



nauticus robotics

AQUANAUT MK 2

All Electric Tetherless Transforming Subsea Robot

Nauticus all-electric subsea AUV/ROV transforming robot, Aquanaut Mk2, is the most advanced **tetherless** subsea robot on the market. Aquanaut Mk 2 has two battery pack options providing 116-hour mission endurance 120 km range or a 175-hour mission endurance 220 km range. Aquanaut Mk2 is 3000 msw depth rating and is fully hoverable while in AUV mode with mission endurance figures calculated at station keeping in 1 knot of current.

In addition, Aquanaut Mk 2 is outfitted with Nauticus Olympic Arms, all-electric work class manipulators that have intelligent, one-click functions, deploying the latest in Nauticus Nautilus autonomy architecture. A quick-change effector system allows for tooling changes whilst subsea.

GENERAL

Depth Rating	3000 msw
Cruising Speed	3 knots
Maximum Speed	6 knots
Range*	120 km, base battery 220 km, extended range battery *based on transit at cruising speed
Endurance^	116 hrs, base battery 175 hrs, extended range battery ^based on station-keeping in 1 knot current

DIMENSIONS	AUV MODE	ROV MODE
Length	4427 mm	6198 mm – With Arms Extended
Width	1778 mm	1778 mm
Height	1544 mm	1544 mm
Weight	3850 kg	3850 kg
Payload	90 kg	90 kg

ENERGY SYSTEM

Battery Capacity	67.4 kWh Li-ion (base) 101.1 kWh Li-ion (extended range)
Recharge Time	4 hours

SENSING PACKAGES

Navigation Package

- Nortek DVL 500 Doppler Velocity Log
- iXblue Phins 6000 Inertial Navigation System
- Micron Sonar
- Blueprint Oculus M1200d Imaging Sonar
- AML-3 Instrumentation (Sound Velocity, Conductivity Temperature, and Pressure)

Communications Package

- Nauticus Dolphin Comms Modem
- Subnero M25 Modem
- Hydromea LUMA-X Optical Modem

Imaging

- HD Cameras
- Blueprint Oculus M1200d Imaging Sonar
- Nauticus Stereo Vision
- Nauticus 3DSL Point Cloud Generation
- Kraken LED Light Panels
- DeepSea LED Flood Lights

Survey and Mapping

- Kraken AquaPix MINSAS Synthetic Aperture Sonar
- Teledyne SeaBat T50 Multibeam Echosounder

Positioning System

- Sonardyne AvTrak-6 Ultra Short Baseline (USBL)
- Advanced Navigation Poseidon GPS / GNSS / Galileo

EMERGENCY SYSTEMS

- Nauticus STO system (Hardware and Software E-Stop)
- Emergency Strobe and Iridium modem
- Hull Subsonus Tags (battery powered)
- Emergency payload drop weight

SOFTWARE

Nauticus Nautilus

- Browser based vehicle connection with a server backend
- Operate AQ from any location that can access the secure server

TOPSIDE CONNECTIONS

Data Download	Fibre Optic
Shore Connection	Nauticus Tether Cart (Data and Power)

MANIPULATORS

Nauticus Olympic Arms

OLYMPIC ARM GENERAL SPECIFICATIONS

Category	Heavy work
Power Source	Electric
Control Modes	Position, Velocity, Impedance
Functions	7
Materials	Al 6061-T6 hard anodized Stainless Steel
Max. Reach	1854 mm
Input Device	Master arm
Depth Rating	6000 msw
Lift at Max. Reach	127 kg
Lift at Min. Reach	454 kg
Gripper Force	113 Nm minimum
Gripper Rotation	360° continuous
Weight in Air	109 kg
Weight in Water	74 kg
Jaw Options	4F intermeshing and 4in parallel acting
Integrated Subsea Tool Changer	



