



Submarine Manufacturing & Products Limited

Worldwide providers of commercial diving and hyperbaric solutions.



www.smp-ltd.co.uk



WORLDWIDE SUPPLIERS OF COMMERCIAL DIVING AND HYPERBARIC SOLUTIONS.

With over 30 years experience SMP is established as a world leader in the design, supply and manufacture of commercial diving, subsea and hyperbaric solutions. Supplying worldwide customers we have won several awards for export and manufacturing and we are fully accredited to BS EN ISO 9001:2008 and BS EN ISO 14001:2002 for Quality Assurance and Environmental Management. Our equipment is IMCA compliant and routinely tested to meet the requirements of Lloyds, DNV and The American Bureau of Shipping standards. We continue to develop our company, broadening our product base to offer a complete service to customers in commercial diving and associated industries. In this brochure we aim to give you an insight into some of the international brands we offer. We pride ourselves on providing bespoke solutions for our clients. If you don't see exactly what you are looking for please contact us to discuss your individual requirements.

Commercial Diving Equipment

- We supply a wide range of commercial Diving Equipment including Hyperbaric Chambers, Diving Compressors and Compressor Spares, Kirby Morgan Helmets, Hydraulic Power Packs, Launch & Recovery Systems (LARS), Containerised Dive Systems.

CAMERA SYSTEMS



COMMUNICATIONS



BREATHING AIR COMPRESSORS



DIVING APPAREL & BAILOUT



HELMETS & BANDMASKS



HULL CLEANING EQUIPMENT



NDT EQUIPMENT



REGULATORS, HOSES & FITTINGS



ROVs



SUBSEA CUTTING & WELDING EQUIPMENT



DIVING UMBILICALS



UNDERWATER TOOLS





Company Profile

SMP Ltd, based in Preston, Lancashire, United Kingdom, is a leading manufacturer and supplier of commercial diving equipment to the oil and gas industry. The product and service range includes design and manufacture of air, mixed gas & saturation diving equipment, diver launch and recovery systems, containerised dive control and diver decompression solutions, hot water machines, surface air diving control panels and much more.

Core Values

Listening We listen to the needs of our customers to better understand what they require from us and that our products and service offering remains relevant.

Innovation We strive for continuous improvement throughout our business through innovation of products, processes and people.

People Successful businesses have successful teams of people involved. We believe that by investing in our people and promoting a culture of teamwork and can do attitude throughout all areas of our business, we can give our customers the highest levels of service.

Performance Saying is not the same as doing. At SMP we walk the talk and strive to perform above and beyond the expectations of our customers by going the extra mile, all of which is backed up by a committed workforce.

Excellence Our products provide a safe working environment for divers. This is achieved by excelling in levels of quality and safety through rigorous testing and certification.

Vision

To be an admired global provider of class leading diving and subsea solutions in our chosen markets by growing trusted relationships to succeed together. We will develop and implement engineered solutions to improve our clients productivity, efficiency and safety.

Mission

To provide a safe working environment for divers through listening to our customers, innovation of products and services, investing in our people and achieving excellence through high levels of performance.

Track Record

SMP have accumulated over 30 years of substantial experience in marine engineering, hyperbaric and military markets. Our experience gives us a leading edge in the design, production, supply and maintenance of specialised commercial diving equipment.



60" (1.5m) DDC and Integrated Dive Control in 20ft Container

SMP build a large number of containerised systems to current IMCA regulations.



DESCRIPTION

As diving advancements take place, working practices and conditions are continuously being improved. The range of SMP Containerised Dive Systems are a complete solution.

The advantages of our containerised systems include:

- Ease of mobilisation
- Security
- Storage of all equipment
- Custom built to operators requirements
- Protection from environment
- Transportability
- Extended equipment life
- Modern working conditions
- Efficiency
- Clean video and computer work areas

SMP's most popular Containerised Diving System is the 20' ISO container which includes a 1.5mtr/60" Twinlock Decompression Chamber. These Containerised Dive Systems are fully insulated and air conditioned with additional personnel doors, viewing windows, steel lockable workbench and diver's surface supply control panel. The container is also fitted with high pressure air storage.

