

# MODULAR RECTANGULAR HYPERBARIC OXYGEN THERAPY CHAMBERS



• CE – MDD & PED

• UL/CB

• ISO 13485

• MDSAP

- Unique Modular in Design
- Ergonomic Comfortable Seating
- Expansion of Seats on Demand
- Mitigates Installation Challenges
- Minimal Civil Work at Site
- Customized Configurations & Features

**FIRST OF ITS KIND IN THE WORLD**

## WIDEST RANGE OF CHAMBERS

- Monoplace
- Modular
- Veterinary
- Multiplace
- Decompression
- Transportable





## WHO WE ARE

*Tekna, in business since 1989, is the Leading Manufacturer of Hyperbaric Chambers. We have successfully installed 100's of chambers across the US!*



**TEKNA FOUNDED**  
in Texas, USA



1989



**RECEIVED US FDA CLEARANCE**  
for chambers - FDA 510(K)



2000

2010



**RELOCATED** to a larger  
facility in Florida, USA



2016

**DEDICATED SERVICE FACILITY**  
in India for Overseas Customers



2017



**UPGRADED TO A STATE-OF-THE-ART**  
manufacturing facility with  
US FDA listing & registration!



2018

**Expanded**  
Distribution Market



**Introduced first of its kind**  
**Modular Rectangular**  
**HBOT Chamber**



2019



2020

**Acquired Certifications**  
CE, MDD, MDSAP, UL & PED



**Launched PSA based O2**  
**Generator & Oxygen Hood**

2021



2022



**Obtained ASME for Entire**  
**Range of Hyperbaric Chamber**



**WE ARE CERTIFIED:** Tekna Devices are US FDA 510(k) cleared, ASME 'U' Stamped, ASME PVHO - 1 and NFPA - 99 compliant, IEC 60601 tested, UL and PED certified. Supported by an efficient service team with multiple installations across India



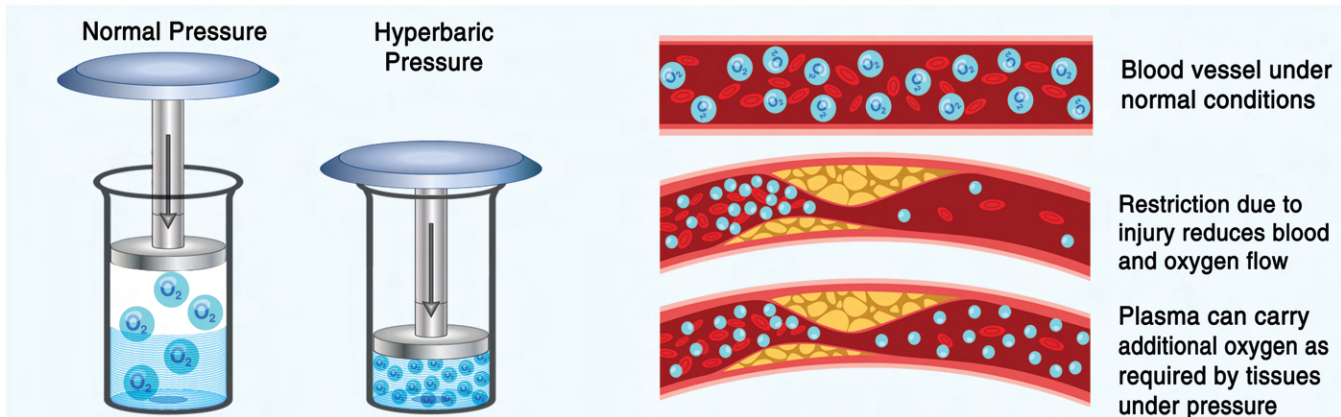
**TEKNA OFFERS:** A range of Monoplace and Multiplace Hyperbaric Chambers to suit the space availability, budget, patient load & types of indications being treated.