AQUANAUT MK 2

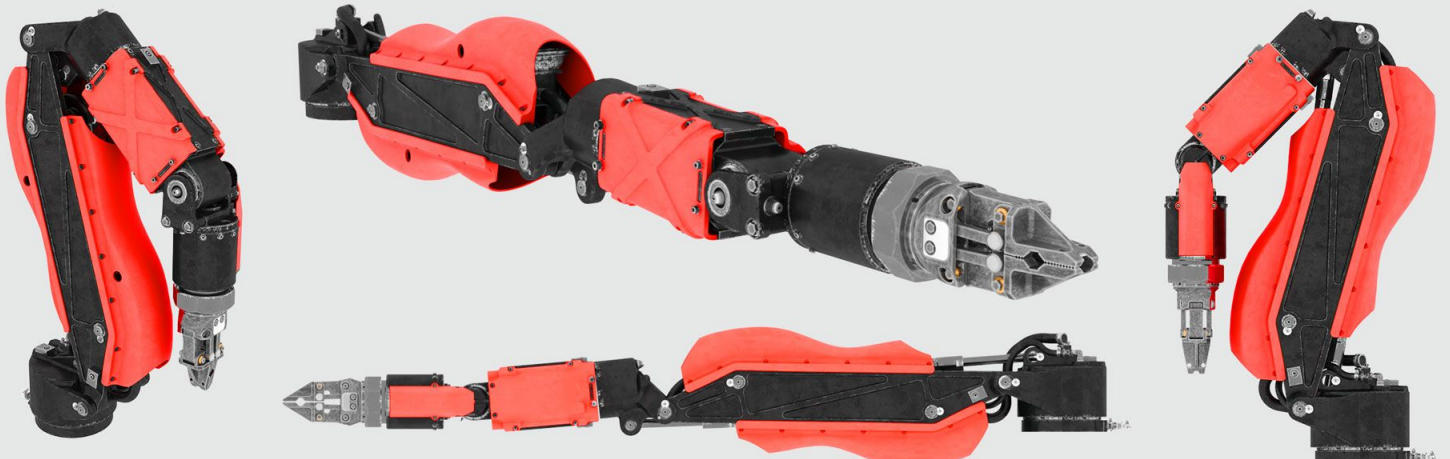
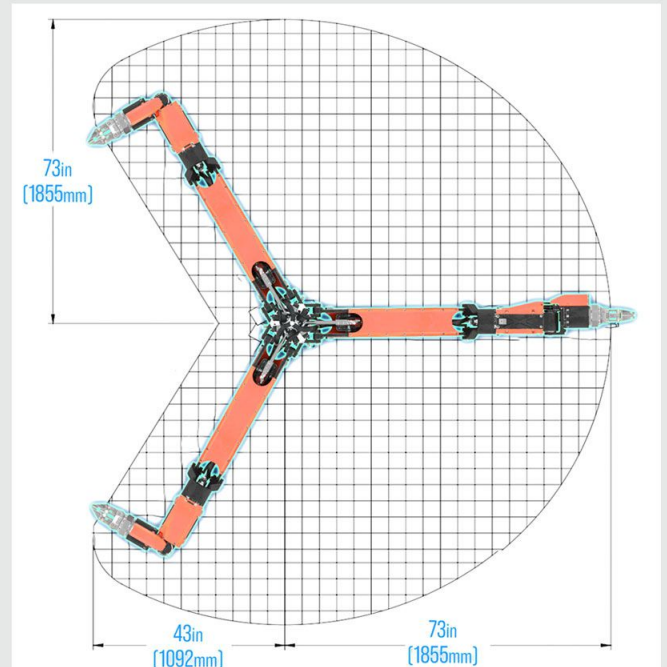
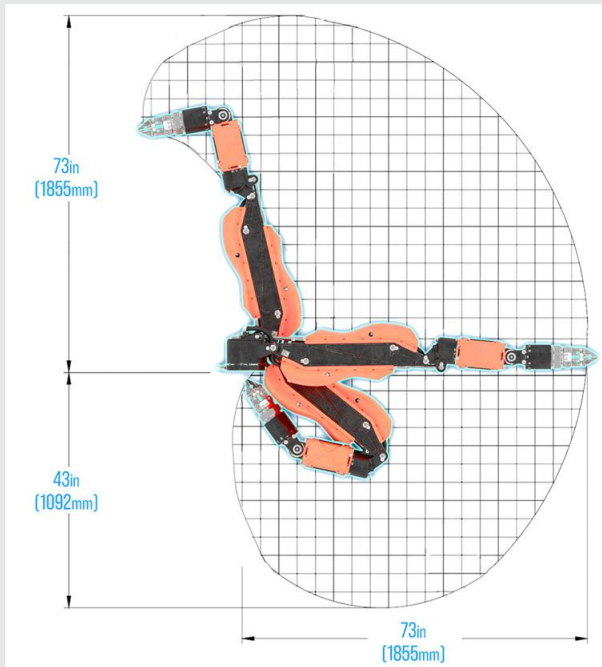
Nauticus Olympic Arm is the world's first work class rated electric manipulator that can match the performance levels of similarly sized and popular hydraulic arm counterparts. With added benefits such as better control features and built-in automation, this electric manipulator has lower repair costs and servicing time. No other manipulator on the market today matches its performance.



The Benefits of the Olympic Arm:

- High precision and dexterity
- Greater reliability
- Zero working fluid
- Strength-Weight-Size ratio
- Low power consumption
- 60 min maintenance
- Integrated tool changer
- Position and force feedback
- Intelligent path planning

Olympic Arm Range of Motion





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