



Capability deployment and umbilical management.

Remotely operated vehicle (ROV) deployment – UmbiM consists of a hydraulically powered, remotely operated high dexterity arm.

Umbilical management – The UmbiM provides a route, support and control of the umbilical for Barrnon's ROVs.

The UmbiM manipulates the umbilical within the working environment, negotiating furniture and snag hazards. The UmbiM has two elbow joints, a slew ring and a telescopic extension capability.

Agile and compact – UmbiM is dimensionally compact to allow for deployment into confined spaces. It can alter its pose to allow for orifice and structural constraints of operating environments.

Designed for hazardous environments – The complete system is designed for durability and reliability as primary considerations. All features are designed to minimise contamination by hazardous wastes and to be easily decontaminated. Hoses, cables and pipes are suitably protected from the ingress of contamination.

Dedicated deployment – Barrnon's Bladecutter and Rotocutter products can be deployed vertically from height by the Barrnon UmbiM.

Dedicated Control – The Barrnon UmbiM allows continuous control of our products in difficult to access, cluttered environments and provides the control and power supply pathways between the control centre and the remotely operated vehicle.

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Key points

- Manipulates control and power umbilicals
- Vertical deployment of Barrnon's ROVs
- Nuclear environment compliant
- Eradicates umbilical snags and tangles
- Modular system
- Compact for confined spaces



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Umbilical manipulation

UmbiM is moved using hydraulic actuators that are remotely controlled by the operator. The UmbiM moves through four degrees of freedom to manipulate the power and control services umbilical of the Barrnon ROVs.

The system allows the umbilical to become a managed system, rather than a passive 'tail' that the ROV drags around. Complete positional management of the umbilical eliminates the risks of tangling and snagging commonly associated with passive umbilicals.

UmbiM is dimensionally compact to allow for deployment into confined spaces, but powerful and strong enough to move and support complex, high power transfer umbilicals. In a vertical configuration, the UmbiM deploys (and recovers) the Barrnon ROVs into deep, awkwardly accessible operating environments.

Trials and actual deployment have shown that the UmbiM can handle a wide range of umbilicals with considerable dexterity, control and accuracy.

UmbiM is normally deployed from a rigid fixed point, but it can also be mounted on a tracked platform or on the Barrnon Hydrospyder for deployment over bodies of water. The UmbiM is remotely operated with CCTV augmented by cameras, lights and sensors as required.

Barrnon Specialities

- Nuclear decommissioning solutions
- Sludge waste handling specialists
- Nuclear fabrication
- Concept to close-out in house
- Patented technologies
- Environment characterisation
- Rapid prototyping
- Plastic and metal 3D printing
- VR control of robotics
- CAD design

UmbiM Capabilities

UmbiM can deploy and retrieve Barrnon ROVs of varying sizes and weights.

The UmbiM allows vertical deployment of Barrnon ROVs into confined spaces

UmbiM provides management and control of umbilicals in four degrees of freedom.

Eliminates snag and entanglement hazards of power and control umbilicals in cluttered environments.



For more information on UmbiM

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