OPTIONS

- Air, Mixed Gas, Nitrox control panels
- Gas storage
- Container Thermal Insulation
- Internal penetrator plates for inward and outward gases
- Emergency BA sets
- Bespoke container layouts
- Camera systems
- Workbench with lockable drawers
- Fluorescent lighting incorporating emergency lighting
- Electrical distribution box and electric points
- Integrated 240v to 12/24 DC (regulated power supplies)
- Heating & Air conditioning units
- Personnel doors & viewing windows
- Compressors (HP/LP)
- DNV 2.7-1 Container

DESCRIPTION

The SMP Deck Decompression Chambers are manufactured to the highest possible quality. They are of a standard commercial twinlock specification and design approved by Lloyds Register to meet the harsh offshore environment. The specification of outfitting depends on the individual clients requirements and SMP's extensive range of optional equipment will allow for the DDC to meet all international requirements. All our Chambers are skid mounted with a minimum of 3 viewports and Medical Lock fitted as standard. The Chambers are available in as standard in 3 diameters; 1.5 metre, 1.8 metre and 2 metre other diameters available. The internal and external outfit are to the highest standards using stainless steel, brass and Tungum pipework.

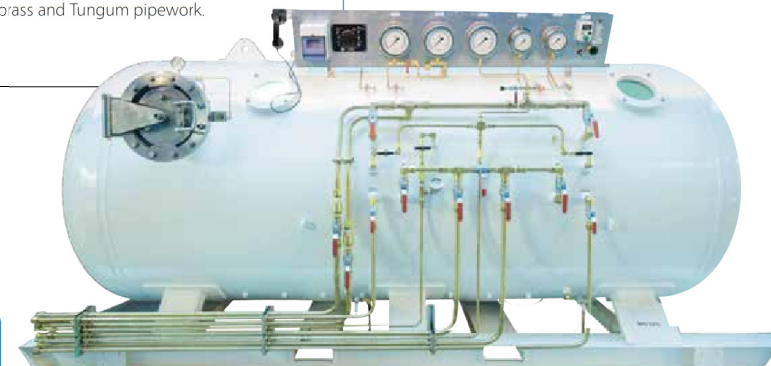


OPTIONS:

- BIBS Masks Scott Vak II
- CO2 Scrubbers
- Sound Powered Phone
- Electric Heating
- Hyperbaric Fire Extinguishers
- Hyperbaric LED Lights
- Chamber Communications
- Oxygen Analyser
- Combined O2/CO2 Analyser

TECHNICAL SPECIFICATION

Depth Rating	100 metres
Design Code	PD5500: 2009 CAT1
Certification	Lloyds Register of Shipping CE Certified
BIBS	2 x Connections Entry Lock and 3 x Connections Main Lock
Max Working Pressure	10 Bar
Weight	3240 Kg





72" (1.8m) DDC with Remote Control Panel in 20ft Container

SMP offer a range of containerised DDC solutions including remote control panel, 2/3 diver control panel, gas storage and much more.



DESCRIPTION

Basic Specification for the 1.8m Diver Decompression Chamber (DDC) c/w Remote Panel
1800mm Twinlock DDC installed into Standard 20' ISO Insulated Container, fully fitted out to comply with IMCA Guidelines.
Remote Ergonomically Designed Chamber Control Panel with Locked Maintenance Access Hatch
Chamber CCTV with twin monitors, recording and USB Export capability
Retractable Air Conditioning Unit with Heating & external security shutter
Strategically Distributed Lighting with Emergency Back-Up
220 VAC & 110 VAC Electrical Fit out (Distribution Board, Twin UK Metal Clad Sockets)
External HP & Regulated LP Optional Sourced Supply
Supervisor's Work Bench/Desk
Service Penetration Plates with stainless steel interface couplings
CO2 Fire Extinguisher
Container insulated bulkhead wall including manway for rapid DDC access and personnel door
Access Doors (2)

TECHNICAL SPECIFICATION

Depth Rating	100 metres
Design Code	PD5500: 2009 CAT1
Certification	Lloyds Register of Shipping CE Certified
BIBS	2 x Connections Entry Lock and 3 x Connections Main Lock
Working Pressure	10 Bar
Weight	3875 Kg

