

Launch and Recovery System (LARS)



Safe, innovative, simple, and adaptable

With more than 180 years of experience, NOV-BLM is the premier deck machinery and equipment designer and manufacturer for the offshore and marine industries.

As oil and gas and renewable energy operations move farther offshore and into harsher environments, our customers require reliable technologies that improve efficiency and safety and reduce carbon emissions.

Our Launch and Recovery System (LARS) is designed to deploy and retrieve a variety of vessels in advanced sea states. From crew boats and submarines to unmanned surface, remotely operated, and autonomous underwater vehicles, our fully electric and customizable LARS lifts and handles the payload safely, securely, and quickly.

Cutting-edge technology

Installed on the stern of the vessel, this bistable system features a cradle, rear sliding gantry, and four lifting points to expand to maximize durability and workability. Each lifting point consists of a winch, two cables, a counterweight, and our patented Smart Power Slip (SPS). This game-changing and mechanical solution enables the LARS to switch from passive heave compensation to lifting mode. When the SPS is activated, the cradle can move up but not down because of the dynamic load transfer between the physical law of buoyancy, Archimedes' principle, and the lifting cables.

As an example, we have designed and successfully tested an adjustable and shock-absorbent cradle with a lifting capacity of 20 tons which can handle vessels up to 12.5 m (41ft) long, 3,8 m (12,6 ft) wide and 4 m (13 ft) in height.

Proven reliability

We were challenged to develop a system that could recover a USV for mine countermeasure operations in sea state 5—up to 4-m waves—at an unprecedented vertical speed of 4 m/s. Due to our vast experience and knowledge of offshore operations, our LARS performed reliably about 300 times full load during the sea trial.



Launch and Recovery System (LARS)



Safety



Innovative



Simple



Adaptable

Features and Benefits

- Simple, adaptable, and proven design that operates reliably in sea state 5
- Unmatched vertical lifting speed of 4 m/s
- Fully electric
- Fail-safe
- Multipurpose
- Adjustable and shock-absorbent cradle
- Lifting capacity of up to 20 tons
- Handles vessels up to 12.5 m long, 3.8 m wide, and 4 m in height
- Does not consume energy during passive heave compensation phases, which minimizes environmental impact
- Requires less maintenance
- Versatile (can be designed from 3- to 50-ton lifting capacity)

Applications

Our proven and versatile LARS serves the following markets:

- Offshore energy
- Military
- Cruise

Characteristics of the model that successfully tested

Main particulars	LARS (Version 1 or LARS 20t)
Length and Width	L=14.3 to 29.8 m and W=10.5 m
Lifting capacity	Up to 20 tons
Handles vessels	12.5 m (L) x 3.8 m (W) x 4 m (H)
Sea state 5	Up to 4-m waves
Unprecedented vertical speed	4 m/s
System	Fully electric
Cradle	Adjustable and shock-absorbent