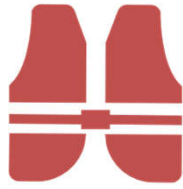
MARIP brings a fully optimised solution for inspection and survey tasks with real-time data transfer to a team onshore. Staff can analyse and interpret acquired Geo-data in near real-time, without having to mobilise offshore and spend time on complex logistics operations.

Documentation exclusively prepared for N-Sea
RC Dock Engineering BV is a wholly owned subsidiary of Sovereign Global Solutions Middle East





MARIP key fundamentals



Safety

No personnel required offshore



Operations

Full 24/7 over the horizon operation via satellite broadband or 5G networks



Environment

0.1% of CO2 emissions of a conventional vessel



Efficient

Fast & Low-cost mobilisation using standard shipping containers for international transport



Economic

Industry's lowest CAPEX and OPEX for the DATA delivered



Sensors

Swappable payload solutions for ROV's and sensors, using 1 platform