OPTIONS

- Air, Mixed Gas, Nitrox control panels
- Gas storage
- Container Insulation
- Internal penetrator plates for inward and outward gases
- Emergency BA sets
- Bespoke container layouts
- Camera systems
- Workbench with lockable drawers
- Fluorescent lighting incorporating emergency lighting
- Electrical distribution box and electric points
- Integrated 240v to 12/24 DC regulated power supplies)
- Heating & Air conditioning units
- Personnel doors & viewing windows
- Compressors (HP/LP)
- DNV 2.7-1 Container





Machinery Container

SMP offer a range of Machinery Containers to your needs



MACHINERY CONTAINER

SMP offer a range of machinery containers to suit your needs. These vary from 10' to 20' DNV standard offshore or standard ISO, with a variety of in-built equipment to suit operational requirements. Included in the range are: HP and LP compressor packages, HP storage systems, nitrox membrane generation systems, subsea hydraulic tooling and LARS hydraulic powerpacks.

The unlimited machinery container options generally include HP compressors which range from 200 ltrs/minute single phase 4 Kw up to 600 ltrs/minute 3 phase 18 Kw. These systems are typically stored alongside HP storage banks (300 Bar) with integral pipework, internal charging panels with interconnecting piping to external penetrator plates in stainless steel or Tungum.

SMP have selected a range of the highest quality rotary screw compressors, free air delivery varies from 1800 ltrs/minute up to 2800 ltrs/minute. All our LP breathing air compressors are fitted with internal coolers and use Domnick Hunter 3 stage LP purification filtration. The power requirements for these machines varies from 7 up to 22 Kw – all 3 phase. LP Air receivers are supplied in various configurations and sizes to suit the clients requirements.

NITROX MEMBRANE SYSTEM

We supply three sizes of Nitrox generation system; LP280 (1070 Litres per minute), LP560 (2140 Litres per minute) or LP713 (2700 Litres per minute). Each capable of supplying 21% to 40% Nitrox. These systems still allow you to operate the LP compressor as a source of LP air and the HP compressor can still supply an independent source of HP air if required.

The SMP machinery containers can be individually designed, manufactured and outfitted to suit the Client's needs. Additional equipment can be fitted depending on the size of the container such as hydraulic powerpacks varying from 15 Kw to 26 Kw. These powerpacks are used for a combination of subsea tooling or for primary and secondary use with the LARS system. Containers are outfitted with marine grade materials and the electrical specification meets marine and offshore requirements.

Our containers can be thermally insulated, air conditioned or ventilated using forced air ventilation. All services ie. air, hydraulic oil and electrical services are piped to suitably protected recessed penetrator plates situated within the container steel bulkheads. Primary and emergency strip lighting is fitted as standard in all our containers. Fire extinguisher are fitted appropriate for use within that container.

Diver Wet Bell System with Dive Control

The SMP Diver Wetbell Launch & Recovery system is specifically designed to provide a compact option to the standard launch and recovery systems offered by our competitors.

DESCRIPTION

SMP's Wet Bell Launch And Recovery System has been specifically designed to give a compact operating footprint to minimise the deck space required on board a vessel or barge. Emphasis has been placed on ease of mobilisation and demobilisation so that these costs are kept to a minimum. The Wet Bell System is IMCA D023 compliant and Lloyds Register Certified. The Wet Bell LARS folds down in order that it fits onto a standard 20ft flatbed road transport trailer thus expensive shipping costs for out of gauge size goods are avoided.

