



ELSS Pods & Bags



Introduction

JFD's Emergency Life Support Stores Pods are used to transfer supplies to a DISSUB, in order to augment the onboard life support provision until a rescue can be effected. JFD's machined aluminium pods are designed, manufactured and tested to ANEP/MNEP 85, and fully Lloyd's Register certified for peace of mind.

They are utilised in the escape hatch of a DISSUB to safely receive ELSS Pods posted by an ROV or diver without the risk of obstructing the hatch. JFD's Pod Bags are in operation worldwide on an array of different submarine classes. While the principal design remains consistent, the fitment of each is tailored for each specific hatch type.

JFD also provides specialist tooling for ROVs, and support containers which facilitate the safe handling of ELSS assets.

ELSS Pod Posting Bags

JFD's Pod Posting Bags allow the safe delivery and recovery of ELSS assets to and from a DISSUB's escape tower. Once posted, and with hatches shut and drained, ELSS pods can be securely lowered into the submarine using the provided lowering mechanism, without the risk of flooding the tower.

Each Pod Bag is designed and built in compliance with ANEP/MNEP 85, and has been load-tested and certified for the receipt of a fully-flooded ELSS Pod. Safety is further enhanced by the design's dual-redundant load path.

For ease of stowage each Pod Posting bag is packaged within its own case.

ROV Tooling

In order to safely handle ELSS Pods, JFD provides specialist tooling for Intervention ROV's. The Pod grab has been designed for simple, reliable operation and can be fitted to most work-class ROVs.

ELSS Containerisation

JFD provides ELSS containers that allow a complete ELSS support package to be easily transported by land, sea and air. JFD's containers are certified for air transportation and optimised for rapid mobilisation to a Vessel of Opportunity.

Specification

Length	970mm inc. handle
Min. Internal Diameter	300mm
Max. Internal Diameter	350mm
In Air Weight	<60kg
Certified Operating Depth	610 msw
Test Pressure	960 msw
Pressure Hull Material	Aluminium 6082/5083
ELSS Payload	25 kg
STANAG	ANEP/MNEP 85
Classification Society	Lloyd's Regulations for Classification of Submersibles
Pressure Vessel Code	PD5500:2009 Specification for Unfired Fusion Welded Pressure Vessels

Case Study: Spanish Navy ROV Upgrade

In 2007, JFD carried out a major upgrade to the Spanish Navy's Scorpion 3 Intervention ROV onboard the submarine support vessel Neptuno. The ROV was outfitted with an array of JFD's bespoke Intervention tooling, including a new ELSS Pod Handling arm and wire cutter. In order to achieve this, the hydraulic system was substantially updated to include a new, dedicated auxiliary valve pack for driving the tooling, along with corresponding controls. The entire scope was carried out onboard a ship in Cartagena in order to ensure that the ROV's operational readiness remained unaffected.



A set of JFD Pods ready to be delivered to the Brazilian Navy



JFD's Pod Bag shown onboard a UK Vanguard class submarine