



ADSAB

The logo for Exail Technologies features the word 'exail' in a lowercase, sans-serif font. The 'e' is white, and the 'x' is a light teal color. The remaining letters 'a', 'i', 'l' are white.The logo for STEERAI features the word 'STEERAI' in a white, uppercase, sans-serif font. The letters are widely spaced, giving it a modern, futuristic appearance.

AUTONOMOUS 170M DETECTOR USV FOR MINE COUNTERMEASURES



**Modular, adaptable, and scalable
solution for Mine Countermeasures
(MCM) launched & recovered from
an Autonomous Unmanned Surface
Vehicle (USV)**

Abu Dhabi Ship Building (ADSAB), Technology Innovation Institute (TII) and Exail Technologies enter a Strategic R&D Partnership to develop Unmanned MCM Integrated Systems, exploring decades of experience of the partners in designing and constructing top notch, world-class advanced vessels; in leading global research and development dedicated to pushing the frontiers of knowledge; and in cutting-edge robotics, maritime, navigation, aerospace and photonics technologies.

UNMANNED SURFACE VESSEL

170M DETECTOR

SPECIFICATIONS

Unmanned Surface Vehicle (USV)	170M Detector
Length (overall)	17.23 m
Overall Beam	4.08 m
Draft	1.90 m
Propulsion	2x Volvo Penta 900 HP / Waterjets HJ403
Speed (max)	45 Knots
Marine Autonomy Payload	<ul style="list-style-type: none">• Surface: Radars, LiDars, RGB Cameras, Thermal Cameras, EO/IR, GNSS Compass, Weather Station, Exail's FOG Phins INS• Underwater: Depth & Speed sensors, Exail's SeapiX Forward Looking Sonar, Doppler Velocity Log
Communication	BLOS and DLOS
Operational modes	<ul style="list-style-type: none">• Remote-control• Semi-autonomous• Fully autonomous



MARINE AUTONOMY KIT

MAK V0

SPECIFICATIONS

Modular Autonomy for Maritime Operations

The Marine Autonomy Kit (MAK) transforms manned vessels into fully autonomous systems, offering remote, semi-autonomous, and fully autonomous operation modes for enhanced mission flexibility.

Advanced Situational Awareness and Obstacle Avoidance

Equipped with multimodal obstacle detection—including LiDAR, radar, thermal imaging, and AI-driven target tracking—MAK ensures COLREG-compliant navigation and high-precision manoeuvrability in complex environments.

Seamless Command and Control Across Domains

With integrated BLOS and DLOS communication, MAK supports real-time remote operations through a compact portable station or a 20-ft containerized ground control hub, ensuring mission success even in GNSS-denied scenarios.

Scalable, Mission-Ready, and Battle-Proven

From mine countermeasures to high-speed interception, MAK's modular design supports various payloads and cooperative autonomy features, enabling swarming, "Follow Me" operations, and multi-vessel coordination for next-gen naval dominance.



MINE COUNTERMEASURES

SEASCAN MK2 ROV

SPECIFICATIONS

Length	1580 mm
Height	430 mm
Width	500 mm
Weight	50 kg
Propulsion	2x horizontal and 2x vertical thrusters
Sensors	<ul style="list-style-type: none">• 1x High resolution sonar:• 120° horizontal field of view• Dual frequency digital CHIRP mechanical scanning sonar for long-range target detection and enhanced high-resolution inspection• Real-time updates for video-like imagery• 3x HD color video cameras for close inspection• 4x LED search light
Endurance	up to 3 hours
Cruising speed	4 knots
Operating speed	0 to 3 knots
Operational depth (max)	300 m
Operational range	up to 1500 m

- **Fiber optic remote-control link to USV for long-range mission**
- **Low magnetic and acoustic signature**
- **Advanced navigation algorithms for semi-automatic missions**



MINE COUNTERMEASURES

K-STER C ROV: MINE DISPOSAL SYSTEM

SPECIFICATIONS

Length	1500 mm
Height	430 mm
Weight (in air)	50 kg
Tilt and head angle	+90° to -90° to dispose any kind of mine under the right angle

- **Li-Ion secondary battery**

Propulsion	2x Horizontal and 2x Vertical thrusters
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- **Dual frequency sonar for long range target detection and accurate approach**
- **HD color video camera with automatic day/night function and LED search light**

Endurance	1 hour
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Speed (max)	6 knots
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Nominal speed	0 to 3 knots
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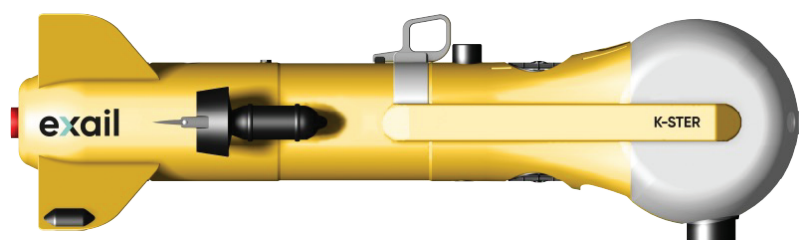
Operational depth (max)	300 m
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Operational range	Up to 2000 m
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Acoustic subsea positioning system	USBL
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Training head	Shaped charge, 2.5 kg insensitive explosive
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- **(3 kg NEQ), cat.1.1D**



MINE COUNTERMEASURES

R7 ROV

SPECIFICATIONS

Dimensions (mm)	780 x 551 x 424
Weight (in air)	< 35 kg
Propulsion	7x DC thrusters, 4x horizontal (vectored) and 3x vertical thrusters (for correct attitude)
Movements	in 3 axes + rotation on its own axis
Operating depth (max)	300 m in sea water
Sensors & Payloads	<ul style="list-style-type: none">• Powerful lighting system: LEDs spotlights• 1080p FHD inspection camera with tilt and optical zoom• Real-time image processing full HD camera• Ultra-sensitive inspection TV camera• Full HD navigation TV camera with wide angle• Full HD backward camera• Forward-looking dual frequency imaging sonar; Sonars for navigation and side scan• INS/DVL• GNSS• Acoustic subsea positioning system: USBL (compatible with the Exail's Gaps range)• Highly accurate navigation system• Electric manipulator arm with three or five functions• UXO depollution device

Advanced navigation features

Station keeping	Automatically holds the ROV in a fixed position for optimum inspection conditions
Go to waypoint	Autonomous ROV navigation to predefined geographical points
Tracking	Autonomous tracking of an object at a fixed distance

