



KATFISH Launch and Recovery System for Unmanned Surface Vessels

Autonomous Operations



- Fully unmanned launch and recovery process from unmanned surface vessels (USVs) for remote operations
- System mitigates risk during high sea-states, wave action, and dynamic vessel movements
- Launch and recovery process remotely monitored through sensors and video link

Intelligent Winch Control



- Perform safe and effective launch and recovery in harsh environments through measurement of the surface vessel and KATFISH motion
- Assist KATFISH in active terrain following and obstacle avoidance through adjustments to tow cable
- Automatically pay out cable if load exceeds a pre-set threshold
- Manages constant tow cable tension throughout launch and recovery sequence ensuring safest possible transition to and from water

Flexible Deployment



- Designed for integration on USVs from 11+ meters
- Constructed of titanium for high strength, low weight, and low magnetic signature
- Suitable for deployment from USVs with up to 1.2-meter aft freeboard

Safe and Effective Launch and Recovery from USVs

While launch and recovery from a vessel is inherently risky, these risks can compound when completed from an unmanned surface vessel. Kraken's compact USV LARS is designed for smooth, safe, and robust launch and recovery operations from small USVs without human intervention.

USV LARS Dimensions	6.00 m L x 1.20 m W x 1.65 m H		
KATFISH Operational Depth	100 m	200 m	300 m
Tow Cable Length	500 m	1000 m	1500 m
Total System Weight with KATFISH	1880 kg	2060 kg	2240 kg
Mounting	ISO 1161 Socket		
Material	Titanium		
Power	340 VDC, 20 kW		
System Components	Inboard or on deck control cabinets, Generator, Hydraulic power unit, Liquid heat exchanger, USBL positioning system		
Operation Parameters	LARS operation up to Sea State 4; Freeboard up to 1.2 m		



KATFISH ISO20 Launch and Recovery System

Remote Operations



- Remove humans from harm's way through a fully unmanned launch and recovery process
- Mitigate risk and human error during high sea-states, wave action, and dynamic vessel movements
- Continuously monitor launch and recovery process through sensors and video link

Advanced Winch Control



- Perform safe and effective launch and recovery in harsh environments through measurement of the surface vessel and KATFISH motion
- Assist KATFISH in active terrain following and obstacle avoidance through adjustments to tow cable
- Automatically pay out cable if load exceeds a pre-set threshold

Flexible Deployment



- Designed for modular, rapid mobilization on vessels of opportunity with ISO20 footprint and twist-lock connection
- Constructed of non-welded aluminum for high strength, low weight, and low magnetic signature
- Suitable for vessels with stern freeboard up to 2.5 m.

Launch and Recovery from Vessels of Opportunity

Launch and recovery is one of the highest risk operations undertaken in the application of uncrewed systems. Kraken's ISO20 autonomous launch and recovery system enables KATFISH towed synthetic aperture sonar to be brought aboard a host ship safely, efficiently, and without damage.

ISO20 LARS Dimensions	6.05 m L x 2.44 m W x 3.32 m H
KATFISH Operational Depth	200 m Standard; 300 m Optional
Tow Cable Length	1000 m Standard; 1500 m Optional
Weight	4700 kg
Mounting	4 x ISO1161:2016 Twist-Lock Connections
Material	Stainless Steel, Aluminum
Power	440 VAC 3 phase 50-60hz, 25kW; Via the Power Distribution Unit (PDU)
System Components	Winch, PDU, pendant controller, remote operation
Operation Parameters	LARS operation up to Sea State 4; Freeboard up to 2.5 m
Optional Equipment	Generator, Hydraulic Power Unit