



# Outreach

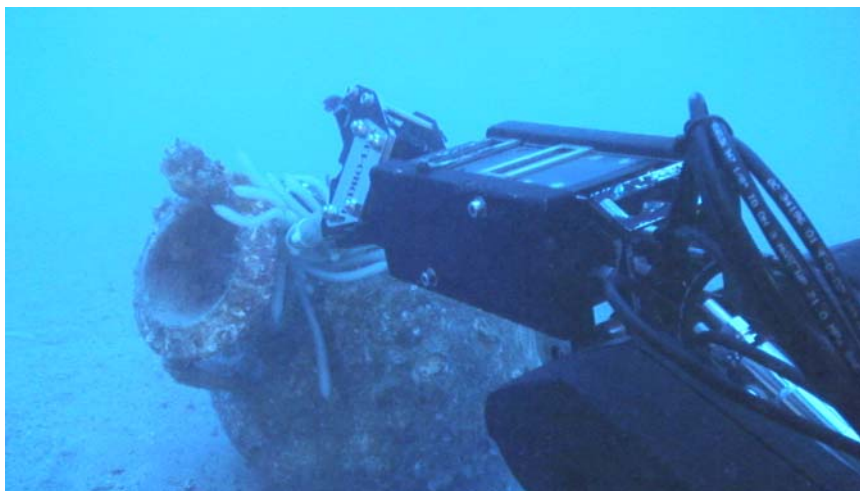
January 2012

*Regular news bulletin from Hydro-Lek, Specialists in remote handling*

## Diary Dates for 2012

- **26-27 January :**  
**Underwater Intervention,**  
New Orleans, USA  
*Hydro-Lek is presenting a paper on Marine Archaeological Excavation*
- **13-15 March:**  
**Oceanology International,**  
Excel, London  
*See us on Stand M100*

## Hydro-Lek arm retrieves ancient artefacts



Hydro-Lek have supplied US based archaeological excavators, RPM Nautical Foundation (RPMNF), with two 5 and 6 function manipulators to successfully retrieve valuable ancient artefacts from the sea floor off Sicily.

Excavating and recovering ancient artefacts from the seabed demands precise and highly reliable equipment. RPMNF has pushed the boundaries of maritime archaeology by performing the delicate and accurate

work necessary at depths beyond effective diver range. Hydro-Lek's manipulators combine simplicity and reliability with high dexterity and have been proven to be well suited to this type of delicate work.

*For more information please contact:*

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## Learn how to troubleshoot on site—and save time and money

We have now announced a further series of one-day courses on the operation and maintenance of our manipulators and tooling.

The aim of our training courses is to minimize time and costs spent on troubleshooting in

the field and to ensure trainees are fully prepared and confident before the equipment is deployed. With correct maintenance, the life of our systems can span decades. In the long run it is in the interests of both the operator and our customer to be fully

trained and practiced to ensure the longevity of the system and maximum ROI for your business.

**Hydro-Lek Training  
Forthcoming Dates:**  
15 February 2012  
21 March 2012



**HLK-14000 Series  
Compact Aluminium Cylinders**

## Hydro-Lek underwater hydraulic system enables AUV operations from low voltages.

The potential of AUVs to develop new applications in underwater applications is increasingly recognized. AUVs are proving to be very effective in a range of deep sea operations from seabed survey and mapping to military missions.

AUVs by definition are autonomous. Compact low-powered hydraulics are finding their way into the AUV market where low voltage and light weight for electro-hydraulic tasks are being developed.

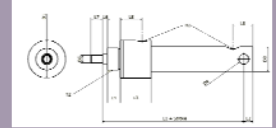
Hydro-Lek's hydraulic system is compact, good for extreme depths and lightweight and can perform battery-powered operations from low voltages – all major contribut-

ing factors when designing an AUV.

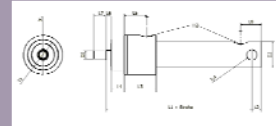
This comprehensive hydraulic system has been adapted to undertake a variety of typical AUV operations including:

- Release and recovery of subsea instruments
- Mine countermeasures
- Payload delivery

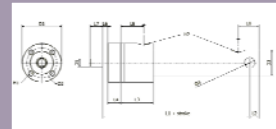
Key to this technology are Hydro-Lek's range of versatile cylinders which, by virtue of their light weight and high resistance to corrosion makes them ideally suited for the AUV market. Available with a range of mounting adaptors:



**Front Eye Mount**



**Nose Thread Mount**



**Rear Eye Mount**

*“Phoenix has used Hydro-Lek’s 6-function rate manipulator for a number of years now. It offers excellent value for the money and has helped perform numerous successful salvage operations for our government and commercial clients in depths of up to 5,400 metres,”*

*Steven Saint Amour,  
Phoenix International*

## Hydro-Lek manipulator used to recover black boxes from Air France Flight 447

A Hydro-Lek manipulator was used to successfully recover both flight recorders from the Air France 447 aircraft which crashed into the Atlantic over 2 years ago.

The HLK HDR6R is a compact, rugged 6 function arm designed for the new breed of smaller work class ROVs. It was used by US-based Phoenix International Holdings, experts in deep ocean search and recovery operations, on its ROV Remora at depths of 3900

metres to clear debris and grab hold of the FDR and CVR and place them into a basket for recovery to the surface.

Fitted with a selectable actuator at the shoulder joint, the HLK HD6R is mountable in 4 separate positions to allow port and starboard mounting as well as offering additional up or down functions.



**Hydro-Lek Manipulator recovering FDR box belonging to Air France Flight 447.**



## James Fisher uses Gauntlet Arm in Nuclear Decommissioning

As part of the government's ongoing process of nuclear decommissioning, James Fisher Nuclear (JFN) has commissioned a tooling system from Hydro-Lek to dispose of and confirm the inventory of miscellaneous nuclear waste.

The skid, which houses a HLK 46000 Mini Gauntlet Arm with corresponding power and valve packs, is constructed

from materials which are extremely lightweight and highly resistant to hostile environments with high pH values. It features a unique sacrificial jaw facility which allows contaminated jaws to be jettisoned and replaced.

*“Hydro-Lek have put a lot of time and effort in researching the materials used in this prototype to meet the key con-*

*straints of such a hostile environment. The simplicity and value for money offered by Hydro-Lek's system, together with their history and proven technology in the offshore industry, meant that Hydro-Lek is the manufacturer of choice for this solution” says Simon Pyne, Business Area Manager for JFN*