The main components of the system are broken down as follows:

- Base Skid
- 'A' Frame
- 'A' Frame Hydraulic Luffing Cylinders
- Wet Bell (2/3 Diver)
- Wet Bell Manriding Winch
- Clump Weight
- Clump Weight Manriding Winch
- Hydraulic Power Unit
- Wet Bell Main Umbilical
- Main Umbilical Hydraulic Power Sheave

TECHNICAL SPECIFICATION

Depth Capability
Design

Certification
Basket / Cage Cylinders
Length

Width

Height

Weight

30 kW HPU Electrical Requirements

Oil Capacity

Oil Delivery

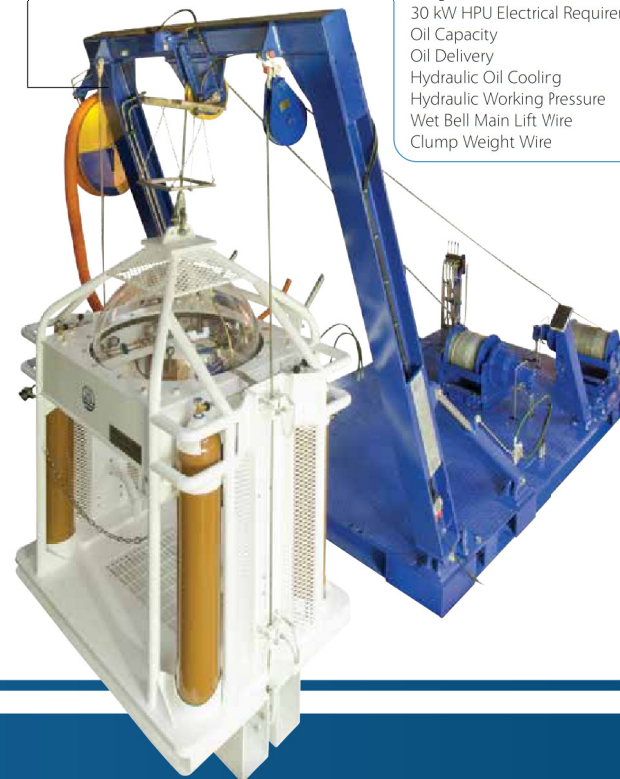
Hydraulic Oil Cooling

Hydraulic Working Pressure

Wet Bell Main Lift Wire

Clump Weight Wire

75 mtrs Standard (100 mtrs optional)
Lloyds Register Rules for lifting
in Marine Environments
IMCA D023 Design & IMCA D018
4 x 50 Litre @ 300 Bar
4258 mm
2238 mm (Standard Container Width)
4181mm Extended 2600mm Retracted (Folded)
5500 kgs HPU Not Included
380-440 V 3PH 50/60 Hz
2 x 200 Litre (Per Twin Tank)
90 litres / min @ 1450 RPM max
2 x Tube and Shell Seawater Oil Coolers
100 Bar
18 mm Dia Anti Rotational
13 mm Dia Anti Rotational



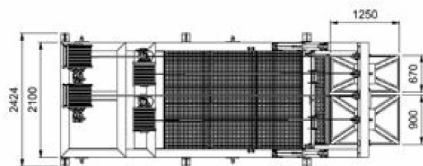


Dual Basket Launch and Recovery System (LARS)

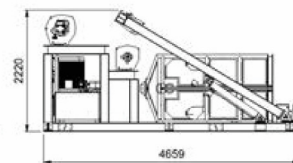
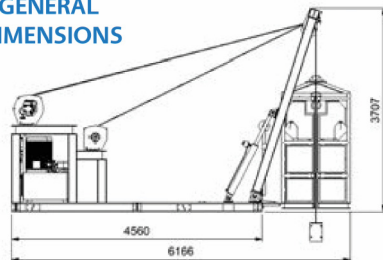
SMP manufacture a range of diver launch and recovery systems to suit a variety of commercial diving applications. This twin basket diver launch and recovery system is our latest offering which is proving very popular with commercial divers due to its innovative design and superior build quality

Skid Base / The Base skid is constructed of heavy section Universal Column with the Vertical 'A' Frame section situated at one end, Winch Platforms and the Hydraulic Power Unit at the other. Hydraulic Cylinders are fixed to the base clevises to operate the 'A' Frame. These can be fully retracted to a safe shipping position without the need for removal. The base frame is covered with a light weight, non-slip, corrosion proof composite material grating. The winches are integrally piped in 316 Stainless Steel to the hydraulic control valve block, which in turn are connected directly to the supply and return hydraulic supplies of the winches. The base skid is additionally fitted with two inward opening safety gates, which have integrated 316 stainless steel multi rollers fitted for umbilical handling.

