

# SOS Group of Companies

## Delivering Solutions for Survival



HYPERLITE 1™

## PORTABLE HYPERBARIC CHAMBER

The Hyperlite 1 is the world leading portable hyperbaric chamber and the only internationally approved non-metallic chamber capable of any 100% Hyperbaric Oxygen Therapy (HBOT). Key features include:

- ✓ All 100% (hyperbaric) oxygen treatments
- ✓ Transfer-Under-Pressure at altitude
- ✓ Human lift (4-6 personnel)
- ✓ Rapid Transportation including parachute delivery
- ✓ Treatment pressure of up to 2.3 Bar/3.3 ATA



50 kg (without patient)



Dimensions:  
Case 1 & 2: 70 x 70 x 42 cm  
Case 3 & 4: 47 x 36 x 18cm



CE Mark (93/42/EEC)  
ASME-PVHO 1 Compliant  
US Navy Diving System Certified



2.3 Bar (g)  
3.3 ATA



5,300 metres 17,500  
feet above sea level

## System Overview



### Control Panel

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



### Foldable Pressure Vessel

MAWP: 2.3 Bar 3.3 ATA  
23.5"/59cm diameter  
88"/225cm length.

### PVHO Weight

50kg excluding patient visibility.



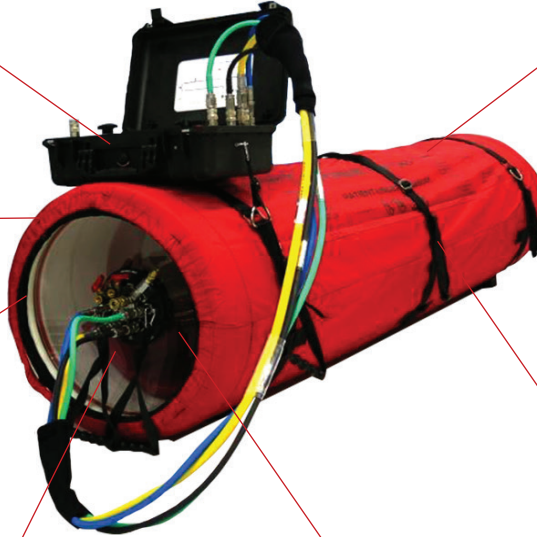
### Medical Lock

Allows essentials (water, food, medicines) to be passed to the patient during treatment.



### Large Viewports

For patient visibility.



### Chamber Monitoring Systems

The CMS provides continuous real-time monitoring of O<sub>2</sub>, CO<sub>2</sub>, Temperature & Humidity. Contains in-built audible alarms.



### Communications

Dual Communications between patient and operator is supplied with a throat microphone to ensure verbal communications and hear patient breathing during treatment.



### Built-In-Breathing System (BIBS)

Patient BIBS provides breathing gas (O<sub>2</sub> & Air) to the patient throughout treatment. Gas exhaled to atmosphere through exhaled breathing hose.



### Carrying Handles

For 4-6 person lift.

## Ancillary Options



### 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 during a treatment. Includes scrubs, hyperbaric blanket, scissors, portable urinals, rehydration packages, drinking reservoir.



### Portable Gas Supplies

Our modular cylinder package provides enough gas for a USN Table 6 Treatment. It includes 3 x 15 litre O<sub>2</sub> cylinders for breathing gases and 2 x 15 litre Air Cylinders for chamber pressurisation and air breaks. Other gas supply set ups also available.

## 6 Reasons To Choose

HYPERLITE™

# 1

### WEIGHT

#### The lightest portable hyperbaric chamber on the market

With a combined weight of just 50kg (without the patient) the Hyperlite 1 is the world's lightest hyperbaric chamber capable of all 100% oxygen therapies. It can be lifted and carried by 4 or 6 personnel and is suitable for helicopter or crane winch. What's more, it's light enough for check-in on commercial international flights.



# 2

### PACKAGED SIZE

#### Transportation with ease

The Hyperlite 1 is highly portable, capable of being carried and assembled by just two personnel. It can be split into three case or four case options with minimal storage requirements. The Hyperlite 1 system can be transported in a small vehicle, operated inside a helicopter cabin, a small vessel and even inside a submarine.

