

## **ZERO HUMAN INTERVENTION** **VIA AUTOMATIC GRASPING** **OPERATIONS (ZHIVAGO)**

Launch and Recovery System (LARS) for marine vehicles from a ship or platform. The innovative robotic system can handle autonomously manned and unmanned, surface and underwater vehicles.

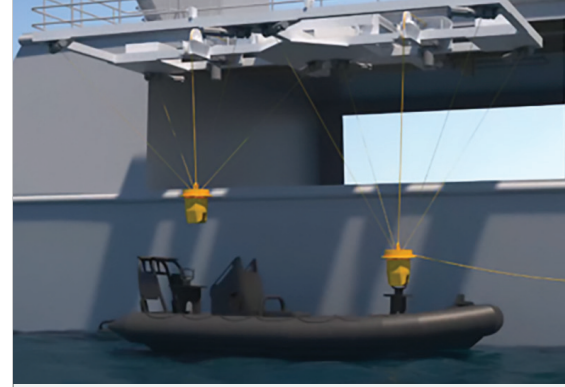
### **MAIN CHARACTERISTICS**

- > Fully-automatic launch and recovery with cable driven parallel robot technology
- > Autonomous grasp with target vehicle lift-point detection and tracking
- > Stabilization of vehicle swinging during deploy and lifting with compensation of the ship induced motions
- > One or two lifting points
- > Painter line option for launch and recovery of surface vehicles at speed
- > Step maneuver and manual override



### **BENEFITS**

- > Safe launch and recovery of marine vehicles in all weather conditions
- > One LARS of all marine vehicles
- > Rapid and effective launch and recovery
- > Reduced manning for operation (1 person for surveillance)
- > Compact installation for unmanned boat recovery
- > Applicable for mission bays with a wide range of loads



### TECHNICAL SPECIFICATIONS (STANDARD DESIGN)

- > Electrical handling motors
- > Lifting capacity up to 12 t
- > Vehicle length up to 12 m

### INSTALLATION AND ENVIRONMENT SPECIFICATIONS

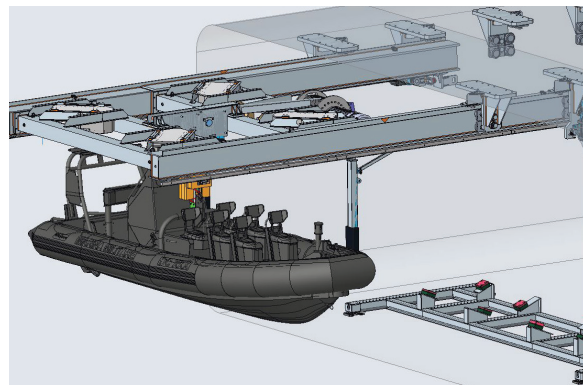
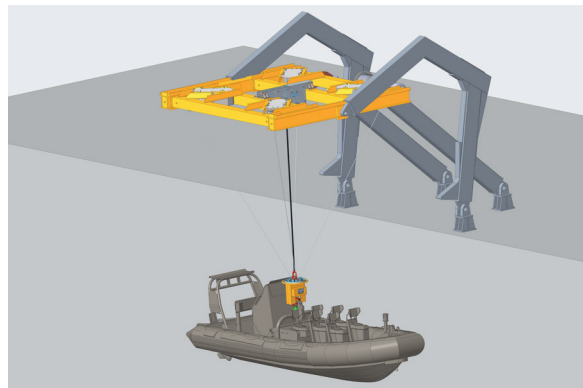
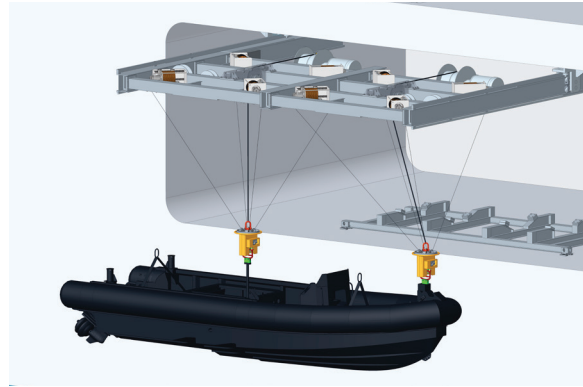
- > On the vehicle: simple connection ring
- > On the ship: frame handler in two basic options
- > Sliding frame: upper deck installation
- > Tilting frame: over deck installation
- > Automation cabinet

### LIFTING VERSIONS

- > One station, lifting point
- > Two stations: one or two lifting points
- > Painter line option

### PATENT PENDING

- > EP 3988440
- > South Korea 10-2021-0139332
- > USA 17/500,283



### L3Harrissellsht\_ZHIVAGO

© 2022 L3Harris Technologies, Inc. | 09/2022

NON-EXPORT CONTROLLED - These item(s)/data have been reviewed in accordance with the International Traffic in Arms Regulations (ITAR), 22 CFR part 120.34, and the Export Administration Regulations (EAR), 15 CFR 734(3)(b)(3), and may be released without export restrictions.

Data, including specifications, contained within this document are summary in nature and subject to change at any time without notice at L3Harris Technologies' discretion. Call for latest revision. All brand names and product names referenced are trademarks, registered trademarks, or trade names of their respective holders. L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains



Via A. De Gasperi 7, 40012  
Calderara di Reno, BO - Italy  
t +39 05141377 | f +39 0514137555  
Calzoni.General@L3Harris.com