



L&RS

Launch and Recovery System

SPECIFICATION SHEET



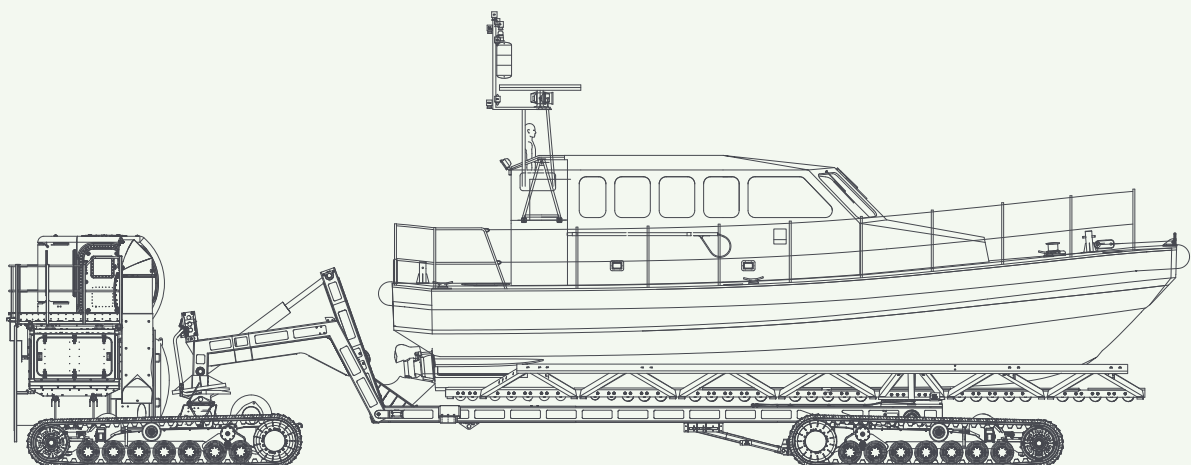
The SC Innovation Launch and Recovery System (L&RS) has been developed in association with the RNLI in response to a requirement for an up to date and highly mobile transport system for a new class of lifeboat.

The L&RS design incorporates several unique and innovative features including a permanent, software controlled, Four-Track-Drive system offering exceptional mobility in all beach conditions.

In addition, the cradle that carries the boat rotates through 360 degrees to enable 'Bow First' launch and recovery. The complete system can be shut down and left submerged to a depth of 9 metres.



Lifeboats



L&RS Vehicle Specification

Tractor Unit

Engine

Scania DC13 12.7 Litre Turbo-charged Diesel, Straight 6,
Max power: 331 kW (450 bhp) Max torque: 1950 Nm.

Cooling

Externally mounted coolant radiators, charge air radiator and oil cooler.

Hydraulic system/transmission

Permanent 4-track drive (with free wheel facility).

Bosch Rexroth hydrostatic system using variable displacement pumps & motors, and reduction gearboxes.

"Piggy-back" pumps provide power for accessory circuits. Carriage hydraulic supply via rotary joint with quick release connection. 300 Litre hydraulic oil tank.

Steering

Vehicle is steered by its tracks.

Track system

Supacat marinised track system. Bridgestone rubber belts.

Parking brake

Hydraulic pressure released, spring actuated multidisc (one per track system).

Fuel system

300 Litre capacity (Diesel).

Electrical system

24v. 4x 12v sealed-for-life batteries (2 for vehicle electrical system, 2 for bilge pumps).

Chassis

Welded box section. Zinc sprayed.

Engine bay

Main access to service points & engine through front door. Air intake/exhaust via stacks. Engine bay can easily be sealed for immersion.

Cab

Capacity for three occupants inc. wet weather gear.

180 degree rotating seat c/w control joysticks.

Cab can easily be shut down for immersion. Composite construction.

Carriage connection

Oscillating (off-road) fifth wheel coupling.

Winch

Winch pull max 27 tons used to recover boat onto cradle, and can be used for system self recovery. 100 m Dynex rope.

Carriage Unit

Swan neck/Drawbar

The main tilt ram provides the slipway angles required for the boat launch and recovery. The rear "kneeling" arrangement allows the drawbar and cradle to raise and lower relative to the tracks. This allows the entire system, complete with boat to fit into a boat house.

When raised into it's "trundling" mode, full track articulation and ground clearance are achieved.

A drawbar mounted transom support provides an attachment point for the rear of the boat. The front is restrained with a hydraulically tensioned stop arrangement. The drawbar incorporates the stainless steel slewing ring upon which the cradle is mounted.

Chassis

Welded box section. Zinc Sprayed

Cradle

The cradle is the main interface with the boat. Plastic keel rollers are used to prevent damage to the keel. During recovery, the boat is recovered bow first onto the cradle and is then rotated through 180 degrees so that the boat can be relaunched bow first. This system meets the requirement for rapid turnaround from recovery to launch.

