



ROVTECH SOLUTIONS

Harsh Environment Problem Solvers

Seaker Remotely Operated Vehicle with Electric Manipulator



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The Super Seaker has been used throughout the world, from surveying Subsea Cabling in the Orkneys, to Treasure Hunting in the Caribbean and Oil Rig Monitoring worldwide. The RSL Electric Gripstick has been through several modifications in its RSL lifetime, but has now become a stable build over the past few years, where, in the nuclear industry it has been used successfully in several designated harsh environments. The Gripstick has a range of interchangeable jaws, capable of many tasks, making it versatile in its operations. Integrating the Super Seaker ROV with the RSL Electric Gripstick Manipulator seemed inevitable.

Super Seaker Pick and Place ROV

The philosophy of the Super Seaker PNP vehicle was to provide a simple modular Remotely Operated Vehicle to offer a reliable and easily maintainable system capable of carrying out the necessary operations with the minimum of basic underwater components.

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Super Seaker PNP Vehicle which comprises:

Robust 316 Stainless Steel Crash Frame

6 High Thrust DC Thrusters with

2x Longitudinal

1x Lateral

3x Vertical giving 17kg minimum up thrust placed on the vehicle to provide optional performance

High Spec Seacam Ultra Wide Angle 700 TVL Colour Camera mounted on a camera tilt for pilot

High Spec Seacam Ultra Wide Monochrome Camera for an overview camera

High Spec Seacam 700 TVL Colour Camera with optimised lens to provide the accountancy camera

Micro Seacam LED Colour Camera mounted on the Gripstick to provide close up images of the objects being retrieved

2x Seabeam Ultra LED Lights one mounted on the camera tilt and the other on the base of the vehicle

RSL 3 Function Gripstick Manipulator

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Uniquely the Gripstick is able to be utilised either vertically directly underneath the vehicle to pick up objects up to 17kg in weight, or in the stowed position out of the front of the vehicle to pick up/manoeuvre small objects on the floor

The Gripstick has the following functions.

Manipulator deployment tilt that rotates the arm through 90° to enable it to be used either vertically or horizontally

Gripstick rotate with 180° operation to enable the operator to position the fuel elements in the skip

Gripstick Manipulator with specially designed dual jaws which because of the unique design of the jaws will enable the operator to exert an upward force on any of the fuel elements that are fused together

There are 2 in built safety features in case of recovery during a 'dead boat' situation

1. Utilising an on-board rechargeable NiMH battery pack when power is lost to the vehicle two things happen firstly the jaws open thus jettisoning anything held by the manipulator. Secondly the manipulator tilt is operated to manoeuvre the manipulator back into the recovery position

2. In the case of a catastrophic failure of the Gripstick when it is in the vertical position there is an ROV friendly jettison pin located just underneath the vehicle that can be operated either manually or by the observation ROV manipulator.

This once removed will allow the entire Gripstick and Jaw contents to be dropped and disconnected automatically thereby allowing the vehicle to be recovered.

RSL Electric Gripstick Hand Controller

The Hand Controller will be of ergonomic design developed in conjunction with and facilitating the operational personnel

Super Seaker Pick and Place Control Console

2u 19" Rack Mount Console

240v AC Input

3x Vertical Thruster power supply

3 Function Gripstick power supply

Front panel connector for Gripstick Hand Controller