

SOS Group of Companies

Delivering Solutions for Survival



HYPERLITE SL3™

Lightweight Single-lock Hyperbaric Chamber

The Hyperlite SL3 is an ASME PVHO-1 Case 18 Compliant, lightweight single-lock hyperbaric chamber designed for multiple occupants. The system utilises SOS Group patented flexible braided tube technology in a single fold-out case.

- ✓ Multiple Occupant, Single Lock System
- ✓ Suitable for Hands-on Medical Attention
- ✓ Lightweight and Modular for Rapid Mobilisation
- ✓ Designed for Military Scenarios Including Bullet Impact
- ✓ Treatment Pressures of 3 or 5 Bar



230 kg



Main Lock: 1.58m³
1168 x 1043 x 1297mm



ASME-PVHO-1
Case 18 Compliant



3 Bar(g)
4 ATA



2 - 3

System Overview

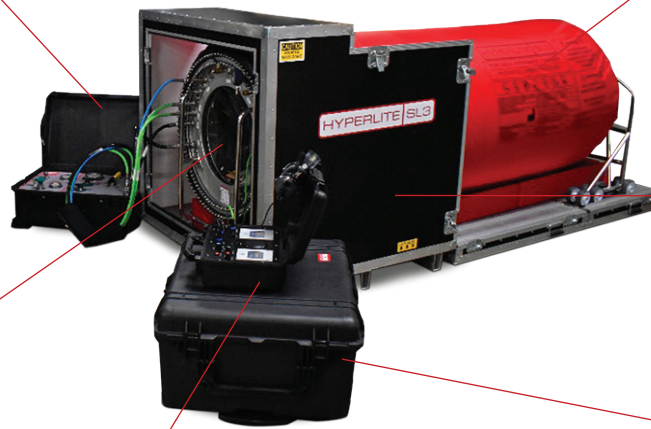
Control Box

Simple Control Box Controls Chamber Pressure, Patients Breathing Gas & Oxygen Isolation. Gauges display cylinder pressure and chamber pressure.



Large Viewports

For Patient & Tender Visibility.



Foldable Pressure Vessel

MAWP: 3 Bar
42"/106cm diameter
100"/254cm length.

Pressure Vessel Case

Designed for ease of use and rapid mobilisation, the case is skid mounted for lift by fork-lift/pallet truck. Military specifications are built with exoskeleton frame with top lifting lugs for overhead lift. The side wall of the chamber doubles as the chamber deck during operation.

Ancillary Equipment

Stored in protective cases.



Chamber Monitoring Systems

The CMS provides continuous real-time monitoring of O2, CO2, Temperature & Humidity. Contains built-in audible alarms.



Communications

Real-time Duplex Communications system with headset, microphone and speaker system allows clear comms with tender and/or patient.



Ancillary Equipment



CDRS System

The CDRS System provides a ruggedized tablet monitor to display the treatment table with a time against pressure profile. The system can also present other chamber parameters on the profile.



Patient Monitoring System

Real-time monitoring of patient vital signs for pre-treatment assessment including Blood Pressure, Pulse Oximetry, Temperature, Peak Flow and Blood Glucose.



Treatment Case

We supply treatment cases packed with essentials for application and/or during a treatment. Includes scrubs, hyperbaric blanket, scissors, portable urinals, rehydration packages, drinking reservoir.



Modular Gas Storage Rack

Built to meet customer requirements, our modular racks are broken down into banks of 2-3 cylinders, suitable for human lift. Options of cylinder range from 20 to 50 litres up to 300 bar MAWP.

6 Reasons To Choose

HYPERLITE™

WEIGHT

1

The SL3 utilises the SOS Group patented lightweight pressure vessel technology, reducing weight when compared to traditional transportable hyperbaric chambers. This benefits the end user by making the system light enough for to transport by pallet truck, crane or (with certain models) multiple-person human lift capability.

