

NORTHERN DIVER

MINE WARFARE & MILITARY DIVING SPECIALISTS

Diver Decompression Chamber

The Twin Lock Deck Decompression Chamber mounted in the 20 ft container is a pressure vessel for human occupancy (PVHO) for maximum operation to 100 MSW or 10 Bar. The two locks are designated as entry lock and main lock.

The Chamber is mounted on a steel skid with 2 viewports installed into the shell of the vessel and a Medical Lock fitted to enable items to be past to and from the pressurized environment.

The chamber is fitted out with high quality brass and stainless steel fittings providing the necessary control and instrumentation required to operate the chamber. The chamber is designed to operate via Two LP air inlet sources these are designated as Primary Air and Secondary Air. From these two sources of air the chamber locks can be pressurized safely via the control panel instruments and valves.

The control panel provides communications and electrical distribution.

Internally the chamber is fitted with bunks and seating for the comfort of the occupants during decompression treatment.

There is additional fitted air bank system which could be refilled automatically by the compressor.

Air bank is equipped with safety valve and filling valve for charging diving cylinders.

Compressor is fully silent with full automatic controls include : automatic condensate drain, autostop and autostart.

Cooling air is get rid by the hole in the container.

Hole window is seal for outside conditions like rain or wind.

There is additional oxygen cylinder bank with control panel for supply the oxygen or mix to the hyperbaric chamber BIBS.

All pipes, connections made in stainless steel, valve are stainless steel and brass, finishing in the container like wall or floor - anodized aluminum.

Container is isolated with Styrofoam.

Technical Specification

- Container - 20' Modified ISO Shipping Container
- Weight Overall - 8,500 kgs
- Ambient Operating Temperature range - 0 °C - 50 °C
- Electrical Power Supply Requirement - 440/380 VAC, 3 Phase, 60/50Hz
- Internal Power Transformer - 440/380 VAC to 220VAC

Chamber Specification

Twin lock decompression chamber the Dc1600 and can be used as a stand-alone version on dive support vessels, training centers, onshore support centers, and can easily meet the IMCA requirements. Because of size and weight these are often used in containerized systems.

Basic features

- Total number of people 10 (8 people to the main lock and 2 people to the entry lock)
- Control panel mounted on the DOC side with depth gauges
- Single viewports in each lock
- Medical Lock in long side
- Folding seat in Entry Lock (matrasses are optional)
- 2x Folding bench in Main Lock (matrasses are optional)
- Manifolds for occupant BIBS* (2x Entry, 3x Main)
- Single LED lighting in each Lock
- Single Bullhorn 2 way communicator in each Lock
- Double Lock chamber communicator
- Electricity switch box

The possibility of individual chamber configuration

Physical Data

- Length : ± 3600 mm. (overall)
- Diameter: ± 1600 mm. (overall)
- Weight : ± 2300 kg. complete with tubing etc.
- Height: ± 1950 mm.
- Entrance lock : length ± 1100 mm.
- Mainlock : length ± 2500 mm.
- Medical lock : length ± 350 mm.
- Medical lock : diameter ± 250 mm.
- Viewports: diameter ± 150 mm.
- Doors: diameter ± 800 mm.
- Design Pressure : 10 Bar, fitted out for air diving (5 Bar)

Documentation & Certificates (language English, delivered digital only, optional printed version)

All decompression chambers come with a complete set of documentation, consisting certificates, manuals, design approvals etc.

Optional Extras (not included)

- BIBS Masks (Delta, Scott, Amron)
- Back pressure regulator (main & entry lock)
- Analysers (Oxygen, Combined Oxygen / CO)
- Medical Penetrator assembly
- Thermo Hygrometer (main & entry lock)
- Primary heating (main lock)
- Emergency heating
- Climate system (heating & cooling)
- Extra hyperbaric LED lights
- Sound Powered Phone (1 external, 2 internal)*
- Caisson gauge*
- Hyperbaric Fire Extinguisher 7L
- Hyperbaric Fire Extinguisher 3L
- CO₂ scrubbers
- Standby battery power supply
- Therapeutic gauge for main lock
- TV camera monitoring
- DOC Medical Kit
- Chamber Data Recording System
- Onboard air cylinder storage system (300 Bar cylinders in Skid under the DDC)
- Chamber spares kit

Air bank specification:

- 4 x 50 l cylinders
- Working pressure 300 bar
- Safety valve
- Hold upside down
- Additional panel with 1 filling hose to charge the diving cylinders.

Oxygen bank specification

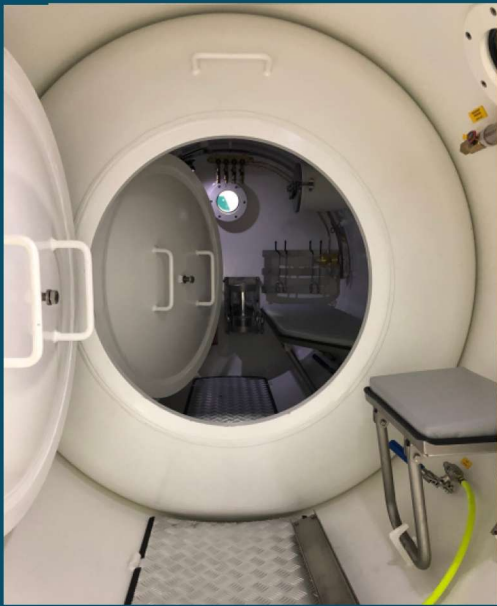
- 2 x 40 l or 50 l oxygen cylinder
- Situated outside of the container
- Additional connection for the recharging the oxygen bank
- Additional outlet or mix
- Separate distribution panel for oxygen / mix gas.

Compressor specification:

- Electro motor (E-Motor / 400V / 3 Phase / 50 Hz)
- Painted steel housing (RAL 6026)
- Sound insulated housing
- Automatic condensate drain
- Automatic stop at final pressure
- Hour counter
- Operating panel with start/stop and condensate test button, as well emergency stop switch
- Phase monitoring c/w shut down at wrong direction of rotation
- Autostart
- Motor protection switch
- Pressure maintaining and non return valve
- All pistons c/w steel piston rings
- Low pressure oil pump and filter
- Oil / Water separators in stainless steel
- Safety valves after each stage
- 3x concentric suction/pressure valves
- Filling pressure to your choice (200 or 300 bar)
- **Connections to your choice** (DIN 200 bar or 300 bar, CGA 200 bar or 300 bar and INT)
- Breathing air purification an accordance to EN 12021
- Capacity: 320 l/min



Diving, marine and rescue system



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NORTHERN DIVER

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