Seaeye launch & recovery systems (LARS) - 'A' frame system

The standard Seaeye range of LARS feature an elevated 'A' frame pivot point enabling the ROV and TMS to be deployed over a 2 metre high ship's guard rail. In the transport condition the LARS is extremely compact and has a crash frame fitted around the winch and HPU with additional protection provided by the 'A' frame in its stowed position. Custom designs and other handling requirements can be quoted with a fast turn round.

Type 1K1-1.25 LARS launching a Tiger and its TMS

LARS in stowed/transport position

LARS in stowed/transport position - port side

Features

- Elevated 'A' frame pivot point to clear a 2 metre high ship's guard rail.
- Compact integrated skid mounted 'A' frame, winch and HPU.
- Forward located rams to provide clear side access to the ROV and TMS.
- Stainless steel fittings, fastenings and pipe work to reduce corrosion.
- No crane required for erecting the 'A' frame to reduce mobilisation time and cost.
- Optional latch mechanism for safer deployment.
- Zone 2 option.
- Crash frame to protect the winch and HPU.
- Compact stowed position for easier transport.
- Designed to DNV Rules for Certification of Lifting Appliances.

Seaeye

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Stowed position viewed from the front

'A' frame erected ready to lift ROV & TMS

Over boarding the ROV & TMS

Ready to lower into the water

The 'A' frame can be erected using the system's own rams without the need of any other external lifting devices. This simplifies and reduces the cost of mobilisation and commissioning to a new location.

The pivot point for the 'A' frame is 2 metres above the deck which allows the ROV and TMS package to clear vessel guard rails up to this height and to achieve a greater overboard reach than a conventional 'A' frame pivoted at deck level.

The forward position of the 'A' frame rams keeps side access to the ROV and TMS clear of obstructions for essential maintenance and pre-dive checks.

Seaeye offer four standard LARS types whose Type number is designated by the umbilical winch capacity and system safe working load. For example, for Type 1K1-1.25, 1K1 refers to a winch capacity of 1100 metres and -1.25 to a 1.25 tonne SWL at 3G which is widely regarded as suitable for operations in sea state 6.

Each of these systems can be provided for safe area or zone 2 operations and an optional latch mechanism can be fitted to the sheave to capture a vehicle or TMS bullet for safer launch and recovery.

The most appropriate LARS Type to match each Seaeye ROV is as follows:

Type 1K1-1.25

Seaeye 600DT
Seaeye Tiger
Seaeye Surveyor Plus
With bale arm or type 6 TMS (but without 2 tonne ballast skid)

Type 1K6-1.25

Seaeye Lynx with 1600 metre umbilical and TMS

Type 1K1-1.7

Seaeye Panther Plus and TMS

Type 1K6-3.2

Seaeye 600DT
Seaeye Tiger
Seaeye Surveyor Plus
Seaeye Lynx
Seaeye Panther Plus with Type 6 TMS and 2 tonne ballast skid
Other special applications

SPECIFICATIONS

	1K1-1.25	1K6-1.25	1K1-1.7	1K6-3.2
WINCH				
Umbilical winch cable storage capacity	1100 m	1600 m	1100 m	1600 m
Umbilical cable diameter	31 mm	31 mm	31 mm	32 mm
Umbilical winch dynamic pull, at 1st layer of cable	3.09 Te	3.09 Te	3.09 Te	5.89 Te
Umbilical winch dynamic pull at 8/9th layer of cable	1.325 Te	1.325 Te	1.87 Te	3.2 Te
Umbilical winch mean recovery speed	0.5 m/s	0.5 m/s	0.5 m/s	0.5 m/s
ELECTRO-HYDRAULIC POWER UNIT				
Hydraulic fluid reservoir capacity	180 L	180 L	180 L	265 L
Hydraulic fluid type	ISO VG 32	ISO VG 32	ISO VG 32	ISO VG 32
Electrical supply type	3 ph	3 ph	3 ph	3 ph
Voltage / frequency	380V, 50Hz or 440V, 60Hz	380V, 50Hz or 440V, 60Hz	380V, 50Hz or 440V, 60Hz	50 Hz 380 or 415V
Electric motor power	25 kW	25 kW	25 kW	37 kW
Cooling water flow required (sea water)	80 LPM	80 LPM	80 LPM	80 LPM
Maximum cooling water inlet temperature	30°C	30°C	30°C	30°C
A' FRAME AND SKID UNIT				
Maximum outboard reach	3000 mm	3000 mm	3875 mm	3500 mm
Nominal host vessel bulwark height transit capability	2000 mm	2000 mm	2000 mm	2000 mm
Effective SWL (for certification purposes)	1.25 Te	1.25 Te	1.7 Te	3.2 Te
Design amplification factor	3.0	3.0	3.0	3.0
INTEGRATED SYSTEM				
Overall length	4000 mm	4000 mm	5000 mm	4750 mm
Overall width, over mounting weldments	2650 mm	2650 mm	2650 mm	3100 mm
Transport width	2500 mm	2500 mm	2500 mm	2900 mm
Maximum height over A frame in operation	6080 mm	6080 mm	7080 mm	6808 mm
Transportation height	2310 mm	2310 mm	2310 mm	2375 mm
Self weight including oil fill	6.9 Te	7.25 Te	7.05 Te	8.9 Te
Gross weight including umbilical cable	9.65 Te	11.03 Te	9.80 Te	13.2 Te

In addition to these standard systems, Seaeye provide a rapid design service for LARS for special applications or to suit your particular requirements.

We can also supply variations of these LARS with smaller winches for systems requiring shorter mainlift umbilicals. This will result in an overall reduction in the LARS weight and a possible reduction in its footprint.

We can also provide stand alone umbilical and lift winch systems to suit Seaeye ROVs or for other handling applications.

Design Codes & Certification

The system is designed in accordance with the requirements described by the DNV Rules for Certification of Lifting Appliances and the load tests are witnessed by DNV.

DNV design verification and survey during fabrication / manufacture leading to the issue of a DNV CG2 product certificate is available at an additional cost.

Note: Specifications may change without prior notice

Seaeye

SEAEYE MARINE LTD.
Seaeye House, Lower Quay Road, Fareham, Hampshire PO16 0RQ, United Kingdom
Tel: +44 (0) 1329 289000 Fax: +44 (0) 1329 289001
Email: rovs@seaeye.com www.seaeye.com