# 3

### CERTIFICATIONS

#### Global approvals with most extensive testing

Hyperlite Chambers are the most extensively tested in the industry. We combine medical device certifications with military approval. We have European CE Mark under 93/42/EEC, FDA 510k Compliance, NATO and US Military Compliance. Our systems are approved for 'Transfer-Under-Pressure or TUP'; Treatment of a patient during transportation to a medical facility.



# 4

### OPERATIONAL CAPABILITIES

#### High pressure and high durability

With an Operating Pressure of 2.3 Barg, the system remains the only non-metallic portable hyperbaric chamber capable of all 100% O<sub>2</sub> therapies including a US Navy TT6 Dive Table at 1.8 Barg. The Hyperlite 1 is the world's only hyperbaric chamber designed and tested for the world's harshest environments. It is the only hyperbaric chamber designed for austere military environments.

# 5

### MAXIMUM OPERATIONAL ALTITUDE

#### The altitude advantage

The capability to continue treatment whilst at altitude provides benefits in patient care & user operations. When a patient suffers from pressure related injuries, an increase in altitude may enhance symptoms. By placing the patient under pressure, hyperbaric oxygen can be administered to improve the condition of the patient, whilst allowing the pilot to evacuate at higher altitude, reducing flight costs.



# 6

### THROUGH LIFE SUPPORT

#### Supporting you for the long-term

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 all calibrated components delivered to you, keeping you operational 365 days a year.



# Technical Specifications

Description	Imperial	Metric
Length	88.5 inches	224.5 cm
Diameter	23.5 inches	59.5 cm
Window Thickness	1.0 inch	2.54 cm
Bladder Thickness	0.05 inches	1.2 mm
PV Weight	110 lb	50 kg
PV Volume	20 cubic ft	570 litres
Max. Allowable Working Pressure	75 fsw – 33.5 psig	23 msw – 2.3 barg
Production Test Pressure	114 fsw – 50 psig	34.5 msw – 3.45 barg
Prototype Test Pressure Achieved	453 fsw – 201 psig	138 msw – 13.8 barg
Gauges – Bourdon Dual Scale	0 – 90 fsw	0 – 30 msw

CASES	NO	DIMS IN INCHES	DIMS IN CMS	WEIGHT LB	WEIGHT KG
MAIN	1	28 x 28 x 17	70 x 70 x 42	88	40
MAIN	2	28 x 28 x 17	70 x 70 x 42	88	40
CONTROL	3	19 X 14 X 7	47 X 36 X 18	25	12
ANC. PARTS	4	19 X 14 X 7	47 X 36 X 18	14	6

## DESIGN CODES & STANDARDS

DESIGN CODES	ASME PVHO-1 (2012) & Case 12 U.S. NAVY DIVING & MANNED HYPERBARIC SYSTEMS SAFETY CERTIFICATION
TEST WITNESSING	LLOYD'S REGISTER EMEA
QUALITY ASSURANCE ASSESSORS	SGS UK LIMITED
QUALITY ASSURANCE STANDARDS ACHIEVED	ISO 13485:2016, DIRECTIVE 93/42/EEC FOR MEDICAL DEVICE CERTIFICATION, FDA 510K COMPLIANCE

## PROTOTYPE TESTING (\* ALL AT 100F/38C)

OVERPRESSURE TEST	6 x MAWP FOR 30 MINS ON 3 UNITS*
EXTENDED DURATION CREEP TEST	5 x MAWP FOR 300 HOURS*
CYCLIC PRESSURE TEST	10,000 CYCLES (1/MIN)*
CYCLIC FOLDING TEST	4400 CYCLES
COLD STORAGE TEST	INFLATION AFTER STORAGE AT -18°C / -0.4°F
DAMAGE TOLERANCE DROP TEST	DROP TEST AT 45° 200 LB LOAD MIN 3 FT
OTHER TESTS	SOLAR RADIATION, SALT FOG, VIBRATION & EMC TESTS



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