'A' Frame / The 'A' Frame is moved by hydraulic cylinders to the inboard or outboard positions by operation of the proportional hydraulic control valves. The 'A' Frame is fitted with two central sheaves, where the lift wire is positioned for lifting and lowering the dive baskets. Additionally there are two sheaves for the clump weight wires and two Becket Lugs for connection of the clump weight wire end termination. The head of the 'A' Frame also incorporates a spotlight for illumination during hours of darkness and electrically interlocked limit switches which activates a failsafe lock-out system when either basket is raised above the preset level.



GENERAL DIMENSIONS



Clump Weight / There are two pre-fabricated Clump Weights which allows the Clump Weight wire to be double reaved through the sheaves situated at each end of the Clump Weight. This allows the free travel of the Clump Weight in the event of an emergency recovery of the two diver basket.

GENERAL

SMP's Dual Basket Launch And Recovery System has been specifically designed to give a compact operating footprint to minimise the deck space required on board a vessel or barge. Emphasis has been placed on ease of mobilisation and demobilisation, so that these costs are kept to a minimum.

The LARS folds down in order that it fits into a standard ISO 20' shipping container, thus expensive shipping costs for out of gauge size goods are avoided. This also allows for safe storage and protection of the LARS from the elements, during periods when the equipment is not required operationally.

The main components of the system are broken down as follows:-

- Base Skid
- 'A' Frame
- Two Clump Weights
- Primary Dive Basket (Two Diver)
- Secondary Dive Basket (Standby Diver)
- Electric Hydraulic Powerpack with Triple Motors and Pumps
- Winches

TECHNICAL SPECIFICATION

Depth Capability:	75 mtrs
Design:	Lloyds Register Rules for Offshore Lifting
Certification:	IMCA DO23 Design & IMCA DO18
Primary Basket / Cage Cylinders:	2 x 50 Litre @ 300 Bar
Weight:	7000kg
HPU Electrical Requirements:	380-440 V 3PH 50/60 Hz
Oil Capacity:	3 x 200 Litre (Triple Tanks)
Main Lift Wire:	13 mm dia Length 80 metres
Clump Weight Wire:	Anti Rotational
	13 mm dia Length 160 metres
	Anti Rotational
Low Noise Level:	85dBA On Load
Main Basket SWL:	975 Kg
Standby Basket SWL:	925 Kg
'A' Frame SWL:	2260 K



Single Basket Launch and Recovery System (LARS)



DESCRIPTION

The SMP Single Basket Launch and Recovery System is designed within a compact operating footprint to minimise the required operational deck space on board a vessel or barge. Emphasis has been placed on ease of mobilisation and demobilisation, so that costs are kept to a minimum. The Single Basket LARS is IMCA D023 and D018 compliant and has Third Party Design approval to Lloyds Rules for Lifting Appliances in a Marine Environment. The A Frame section can be fully retracted by the hydraulic cylinders to a stowed position for fitment into a standard 20ft ISO Container. This ensures protection of the equipment during transit / storage and minimises shipping and transport costs.

TECHNICAL SPECIFICATION

Depth Capability:	50m Operational Depth
Design Appraisal:	Lloyds Register
Design Approval:	Lloyds Rules for Lifting Appliances in a Marine Environment.
IMCA Compliance:	IMCA D023 & IMCA D018.
Dive Basket Cylinders:	2 x 50 Litre Cylinders 300 Bar rated.
Dive Basket Dimensions:	1340 mm x 1250 mm.
Length:	4000 mm.
Width:	2100 mm.
Height (Operational):	3550 mm.
Height (Stowed):	2200 mm.
Weight:	6000 kg
Hydraulic Power Units:	2 x 22kw HPU Tank Mounted Submerged Vane Pump.
HPU Electrical:	3Phase 380 – 440 Volts 50 / 60 HZ.
HPU Oil Capacity:	2 x 200 Litre Hydraulic Tanks with Inspection Covers.
HPU Working Pressure:	100 bar @ 90 Litres / Min @ 1450 RPM.
Seawater Oil Cooler:	Shell and Tube Type Seawater 45 Litre / min @ 5 bar Max
Basket Winch Manriding:	13 mm Dia x 80 Meters Anti Rotational Wire Rope.
Clump Winch Manriding:	13 mm Dia x 160 Meters Anti Rotational Wire Rope.