# WHAT IS HBOT?

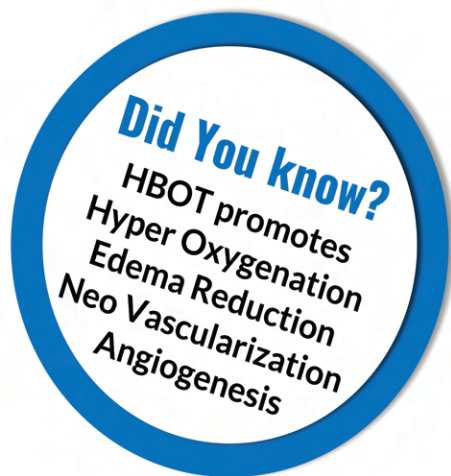
*UHMS (Undersea Hyperbaric and Medical Society) defines HBOT as breathing 100% oxygen delivered at pressures greater than 1.4 ATA. Typically, patients are pressurized from 1.5 upto 3 ATA (2 - 2.5 ATA is commonly used) while breathing 100% oxygen.*

Under normal conditions, nearly 97% of the oxygen requirement is transported to the tissues by haemoglobin and the balance is carried by the oxygen dissolved in the Plasma.



Accordingly to Boyle's and Henry's Law, More gas dissolves in a liquid under pressure. In our Body, Oxygen Molecules become more soluble (more easily dissolved) in Plasma under Hyperbaric Pressure.

This plasma can then carry oxygen to Hypoxic tissues when conditions exist that prevent the transport of RBC's. Subjecting the patients to Hyperbaric Pressure above 1.5 ATA also reduces inflammation at the wound site thereby facilitating increased oxygen transport.



An example: ICP reduction has been seen after the first application of HBOT. This is especially useful in conditions such as Venous Ulcers etc.<sup>1,2</sup>

## IMPORTANT NOTE

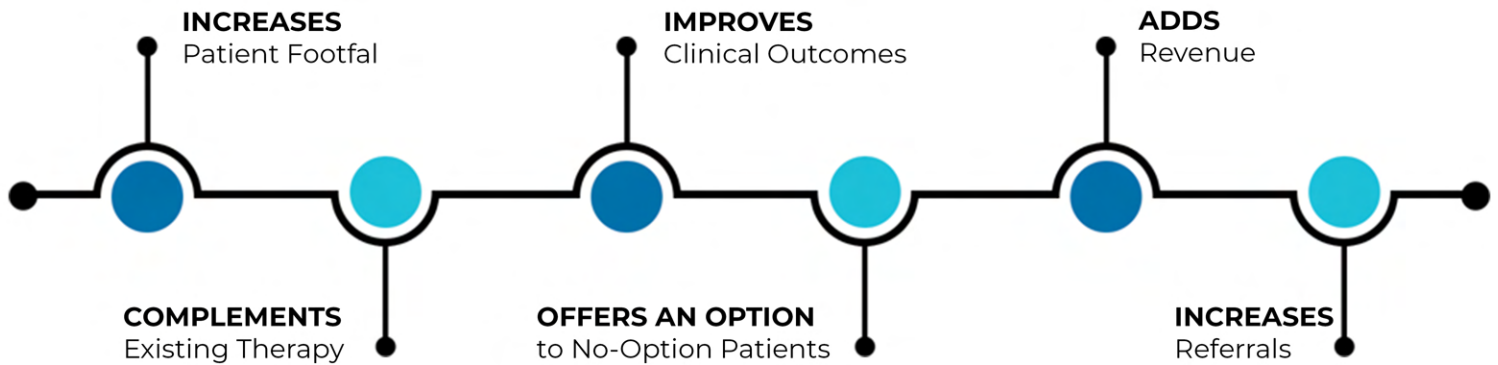
Chambers that are below 1.5 ATA- mild pressure chambers/ bags (Eg: Gamow bags) are not recommended by the FDA for clinical use.

