

The logo for JFD, featuring the letters "JFD" in white on a dark red background with a wavy top edge.

JFD

The background of the entire page is a deep blue underwater scene. Sunlight rays stream down from the surface. Three divers are swimming in the upper left. A large, white wireframe dome structure is on the right. A glowing blue oval highlights a detailed view of two divers inside a chamber with various equipment.

Special Forces Chambers

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OVERVIEW

To enable Special Forces (SF) operations from a submarine, JFD can support navies and shipbuilders with the complete system development, including:

- CONOPS / CONEMP and Requirements Development
- System Design
- Product Supply and Integration
- Installation, Test and Commissioning
- Introduction to Service
- In-Service Support

To enable this capability, JFD provide Special Forces Chambers to facilitate divers and equipment deploying / recovering between the submarine to the ocean environment.

JFD believes that SF operation can be fully achieved with a Lock In Lock Out (LiLo) Chamber combined with a wet vehicle such as the JFD Carrier Seal Tactical Diving Vehicle. However, if a bespoke Dry Deck Shelter (DDS) is required, JFD can provide this.

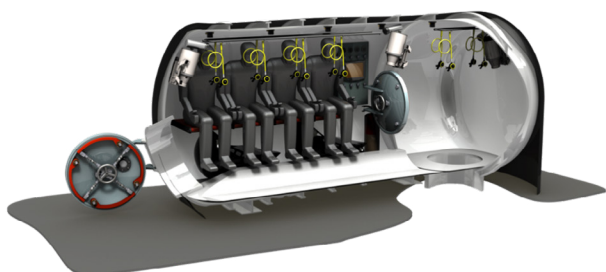
JFD's knowledge of the latest diving and hyperbaric technology, equipment and organisational structures can provide a single focal point for integration of the diving operation solution.

SPECIFICATION

- Size, dimensions - subject to customer requirements
- Number of personnel - subject to customer requirements
- 40msw Maximum Lock Out Depth (normally 10-15msw) - subject to customer requirements
- 200msw Operating Depth - subject to customer requirements
- 250msw Test Depth - subject to customer requirements
- 400msw Minimum Crush Depth - subject to customer requirements

FITOUT AND COMPONENTS

- PD5500 for Pressure Vessel Design; although JFD can work to whichever standards are specified by the customer.
- For diving and hyperbaric standards, JFD have experience with and can work to comply with specific standards required by the customer.
- JFD can work with any 3rd Party assurance organisation (e.g. Lloyd's Register, DNV, TUV, etc.)



LOCK IN LOCK OUT (LiLo)

- JFD can provide bespoke integrated LiLo Systems. The example below shows a LiLo fitted within the bridge fin of the submarine with divers locking in and out through the bottom of the chamber and swimming out through the aft hatch.
- This particular LiLo is a simple and versatile design allowing for up to 8 divers to lock in or out in a single cycle, and is currently in manufacture for delivery to new submarines.
- The design can, however, be adapted to suit the exact requirements of the submarine.
- Routine decompression is accommodated in the LiLo chamber design as standard. Therapeutic Recompression is an additional capability that is required when operating divers. This can be included in the LiLo design or alternatively JFD can provide a standalone Therapeutic Recompression Facility (TRF) by working with the platform designer.

DRY DOCK SHELTER

- If a Dry Deck Shelter is required by the customer, JFD can provide this, built to suit exact customer requirements.
- JFD's versatile solutions can accommodate a high number of divers also providing stowage for Tactical Diving Vehicles (TDV) or other vehicles.
- The shelter's volume is kept to be as small as practical to minimise the air volume required for pressurisation as well as wider platform impacts.
- The lock out hatch is usually positioned at an angle so that the chamber can be operational while remaining only partially flooded.

APPLICABLE STANDARDS

- The chamber is an outfitted habitable space with Life Support Systems and a Gas and Fluid System that allows the system to be equalised with its surrounding area to allow the lock out / in of divers.
- Externally a lighting and camera system to allow the duty officer to monitor the situation below the lower hatch from the monitoring and communications panel.
- The duty officer can communicate with the chamber operator via the monitoring and communications panel / control station if required.

The systems encompasses the following key sub-systems:

- Gas and Fluids Supply and Transfer Systems
- Control and Instrument Panels
- Monitoring and Communications Systems (visual & audio)