Diver Hot Water Machines



FEATURES

- Cathodic protection
- Mechanical Flow Switch
- Fuel Filter Cartridge System
- Inline water filter
- Ground fault protection system
- No mixing valves required
- Primary fuel solenoid shut-off valve
- Stainless Steel covers



DESCRIPTION

The SMP Range of diesel fired Hot Water Machines include Single, Double and Triple burner units that have individually controlled heat exchangers and 60 litre hot water receivers. The systems are designed for surface diving operations, by both commercial and military divers.

The units maintain an automatic digitally controlled temperature to within + or - 1°C and will support diving operations from single Diver operations including the standby Diver through to 3 / 4 Diver Wet Bell operations to 100m. The water supply can be either via a stainless steel submersible pump or inbuilt pumps depending on the client's specific requirement.

Flow (per Burner Unit):	7 GPM / 28.3 LPM per Burner Unit
Pressure (per Burner Unit):	10 Bar / 150 Psi Submersible Pump Unit 20 Bar / 290 Psi In-Built Pump Unit





Surface Supply Diving Panel



FEATURES

- HP / LP Air Diving Control Panels
- Mixed Gas Diving Panels
- Nitrox Diving Panels
- Portable Diving Panels
- Wall Mounted Dive Control Panels
- IMCA compliant panels using gas analysis
- Engraved Panel Fascias
- Saturation Diving Panels
- Gas Distribution Panels

DESCRIPTION

SMP manufacture a complete range of standard and deluxe air diving control panels from small applications for 1 diver, up-to 2, 3, 4 diver applications including air, mixed gas and Nitrox panels.

Within the standard and deluxe ranges, SMP offer a wide selection of compact portable panels supplied in Peli cases and wall mount options manufactured within aluminium frames.

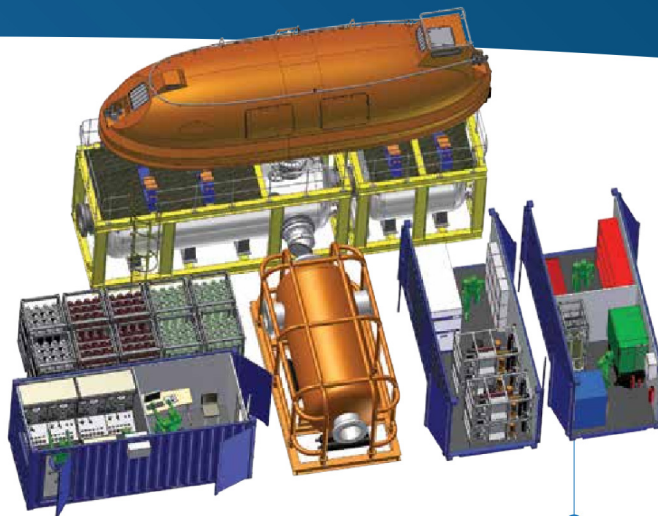
All SMP diving panels are supplied with CE certification, comply with HSE standards and when supplied with gas analysis also meet IMCA requirements. Full certification packages are supplied with all panels in accordance with IMCA D018

Panels are manufactured from quality components and are supplied with engraved panel fascias. In addition, SMP also offer bespoke solutions for any application and manufacture saturation diving, gas distribution and hyperbaric medical control panels.



Hyperbaric Reception Facility

SMP provide flexible design solutions, from a team of dedicated in-house professionals with extensive offshore operational experience and in depth industry knowledge. SMP listen to their clients requirements and design the systems around their specifications.