1 Enrico M Camporesi MD and Gerardo Bosco MD, PhD , Hyperbaric Oxygen Therapy indications ebook, 13th Edition, 2014, Chapter 15 by Undersea and Hyperbaric Medical Society.

2 Sarah B. Rockswold, M.D. et al., J Neurosurg, Vol. 112, pp 1080-1094, 2010

# WHY use HBOT?

Hyperbaric Oxygen Therapy (HBOT) is a Proven, Clinically Documented, Non-Invasive Treatment option to treat various clinical conditions, sports & rehabilitation and wellness.



## WIDE RANGE OF APPLICATIONS

### US FDA APPROVED INDICATIONS

- Air or Gas Embolism
- Arterial Insufficiencies
  - Central Retinal Artery Occlusion
  - Enhancement of Healing in Selected Problem Wounds
- Carbon Monoxide Poisoning
- Clostridial Myonecrosis (Gas Gangrene)
- Compromised Grafts and Flaps
- Crush Injuries and Skeletal Muscle-Compartment Syndromes
- Decompression Sickness
- Delayed Radiation Injuries (Soft Tissue and Bony Necrosis)
- Idiopathic Sudden Sensorineural Hearing Loss
- Intracranial Abscess
- Necrotizing Soft Tissue Infections
- Refractory Osteomyelitis
- Severe Anemia
- Thermal Burns

### INDICATIONS APPROVED IN OTHER COUNTRIES\*

- Ischemic Stroke
- Traumatic Brain Injuries
- Cerebral Palsy
- Autism
- Migraine
- Multiple Sclerosis
- Viral Encephalitis
- Facial (Bell's) palsy
- Vertigo/Meniere's disease
- Complex Regional Pain Syndrome
- Fibromyalgia
- Frostbite
- Sports Injuries
- Recurrent Oral Ulcer
- Periodontal disease
- Ulcerative colitis

\* These indications are not currently approved by the US FDA



# TEKNA MULTIPLACE PRODUCT RANGE

## MODULAR RECTANGULAR



- Dedicated Patient Cubicles - Provides patients privacy
- Offers extra leg room
- Personalized Climate and Lighting Control

## CYLINDRICAL MULTIPLACE



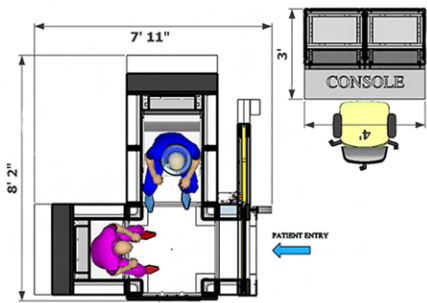
- Patients are treated in a row next to each other
- Offers standard leg room
- Centralized room temperature maintained
- Common Entertainment System

## ADVANTAGE OF MODULAR RECTANGULAR

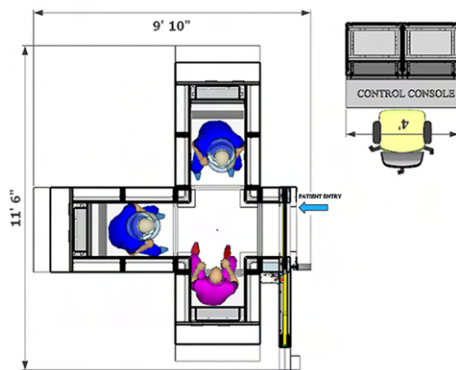
- Expandable to more number of seats on demand, thereby reducing the investment cost and space
- Mitigates Installation challenges and avoid unwarranted civil work at site
- Unique design to accommodate multiple patients with reclining / non reclining option, separate patient stretcher section and dedicated seat for the attendant / nurse / doctor
- State-of-art communication system where sound is transmitted through the shell from an external transducer for highest safety
- Personalized IR cameras for every patient seat and stretcher for additional safety
- Personalised exterior skin options to suit clinic / hospital aesthetics
- Elegant Modular Control Console saves space and facilitates easy maintenance
- Cool touch fiber optic LED lighting system where the electrical components are outside and the illumination is passed inside – individual patient controls to control the lighting
- Fire suppression system complies with NFPA-99 ensures highest safety
- Oil free duplex compressor ensures durability and provides high quality medical grade air
- Comes with quality ECU and Dryer system, offers optimum air temperature

