

### Description



The decompression chamber is custom built in a standard ISO 20 ft shipping container as a standalone unit for easy transport. It can be placed either on a supply vessel, port or a barge, depending on the operation requirements.

Partitioned into two areas with an entry into the larger area via the container main double door, the entry area accommodates the 60' chamber together with the controls and the air storage banks. Is fully air-conditioned illuminated with overhead fluorescent lights with emergency backup lighting and 220 Volt double gang sockets located at strategic points, cabling are fastened on to galvanized steel cable trays.

The other area is separated by a wall fitted with an access door and accommodates the machinery area, which is ventilated by a forced draft fan, that area houses the Bauer KAP 150 (32,4 m<sup>3</sup>/h) HP compressor and the O<sub>2</sub> cylinder bank in a handling frame.

A 3-phase electrical supply via an externally mounted bulkhead plug suitably rated for service on different voltage and currency options (440V 60Hz 380V 50Hz 63A and 220V 50/60Hz). The electrical fit out complies with all current industry standards.

The piping system is wall mounted inside the container built with Tungum & Stainless-Steel Pipe Work and fittings. The system linking the chamber with the Air and O<sub>2</sub> banks and the HP compressor. It is also outfitted with the option for incoming HP & LP Air and O<sub>2</sub> from external sources.

Left at the back wall is mounted a single shipping container cargo door with external rubber seals and two locking bars, enable access to the machinery area from outside. At the right side of the back wall is the fitted power sockets, penetrator plate, A/C external unit, and a filling manifold with three hose connections to charge the six cylinders air diving quad from the surface supply diving system and the bailout cylinders.

As build first line of defense against fire hazards there is a fire protection wiring system in both areas with smoke - fire detectors and emergency switches connected with alarm system. Powder and CO<sub>2</sub> fire extinguishers permanently located at the entry areas and chamber control.

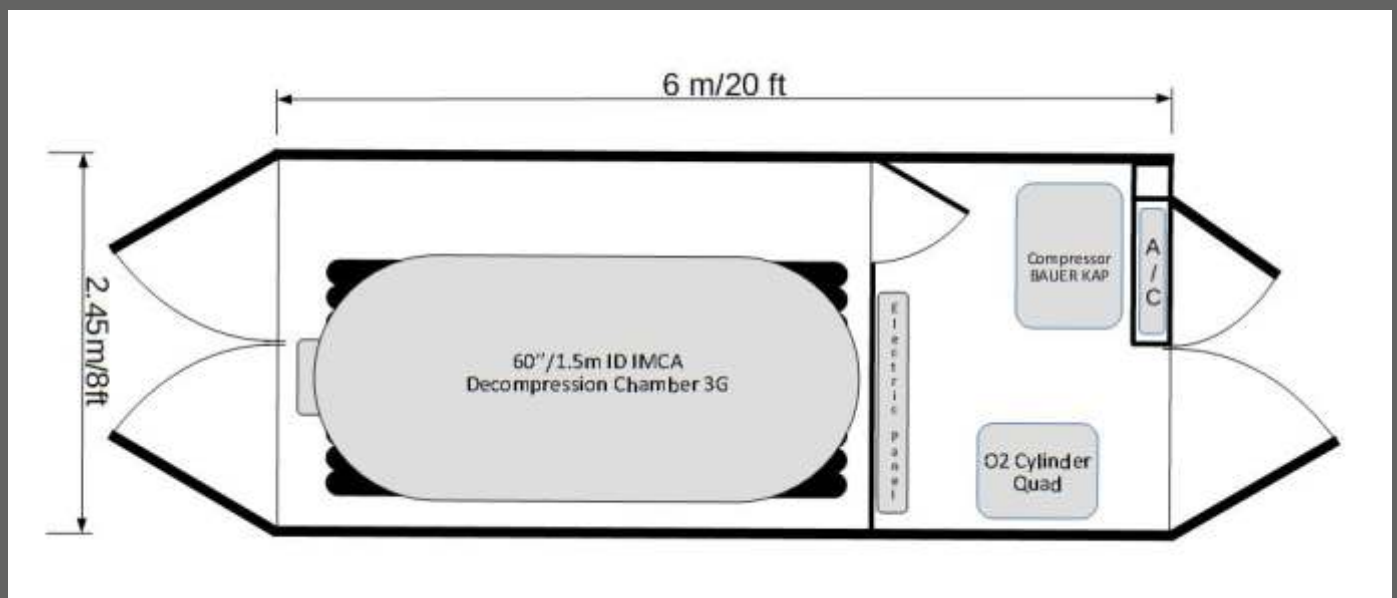
There are also available as back up units a HP Compressor Bauer Mariner 320 (18 m<sup>3</sup>/h) 220/330 Bar (Lombardini 24Hp Diesel engine) and a Generator 230/400V 5,5KVA 50Hz (Honda 9Hp Petrol engine).



## Chamber Description

60' IMCA Compliant twin lock deck decompression chamber, 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.

The 3G 1.5m ID (60") Twin Lock Decompression Chamber Design Approval by Lloyds Register and is compliant with UK Health and Safety requirements for diving operations in accordance to HSE guidelines, BSI quality standards & CE approvals. The chamber is manufactured and certified to IMCA and OGP guidelines for inshore and offshore use.



## Technical Specification

Depth Rating:	100 Metres
Design Code:	PD5500 : 2015 CAT 1, EN13445:2015, PED 97/23/EC Mod G Cat IV
	ASME VIII Div 1: 2015 & ASME PVHO: 2012
Manuf. Certification:	Lloyds Register
Working Pressure:	10 Bar (145 psi)
Length:	3572 mm (140.6")
Width:	1698 mm (66.8")
Height:	2068 mm (81.4")
Operating Weight:	3580 kg (7892 lb)
Viewports:	1 x Entry Lock / 1 x Main Lock - 200mm View Diameter
Bunks:	2 x Main Lock (Allowing 2 persons lying down or 4 persons seated)
Seating:	1x Entry Lock
Piping:	Tungum & Stainless Steel Pipe Work

## Standard Equipment

Equipment:	Quantity
0 – 100 MSW Gauges	2
0 – 24 MSW Therapeutic Gauge (Main Lock)	1
Low Pressure Air Gauges (0 – 30 Bar)	1
Low Pressure Oxygen Gauges (0 – 30 Bar)	1
Caisson Gauge	1
Sound Powered Phones for Communications Systems in main lock	1
Sound Powered Phones for Communications Systems in entry lock	1
Oxygen & CO2 Digital Analyzer, Flow Meter and Sample Lines	1
Chamber Pressure Relief Valve (one in each lock)	2
Valves Fitted to each side of the Pressure Hull	Set
BIBS Connected at main lock	2
BIBS Connected at entry lock	2
50 Litter @ 300 Bar Cylinder Banks & LP Reduction System	10
Hyperbaric Fire Extinguisher 7 litter (main lock)	1
Thermo Hygrometer	1
Hyperbaric Mattresses & Bedding (main lock)	2
CO2 Scrubber	1

## Dimensions of 20' ISO shipping container

Dimension	Feet – Inches & LB	Metric
Height (external)	8' 6"	2.59 M
Width (external)	8'	2.43 M
Length (external)	19,10"	6,05 M
Size (capacity)	1172 CU. FT	33,2 CU.M
Weight Dry	4410 LB	2000 KG
Weight Fully Loaded (DDC)	18 800 LB (Approx.)	8500 KG (Approx.)



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