The image displays the Hyperlite SL3 prior to pressurisation. The main fabric body is flaccid, keeping system lightweight.



PACKAGED VOLUME

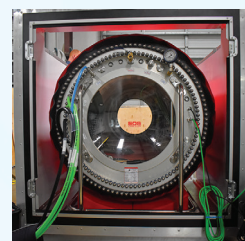
2

The SL3 is modular in design, making each case more manageable for lifting, mobilisation and storage. The Packaged Volume of the main chamber is just 1.58m³ and weighs just 230 kg, particularly attractive onboard vessels where space is at a premium and minimising weight is important. An additional exoskeleton allows lifting lugs to be attached to the top of the chamber for overhead lift.

3

CERTIFICATIONS

At SOS Group, Quality and Safety are the absolute priority. All of our chambers are designed to meet the highest safety standards. That's what makes us the preferred choice for most militaries around the world. Our SL3 Chamber is designed and built to comply with ASME-PVHO-1 under approved Case 18 (you can be found online through asme.org).



OPERATIONAL CAPABILITIES

High pressure and high durability

4

The Hyperlite SL3 and DL5 Pressure Vessels exceeded all previous known pressure limits for textile pressure vessels anywhere in the world. Our prototype testing took the pressure vessels to an impressive 246 msw (24.6 Bar / 25.6 ATA) without failure, allowing our pressure vessels to be rated to up to 50 msw (5 bar/5 ATA) as per the requirements of ASME-PVHO-1. These pressures allow the system to be operated in accordance with some dive tables that require mixed gas use.

5

OCCUPANTS

Hands-on medical attention throughout treatment

The SL3 System standard set up is designed for 2 occupants – 1 x patient and 1 x attendant, enhancing patient care capabilities of the system by allowing hands-on medical care to take place throughout a treatment and therefore expanding the scope for treatment in more critical incidents. Additional gas masks can be provided for emergency situations.



THROUGH LIFE SUPPORT

Supporting you for the long-term

6

At SOS Group, we are committed to supporting you from initial enquiry all the way to end of product life cycle. We provide you with training, servicing and support throughout. We are the only hyperbaric chamber manufacturer able to offer calibrated components delivered to you, keeping you operational 365 days a year.

Technical Specifications

Description	Imperial	Metric
Length	118 in.	300 cm
Diameter	42 in.	107 cm
Window Thickness	1.7 in.	4.31 cm
Window Diameter	22.19 in.	56.36 cm
Pressure Vessel (PV) Weight	507 lb	230 kg
Pressure Vessel (PV) Volume	94 ft. ³	2,662 litres
Max. Allowable Working Pressure	98 fsw	30 msw
Production Test Pressure	147 fsw	45 msw
Prototype Test Pressure Achieved	591 fsw	180 msw

CASES	VOLUME	DIMS IN INCHES	DIMS IN CM	WEIGHT LB	WEIGHT KG
MAIN LOCK	1.58m	297 x 264 x 330	117 x 104 x 130	506*	230*
Control box and ancillary cases are variable based on required specification					

DESIGN CODES & STANDARDS	
DESIGN CODES	ASME PVHO-1 (2012) & Case 18
QUALITY ASSURANCE ASSESSORS	SGS UK Limited
QUALITY ASSURANCE STANDARDS ACHIEVED	ISO 13485:2016

PROTOTYPE TESTING	
OVERPRESSURE TEST	10 x PVHOs at 360 psi for 30 minutes @ 38°C
EXTENDED DURATION CREEP TEST	10 x PVHOs at 300 psi for 300 hours @ 38°C
CYCLIC PRESSURE TEST	4000 CYCLES - 0 to 80 psi
CYCLIC FOLDING TEST	1100 CYCLES
COLD STORAGE TEST	2 x PVHOs @ - 18° C
DAMAGE TOLERANCE TESTING	Controlled depressurisation after .762 round from 91 meters



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