

# Submarine Rescue Vehicle (SRV) – LR Class

Forum Energy Technologies (FET) is a world-leading designer and manufacturer of subsea vehicles and tooling. For more than 45 years FET has reliably supported military organisations and naval forces across the globe.

Since 1975 we have pioneered the development of manned submersibles. One previously delivered system includes the NATO Submarine Rescue System (NSRS) which entered service in 2008. NSRS is on constant standby for rescue operation in any part of the world and is specifically packaged for rapid deployment by air transport with its other surface elements.

Our latest SRV system (LR11) completed sea trials in 2021 and was built with full Lloyds class certification. The system was supplied with a Launch & Recovery System, a complete training & after sales support package as well as an ROV System, Simulator, ELSS Pod Skid & Mating Target.

We have successfully supplied defence equipment/services to NATO and the following countries: UK, USA, Australia, Ireland, Norway, Germany, Spain, China, Vietnam, Malaysia, Singapore and South Korea. We are proud to deliver cutting-edge technologies which are at the forefront of the subsea industry and remain the systems of choice by many of the world's military and naval forces.



# Submarine Rescue Vehicle (SRV) – LR Class

## Dimensions & Performance

Max. Operational Depth Rating (m):	up to 600
Weight in Air (kg):	Under 30,000
Length (mm):	9,700
Width (mm):	3,200
Height (mm):	3,400
	(incl. mating skirt)
Draught on Surface (m):	2.5 +/- 0.25
Max. Internal Pressure RC (bar g.)	5.0
Rescue Capacity:	18 persons max. (excl. crew)
Crew:	Pilot & Co-pilot & RC Operator
Main Thrusters:	2 electric propulsors
Auxiliary Thrusters:	2 hydraulic side thrusters Incl. swivel from 0° to 90° (vertical & horizontal direction thrust) 2 hydraulic thrusters, fixed, Mounted fwd and aft (lateral thrust)
Surface Speed	
Forward:	3.5 knots +/- 0.2 knots
Aft:	2.5 knots +/- 0.2 knots
Cruise:	1.5 +/- 0.2 knots @ 8 hours duration (depending on sea conditions)

## Design Code & Classification

- Lloyds Rules and Regulations for the Construction and Classification of Submersible and Diving Systems
- Lloyds Register: Code for Lifting Appliances In A Marine Environment
- PD5500: Specification for Unfired Fusion Welded Pressure Vessels
- The ASME Code for Pressure Vessels for Human Occupancy (used for the design of the acrylic viewports)
- Latest code used during contract award

## Standard Equipment

Control Modes:	Manual & Auto Pilot
Navigation:	North seeking gyro compass Flasher/strobe Pinger locator DVL Altimeter Obstacle avoidance sonar
Communication:	CM & RC intercom system Deck communications VHF radio Underwater telephone
Cameras:	6 cameras – Low light, colour zoom, monochrome
External Lights:	8 LED
Internal Lights:	10 LED
Tooling:	7 function hybrid controlled manipulator Low pressure water jet pump Cutter & Pressure Intensifier Ø 38mm wire rope cutter

## Power

Battery: – Power train, instrumentation	Lithium Ion Battery modules housed in port & stbd battery pods. Can be jettisoned in an emergency
Battery Emergency:	Lead acid batteries Deck Power Supply (instrumentation only)

## Life Support

Life Support: (Normal):	Approx. 12 hours for 20 persons
Life Support (Emergency):	Approx. 96 hours for 20 persons
Atmosphere Monitoring:	CM & RC atmosphere monitoring system
CO <sup>2</sup> absorbent (normal):	Approx. 12 hours for 20 persons
CO <sup>2</sup> absorbent (emergency):	Approx. 96 hours for 20 persons
Life Support Kits:	20 individual kits containing CO <sup>2</sup> absorbent, rations, life jacket, space blanket, light stick and goggles

## Exterior Features

Lift Point (Normal):	Main single lift point (for LARS) Lift Point (Emergency): Double lift point (crane lift) Double soft strops for emergency recovery from sea bed
Towing Assembly:	Fwd & aft tow point
Transfer Under Pressure:	Mating to TUP from rear of RC or via Dry Mating Skirt External tanks (fwd, mid, aft) 2 external bottles (port & stbd) 4 external bottles (port & stbd) Adjustable roll control via port & stbd movement (hydraulic) Can be jettisoned in an emergency
Air Buoyancy:	
Air Storage:	
Oxygen Storage:	
Trim Weight (roll)	

## Pressure Hull

Proof Test Pressure:	1.4 x Max. Operating Depth
Hatches:	5
Viewports:	Acrylic main viewport Conning tower & hatches

## Submarine Transfer

Max. Angle for Rescue:	+/- 45°
------------------------	---------

## Environmental:

Operational Sea State:	Sea State 5-6 significant wave height 3.9m as per Lloyds Rules Lifting Appliance Marine Environment
------------------------	--

Contact Us: Aberdeen: +44 (0) 1224 798660  
Houston: +1 713 351 7900  
Singapore: +65 6465 4850  
Brazil: +55 21 2112 4752  
Kirkbymoorside, York +44 (0) 1751 431751

The specification details are illustrative and are for marketing purposes only. Actual equipment may be different as a result of product improvement or other reasons. Specific interface and performance information should be reconfirmed at time of order placement.

SU1043.01.23