# MULTIPLE CONFIGURATIONS

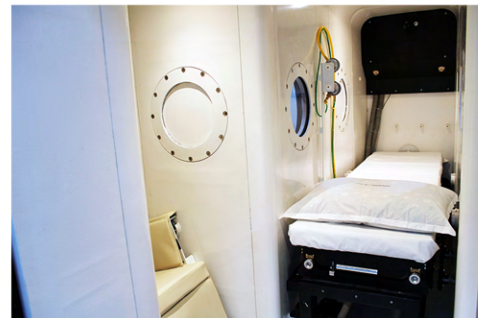
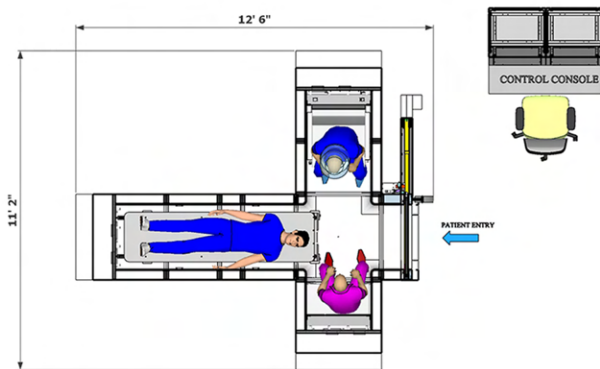
To fit different Applications, room sizes and available budgets



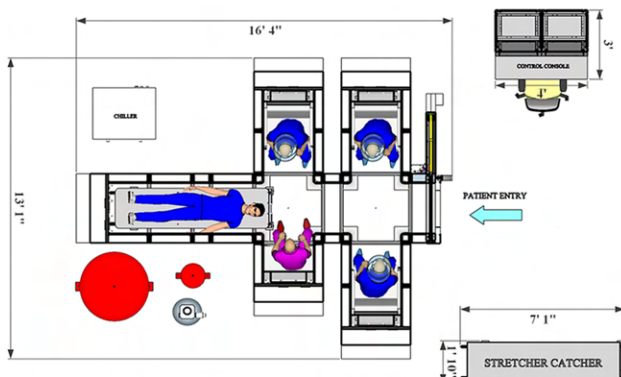
Redefining small but spacious, a 2 occupant chamber for small clinics



Our fastest selling model, 3 occupants in the limited space like Clinic / Day Care centre



Add a Dedicated Stretcher Section where the attendant can access the patient easily



The beauty of modular chamber - it grows and expands with your practise

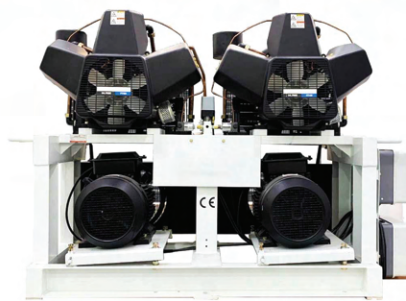


# HBOT CHAMBER ACCESSORIES



## CONTROL CONSOLE

Console is the operating panel for the chamber



## AIR COMPRESSOR

Medical Grade Air Compressor (100% oil free) - compresses atmospheric air and stores in the air receiver



## AIR RECEIVER

Stores Compressed atmospheric air compressed by the Oil free compressors



## AIR DRYER

It removes the moisture & cools the compressed air which is passed on to the chamber



