



ADVANCED SUBSEA SERVICES

OBSERVATION CLASS ROVS

LAUNCH AND RECOVERY SYSTEM / TETHER MANAGEMENT SYSTEM SPECIFICATIONS



Advanced Subsea Services Launch and Recovery System (LARS) for the observation class ROV's is equipped with a Tether Management System (TMS). This LARS dramatically increase the operational capabilities of a ROV system by enhancing the ability to launch and recover the ROV in above normal sea states. The TMS type of LARS also minimizes the potential for damage to the ROV during the critical air/water interface stage, reducing the potential for downtime on the job.

Advanced Subsea's TMS LARS consists of a winch, 'A' frame, and garage or cage which contains the ROV and the flying umbilical which extends from the submerged cage to the ROV

With the 'A' frame extended outboard, the winch is used to pay out the umbilical until the garage is at the required operating depth.

The ROV pilot is then able to pay out or recover flying tether from the garage using a remote foot switch which enables the ROV to fly safely and with minimal current related forces on the flying tether enabling greater ROV manoeuvrability.

The TMS can safely launch and recover the ROV to 300m and allows up to a 150m radius of workability from the garage via the flying tether. The TMS LARS compact size and skid mounting makes it ideal for smaller vessels as well as supply vessels where deck space is of the utmost importance.

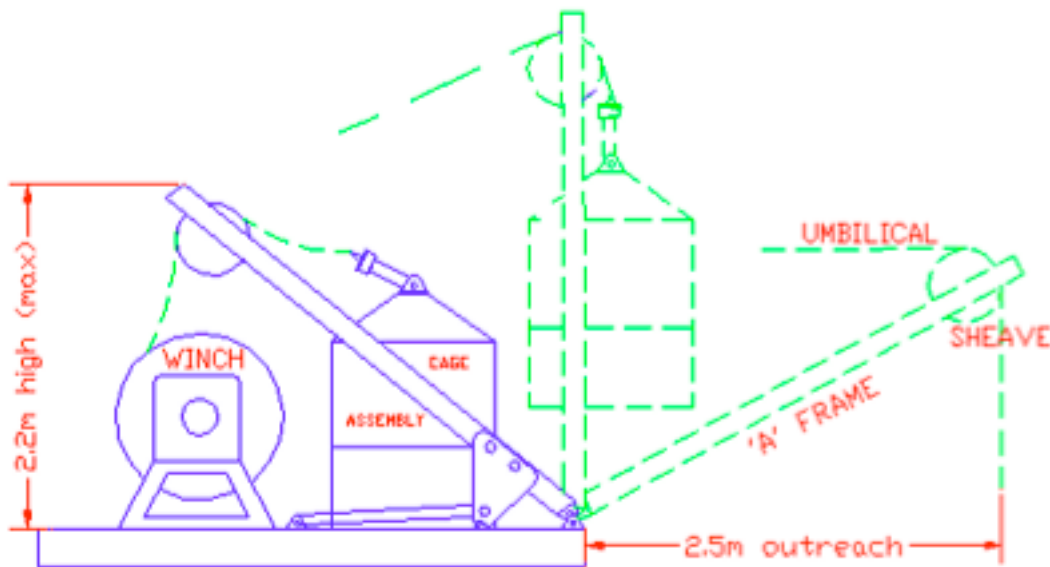


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The complete package consists of a skid mounted deployment system and a tether management system (TMS). The deployment system is an aid to ensure safe deployment and recovery of the ROV within its garage. This action is carried out by means of a winch for main lift wire handling, and an 'A' frame for garage deployment, with an outreach of 2.5m.



The power supply necessary to power the winch is 440V at 60 HZ or 415V at 50Hz, both 3 phase, with an MRCB of 20A.

The Surface Control Unit is connected to the deployment system via an umbilical whip or deck cable. Vehicle power, telemetry and video, together with two spare screened twisted pairs are then carried from a junction box, via a set of slip rings, to the winch umbilical. The maximum storage capacity on the winch is 356m. The winch line pull is 5000N fully loaded with cable and 9000N when near empty of cable.

The speed at which the winch deploys or recovers umbilical is 0.6m/s when fully loaded with umbilical and 0.38m/s with the winch near empty of umbilical.

The winch and 'A' frame control levers are situated on the main body of the deployment system and a remote foot operated switch is provided for paying out and recovering ROV tether.



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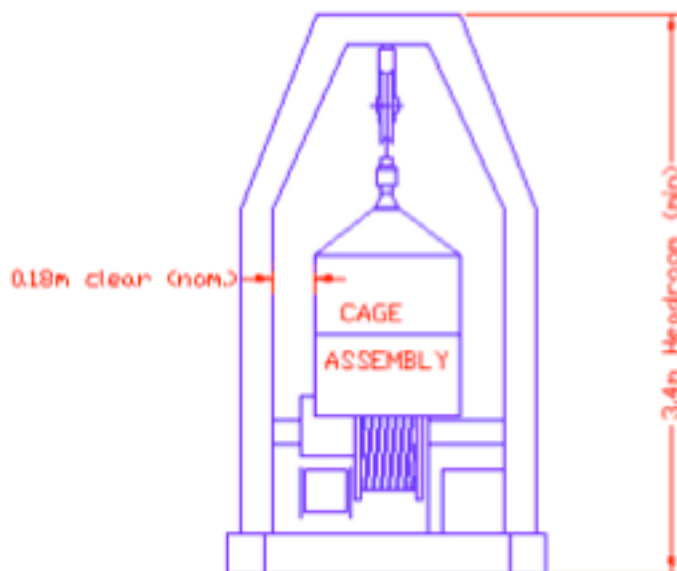
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At the garage the umbilical is terminated at an oil filled junction box. The ROV tether connects to this same junction box and is paid in and out from a static drum using a simple baling mechanism. This drum stores up to 150 meters of standard tether or 120 meters of neutral tether. The TMS comprises of a garage, with the upper part storing the tether and baling system, and the lower part garaging the Mini Rover MK II or Seaeye Falcon.

With the 'A' frame turned outboard, the winch is used to pay out the armoured umbilical until the garage is at the required operating depth. The ROV pilot is then able to pay out or recover ROV tether from the garage using a remote foot operated switch.

The tether pull force is 180N

The tether velocity is 0.3m/s



The power source necessary for the TMS is 415V at 50Hz or 440V at 60Hz, both 3 phase, with a current capacity of 3.5 amps.



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Technical Specification

Deployment System

Dimensions:

Length:	2.6 m
Width:	1.5 m
Height:	2.2 m
Height with sling gear attached:	5.4 m
Weight:	2000 kg
Out Reach:	2.5 m
Winch Line Pull Maximum Diameter of Umbilical:	5000 N
Winch Line Pull Minimum Diameter of Umbilical:	9000 N
Line Speed Maximum Diameter of Umbilical:	0.6 M/Sec
Line Speed Minimum Diameter:	0.38 M/Sec
Winch Storage Capacity:	365 m of 19 mm OD
Power Requirements:	440/60 Hz 415/50 Hz 20 Amp MRCB 3 Phase

Tether Management System (TMS)

Dimensions:

Length:	1.07 m
Width:	1.07 m
Height:	1.40 m
Weight:	245 kg
Tether Capacity:	150 m
Standard Tether Diameter:	12 mm
Neutral Tether Diameter:	15 mm
Tether Pull Force:	180 N
Tether Velocity:	0.3 m/Sec
Power Requirements:	415/50 Hz 440/60 Hz 3.5 Amp 3 Phase