

SEA-KIT



SEA-KIT INTERNATIONAL SEA-KIT XL USV

The SEA-KIT XL Uncrewed Surface Vessel (USV) is a robust and versatile naval defence and maritime security platform that can operate effectively at long range even in heavy seas. With a payload capacity of up to 7 tonnes and powerful bollard pull, the XL USV is suitable for towing seismic cables and larger sensors. The XL can launch and recover a range of different vehicles and payloads, such as AUV/UUVs and ROVs, enabling the execution of multiple missions at reduced cost and with less risk to personnel than crewed vessels. Fully redundant station holding capability, Cat 0 operations for unrestricted use and a large lithium UPS supply for ship systems make the SEA-KIT XL a high-endurance standalone asset or strong force multiplier as part of a larger fleet.

SEA-KIT USVs are controlled using SEA-KIT's proprietary G-SAVI control and surveillance platform, which provides safe and secure operation from remote control centres.

KEY BENEFITS

- Safer, reduced risk, low environmental impact maritime operations
- Commercially proven technology with extended endurance & full ocean capability
- Fully uncrewed launch & recovery of underwater vehicles & sensors
- Highly configurable payload capacity
- Acoustically quiet operation
- COLREGS compatible
- On-board processing capability, including ATR & data compression
- Remote operation from secure location anywhere in the world

USE CASES

- Anti-submarine warfare
- Mine countermeasures operations
- Maritime intelligence surveillance & reconnaissance
- Logistics support
- Maritime & border security
- Amphibious operations
- Oceanographic & hydrographic survey



OPERATIONAL VARIANTS

The SEA-KIT XL USV is designed to support a wide range of maritime operations and is highly configurable.

OPTIONS INCLUDE

- ▲F FATHOM with MBES package
- ▲S STEADFAST with station holding package
- ▲V VIGILANCE with maritime security package
- ▲T TRANSPORTER with launch & recovery package

E.G. SEA-KIT XL ▲V▲S

The SEA-KIT XL VS delivers a mobile, extended endurance, stable sensor platform that can be deployed to extend the surveillance capability of maritime and border security systems. The platform can be configured to deploy a suite of maritime security sensors including hi-resolution radars, long range electro-optic and thermal cameras and intruder detection sonars. The vessel can hold station in near silence for extended periods, enabling sensors to be deployed many miles from ports or the coast.



E.G. SEA-KIT XL ▲F▲S▲T



The SEA-KIT XL FST includes a multibeam echo sounder, station holding and underwater vehicle launch and recovery packages to deliver versatile ocean survey capability. When equipped with a swarm of AUV/UUVs, large areas of the ocean can be surveyed by the vessel and its assets fully autonomously. The extended endurance and robustness of the XL Class allows for surveys many miles from port or mother ship.

Variations of sub-categories available on request

VESSEL SPECIFICATION

LENGTH OVERALL	17.625	metres
BREADTH	3.5	metres
HEIGHT (FROM UNDERSIDE OF FINS)	10.6	metres
OPERATIONAL DRAFT *	1.8	metres
MAX DISPLACEMENT *	45	tonnes
PAYLOAD	Up To 7,000kg	(Excluding Ballast water)
ENDURANCE *	28 Days @ 5 Knots	(3360 Nautical Miles)
AUV VARIATIONS	1 x Hugin Superior	or equivalent
ROV VARIATIONS	1 x 750	kg
CABLE LAYING CAPACITY	TBC	
HULL CONSTRUCTION	Aluminium	
MAST CONSTRUCTION	Aluminium	
PROPULSION	2 x 75kW Directional Stern & 1 x 25kW Directional Bow	thrusters
BOLLARD PULL	TBC	
LOITERING CAPABILITIES	Beaufort 8	
MAX SPEED	9	knots
ENDURANCE SPEED	5	knots
OPERATIONAL SPEED	6	knots
RANGE *	3,360 Nautical Miles	(excluding optional additional tank)
FIXED FUEL CAPACITY	7,000	litres
OPTIONAL ADDITIONAL FUEL	48 Days @ 5 Knots (5760 Nautical Miles)	5,000 litres
COMMUNICATIONS	Vessel control and monitoring via the purpose-built G-SAVI package Remotely controlled VHF & DSC system with two-way onboard sound feed Wi-Fi, Radio, Satellite (Iridium and Inmarsat) and Kongsberg Maritime Broadband Radio	
COMPLIANCE	COLREGS	Compatible
OPERATIONAL ENVELOPE	Multiple worldwide control stations	Cat-0 Unrestricted
SELF RIGHTING	YES	

* Values will depend on the operational profile

CERTIFICATION

The SEA-KIT XL Class design is patented and holds Lloyd's Register Unmanned Marine Systems certification. The SEA-KIT hull designs are certified by Lloyd's Register.



CONTACT US FOR INFORMATION ON THE SEA-KIT Σ CLASS (36M)



G-SAVI – A VIRTUAL HELM FOR REMOTE USV CONTROL

G-SAVI is SEA-KIT's proprietary, purpose-built virtual helm station. Numerous software elements interact with onboard systems, allowing the vessel operator to:

- Take direct control of the vessel's autopilot and access all features, including multiple control modes
- Access full admin control through various levels of operator user accounts
- Monitor the connection state of all systems onboard the vessel

- Switch power to all onboard systems and control their function
- Monitor machinery, environmental and vessel health data and easily recall data from any point in time.

G-SAVI can be easily customised to control additional equipment. It also incorporates the vessel's numerous redundancy features and can be installed on most standard desktop computers for the control of USVs located anywhere in the world.



REDEFINING THE WAY WE WORK OFFSHORE

SEA-KIT International is a British SME providing hi-tech, robust USV solutions for nearshore and over the horizon deployment. The company is sharply focused on driving down the cost of geo-data collection and reducing the sector's carbon emissions. Since Shell Ocean Discovery XPRIZE success in 2019, SEA-KIT USVs have achieved numerous world firsts and are now deployed around the world on commercial projects.

FIRST INTERNATIONAL COMMERCIAL UNCREWED TRANSIT IN 2019

- 22** hour transit in busy shipping lane
- 5%** fuel consumption compared to crewed vessels
- 2.5** Only 0.2% of 2.5 tonne payload capacity used
- 1** shipping container needed to deploy USV globally

FIRST UNCREWED OFFSHORE PIPELINE INSPECTION IN 2019

- 4** offshore pipelines inspected
- 175** 175km of pipe surveyed
- 100** Up to 100km from shore
- 6** days offshore operation
- 0** risk to personnel with no crew onboard

UNCREWED ATLANTIC SURVEY MISSION IN 2020

- 22** days offshore
- 1.5** billion data points gathered
- 24/7** remote operation from UK control centre
- 1200** 1200+nm travelled
- 1000** 1000+km² ocean floor mapped