FEATURES

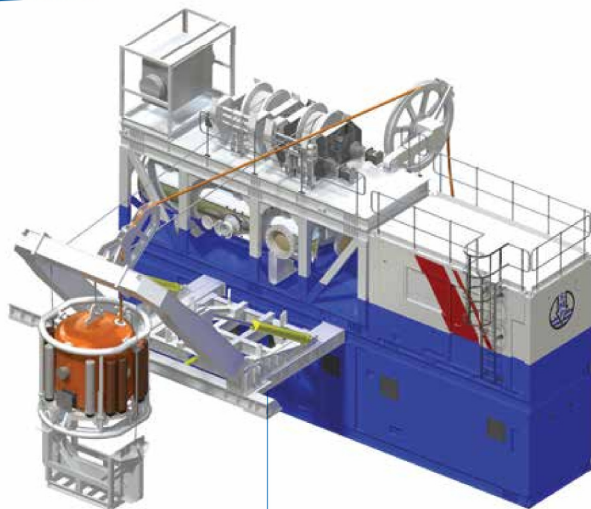
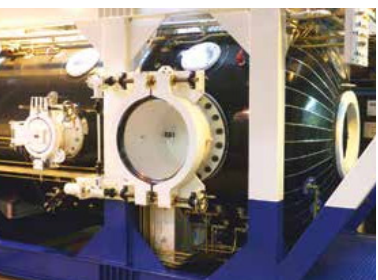
- Modular system transportable by conventional means
- Up to 24 person capacity
- Depth rating up to 300 MSW
- Pressure vessels design PED 5500 Cat 1 or ASME V111 Div 1 & PVHO
- Life support control fully insulated and air conditioned with a separate medical monitoring and evaluation facility
- Adaptable side, end or top mating manways to accept side or bottom mating SPHL or HRC
- Fully adjustable SPHL support saddles to accept various boat lengths and keel profiles
- Large equipment lock in addition to SMP standard medical locks
- Fully equipped life support machinery containers for system services
- Dedicated closed loop water chiller package for continued operation of the environmental control units, without reliance on the availability of seawater cooling
- A dedicated TUP / SPHL reception chamber which can be isolated from the main chambers for added safety during diver transfers
- Fully IMCA compliant
- Design approvals and class survey requirements to suit client





Saturation Diving Systems

SMP provide flexible design solutions, from a team of dedicated in-house professionals. With extensive offshore operational experience and in depth industry knowledge. SMP listen to their clients requirements and design the systems around their specifications.



FEATURES

- Modular transportable systems or fixed installations.
- Designed to meet clients specific individual requirements
- 4 to 24 person systems
- Depth rating up to 300 MSW
- Pressure vessels design PED 5500 Cat 1 or ASME V111 Div 1 & PVHO
- Dive control and life support control panels to suit client individual requirements.
- Fully insulated and air conditioned life support & dive control rooms.
- Overhead gantry or "A"-frame type bell launch & recovery systems, suitable for moonpool and or vessel side launch.
- SDC optional mating interfaces side, end or top mating with heavy duty mating clamp.
- Adaptable to work with SPHL or HRC emergency evacuation systems
- Fully equipped life support machinery skid packages or containers
- Dedicated remote location life support package for SPHL or HRC evacuation.
- Fully IMCA compliant
- Design approvals and class survey requirements to suit client



Hyperbaric Medical Treatment Chamber



DESCRIPTION

SMP design and manufacture multiplace Hyperbaric Oxygen Treatment chambers (HBOT) for medical facilities, our chambers are manufactured to clients specifications with size to suit number of patients and size of building. The chamber shown is a 12 person Triple lock unit with many innovative features, including a full height rectangular door for increased accessibility for emergency treatment cases as well as three independent chambers which can be pressurised individually. SMP supply full HP and LP compressor systems including gas storage and distribution. This chamber can take an ICU bed in the main treatment locks.

SMP will work with our clients architects and designers to accommodate our design within their buildings. All our medical chambers are built to comply with the latest medical directives and are CE certified.

FEATURES:

- Single Lock, Twin Lock & Triple lock chambers
- Medical Locks
- Full height rectangular doorway
- NATO Flanges
- Oxygen BIBS & Hoods
- Entertainment Systems
- Patient communications
- Comfortable Medical Seating
- Patient Monitoring & Data Recording
- Auto Fire Suppression Systems
- Auto Chamber Operating Systems
- Chambers Rated Up to 5 BAR working pressure