SHEPL

"IMCA, ABS, IRS & ISO Compliant Diving Systems and Services"

HYPERBARIC RECEPTION FACILITY (HRF)

Supreme Hydro Engineering Pvt. Ltd. has recently established a **portable Hyperbaric Reception Facility (HRF)** designed to safely receive saturation divers evacuated under pressure from offshore diving systems via a **Self-Propelled Hyperbaric Lifeboat (SPHL)** or **Hyperbaric Rescue Chamber (HRC).**

Configured as a **shore-based reception facility**, the HRF will enable the transfer of personnel under pressure into a controlled hyperbaric environment for continued life support, monitoring, and decompression.

The system is designed in accordance with applicable **IMCA** guidance and is compatible with **IMCA-compliant** hyperbaric evacuation units.

MAIN CHAMBER 1 :

Chamber - 1 constitutes the primary pressure habitat within the HRF, provides a controlled hyperbaric environment for personnel evacuated under pressure.

The chamber is designed to support safe occupancy, life support, medical observation, and the execution of controlled decompression following transfer under pressure from a hyperbaric evacuation unit.

Key Specifications:

- **Internal volume:** ~Approximately 15 m^3
- **Occupancy:** 4 beds
- **Design pressure:** 30 bar
- **Features:** Integrated life-support systems, environmental monitoring, communications, and operational control interfaces

The chamber is suitable for extended occupancy and provides the necessary infrastructure to safely manage post-evacuation decompression and diver recovery operations.

TRANSFER CHAMBER :

The Chamber serves as the pressure-retaining interface between the hyperbaric evacuation unit and the main chamber, enabling the TUP of personnel while maintaining pressure integrity.

Designed to facilitate the safe and controlled movement of evacuated divers, the chamber ensures seamless transfer into the Hyperbaric Reception Facility for continued life support and decompression.

Key specification:

- **Internal volume:** 6.42 m^3
- **Design pressure:** 30 bar
- **Primary Function:** Transfer of personnel under pressure
- **Features:** Pressure-rated hatches, integrated lighting, communication systems, and pressure-control arrangements.

The Transfer Chamber is a critical component of the reception process, ensuring safe, efficient, and pressure-continuous transfer operations following hyperbaric evacuation.

MAIN CHAMBER 2 :

Chamber - 2 is designed to accommodate and sustain personnel under pressure during hyperbaric evacuation and subsequent reception operations. The chamber provides a controlled environment with independent life-support and environmental control systems, ensuring the safety and well-being of occupants throughout transport, reception, and decompression phases.

Key Specification:

- **Capacity:** 6 bed, seating capacity for 12 personnel
- **Internal volume:** 19.26 m^3
- **Design pressure:** 30 bar

Features:

- Independent life-support and environmental control systems
- Built-in Breathing System (BIBS) with CO_2 scrubbing capability
- Medical lock, Bunk beds for extended occupancy & Integrated sanitary facilities

The chamber is configured to support safe occupancy, medical observation, and controlled decompression of personnel following hyperbaric evacuation.

LIFE SUPPORT MACHINERY UNIT:

The Life Support Machinery provides the essential environmental control , breathing gas management, and utility services required for safe and sustained hyperbaric operations. Designed with redundancy in critical systems to ensure uninterrupted life-support capability.

Key Components:

- **Diver Hot Water Unit:** System is with 100% redundancy
- **Environmental Control Units:** 4 × Kinergetics 126K units
- **Potable Water System:** Integrated hot and cold-water supply
- **Gas Reclaim System:** Divex air-driven reclaim unit

It can maintain chamber habitability through reliable temperature and humidity control, breathing gas quality management, and continuous support of critical life-support functions, ensuring safe operation of the Hyperbaric Reception Facility.

SYSTEM OVERVIEW :

The HRF is designed to interface seamlessly with both **Hyperbaric Rescue Chambers** and **Self-Propelled Hyperbaric Lifeboats,** facilitating the safe reception and transfer of evacuated personnel under pressure.

The facility is configured to accommodate both top-mating and side-mating arrangements, providing operational flexibility to suit varying site layouts and logistical requirements. The HRF comprises two interconnected hyperbaric chambers:

- **Main Chamber:** Accommodates 4 bed as primary chamber for habitation, life support, and decompression.
- **Main Chamber:** Accommodates 6 bed, seating capacity for 12 personnel, provides additional occupancy and decompression capability.

This configuration ensures safe TUP, reception of evacuated divers, continued life support, and controlled decompression in accordance with recognised hyperbaric rescue and evacuation standards.

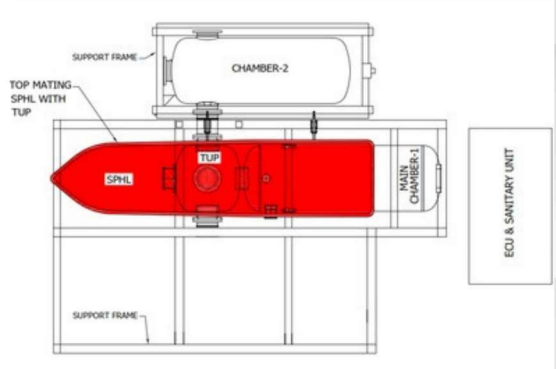
HYPERBARIC RESCUE CHAMBER CONFIGURATION:

The HRF is configured to receive personnel evacuated under pressure via an **SPHL** or **HRC**, while maintaining complete pressure integrity throughout the transfer process. The system is designed to interface directly with the Transfer Chamber through multiple mating arrangements, including:

- **SPHL top-mating** to the Transfer Chamber
- **SPHL side-mating** to the Transfer Chamber
- **HRC side-mating** to the Transfer Chamber

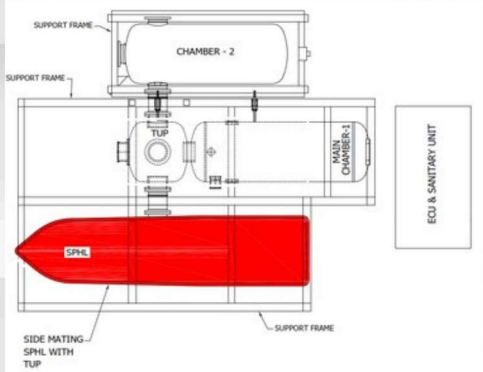
The selection of the mating configuration is determined by operational requirements, site constraints, and access considerations. All mating arrangements are engineered to ensure accurate alignment, secure sealing, and safe transfer under pressure, thereby maintaining the integrity and continuity of the hyperbaric environment during reception operations

TOP MATING OF SPHL



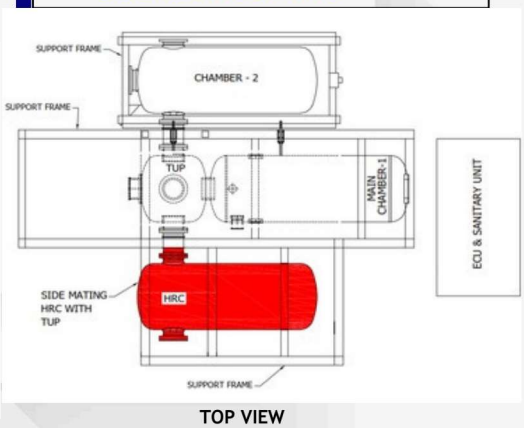
TOP VIEW

SIDE MATING OF SPHL



TOP VIEW

SIDE MATING OF HRC



TOP VIEW

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