## ECU

Water/ethylene glycol is chilled externally and circulated through the ECU system inside the chamber to maintain a comfortable environment inside the chamber



## FSS Deluge Tank

Fire Suppression System Water deluge tank as per NFPA- 99-2015

## BIBS - BREATHING OPTIONS

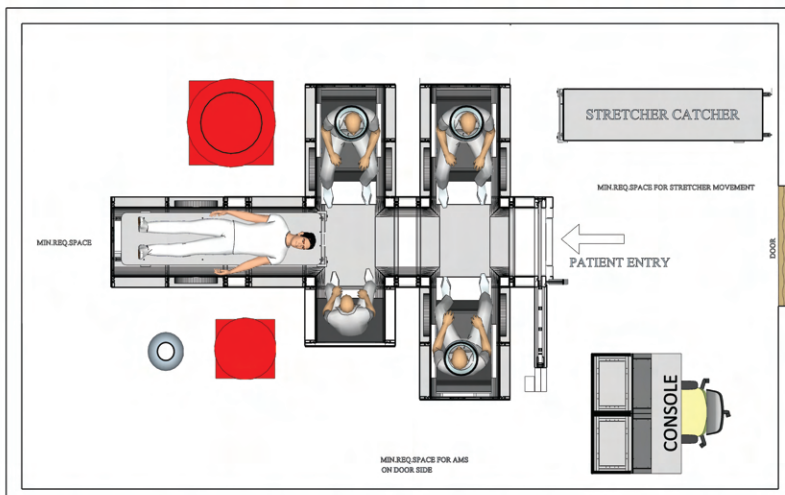


Hyperbaric Hood



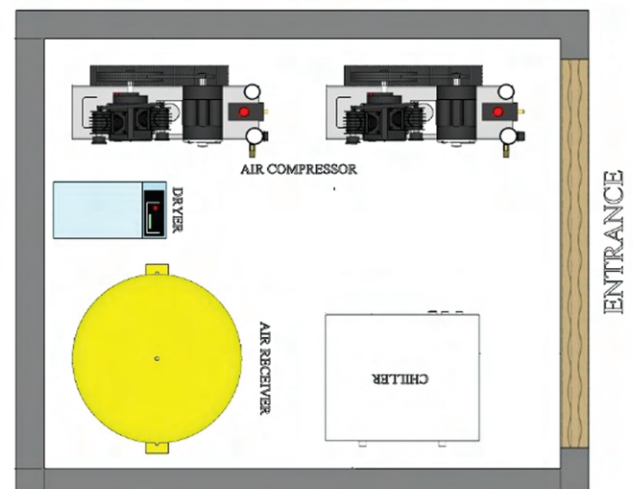
Hyperbaric Pressure rated Mask

## HBOT REPRESENTATIVE ROOM LAYOUT



Config: 3 Seats + 1 Stretcher + 1 Attendant Seat

## COMPRESSOR ROOM LAYOUT



ISO 10' - STD CONTAINER

## TEKNA RANGE OF HBOT CHAMBERS



**MONOPLACE  
HYPERBARIC CHAMBER**



**MULTIPLACE  
HYPERBARIC CHAMBER**



**VETERINARY  
HYPERBARIC CHAMBER**

### SERVICES & SUPPORT

Tekna has helped to setup hundreds of hyperbaric oxygen therapy clinics in India and Worldwide. Tekna is always available to help!

- Hyperbaric Room Layout Design
- Med Gas plumbing / point of connection
- Fire code compliance / Certification
- Installation and Commissioning
- Comprehensive chamber maintenance
- Timely after sales service
- Marketing support to improve footfalls, website templates, sample ads, video, etc.,
- Offers training to operators/ maintenance technicians
- Facilitates training to clinicians through our EDU partners
- Helps in conducting CME to improve awareness
- Offers all accessories like Hyperbaric approved Hoods/Scrubs



**Marketed in USA by:**

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