

DIVE VERTICAL



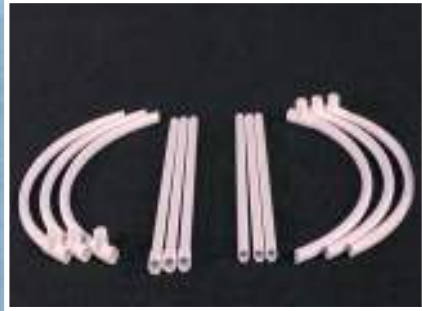
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WHAT IS INCLUDED



CARRY BAG



FRAME



FLOOR



CARPET



COMPRESSORS



OPEN ME FIRST

FAILED CIRCUIT ALARM



METHOD 1: Take the circuit alarm, ensure that the 9 volt battery is installed in the circuit alarm.

FAILED CIRCUIT ALARM



Plug the circuit alarm into the outlet (DO NOT PLUG INTO OUTLET POWERED BY LIGHT SWITCH)

GETTING STARTED



Place the floor on the ground, with the “This Side Up” facing up. Ensure that all of the buckles on the floor are extended out (see the picture above)

GETTING STARTED



Remove the chamber from the carry bag and place the chamber on top of the floor.

[Click for video reference](#)

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ZIPPER SYSTEM



Now you will bring it to shape without anyone inside so you can connect the floor to the chamber. First ensure that the buckles are buckled (*note* they will be upon delivery).

Place a small dot of silicone lubricant to aid in zipping the internal zipper.

ZIPPER SYSTEM



Close the internal zipper, make sure the zipper is completely in the zipper dock. If the zipper is not completely in the dock, the chamber will not fully pressurize. (*see picture on next page for proper way to zip)

ZIPPER SYSTEM



Look at the two pictures above. The picture on the left has an example of a zipper that is not properly zipped, notice the gap between the zipper and the dock. The zipper on the right is zipped correctly, with the zipper fully in the dock.

It is important to zip the zippers properly, failure to zip the zipper properly could damage the zipper, requiring the chamber to be sent in for repairs.

ZIPPER SYSTEM



Next close the external zipper, ensure it is fully closed, by pulling the zipper string through the white safety strap.

INFLATING THE CHAMBER



Now that the zippers have been zipped and the buckles are closed, it is time to connect the compressors (*pictured above 2 compressors) to the chamber.

INFLATING THE CHAMBER



Locate the 2 fill valves on the chamber, apply a small dot of silicone lubricant on the O ring on the end of each fill valve connector. Now click the hoses onto the fill valve connectors. Once both valves are connected, make sure that the red deflation valve is in the closed position (*closed position is lining up the gray dots)

CONNECTING THE FLOOR



Now that the compressors are connected and the red deflation valve is closed, turn on the power to the compressors. The chamber will begin to inflate, when the chamber is to shape and soft like the above picture. Turn off the power to the compressors.

CONNECTING THE FLOOR



Now that the chamber is to shape, position the chamber upright and center it on the floor.

[Click for video reference](#)

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CONNECTING THE FLOOR



Once the chamber is positioned correctly, buckle all 8 of the belts to the chamber (* If the belts are too tight to connect, open the red deflation valve to release pressure.) Once the floor is connected close the red deflation valve and turn on the power to the compressors to inflate the chamber to full pressure.

CONNECTING THE FLOOR



When the chamber is at full pressure it should look like this. ([CLICK FOR PRESSURE INFORMATION](#)) If your chamber does not look like this partially deflate and re-center the chamber on the floor. Then pressurize the chamber.

BUILDING THE FRAME

Now it is time to build the frame.

For the purposes of this manual and the corresponding video. We will demonstrate building the frame outside of the chamber (*it is a good idea to practice building the frame outside of the chamber regardless).

The frame includes 12 pieces total, 6 arches and 6 small side poles. See below.



*Finished Frame



BUILDING THE FRAME



The first thing to do is deflate the chamber, turn the red deflation valve to the open position. Wait for the gauge to read zero as shown above. Once the gauge reads zero, unbuckle the belts and then unzip the zippers.



BUILDING THE FRAME



First, we will build the 2 rings, take 3 of the arches and lay them out as shown above.

BUILDING THE FRAME



Line up the holes and insert the screws, using the included screwdriver to tighten the screws.

[Click for video reference](#)

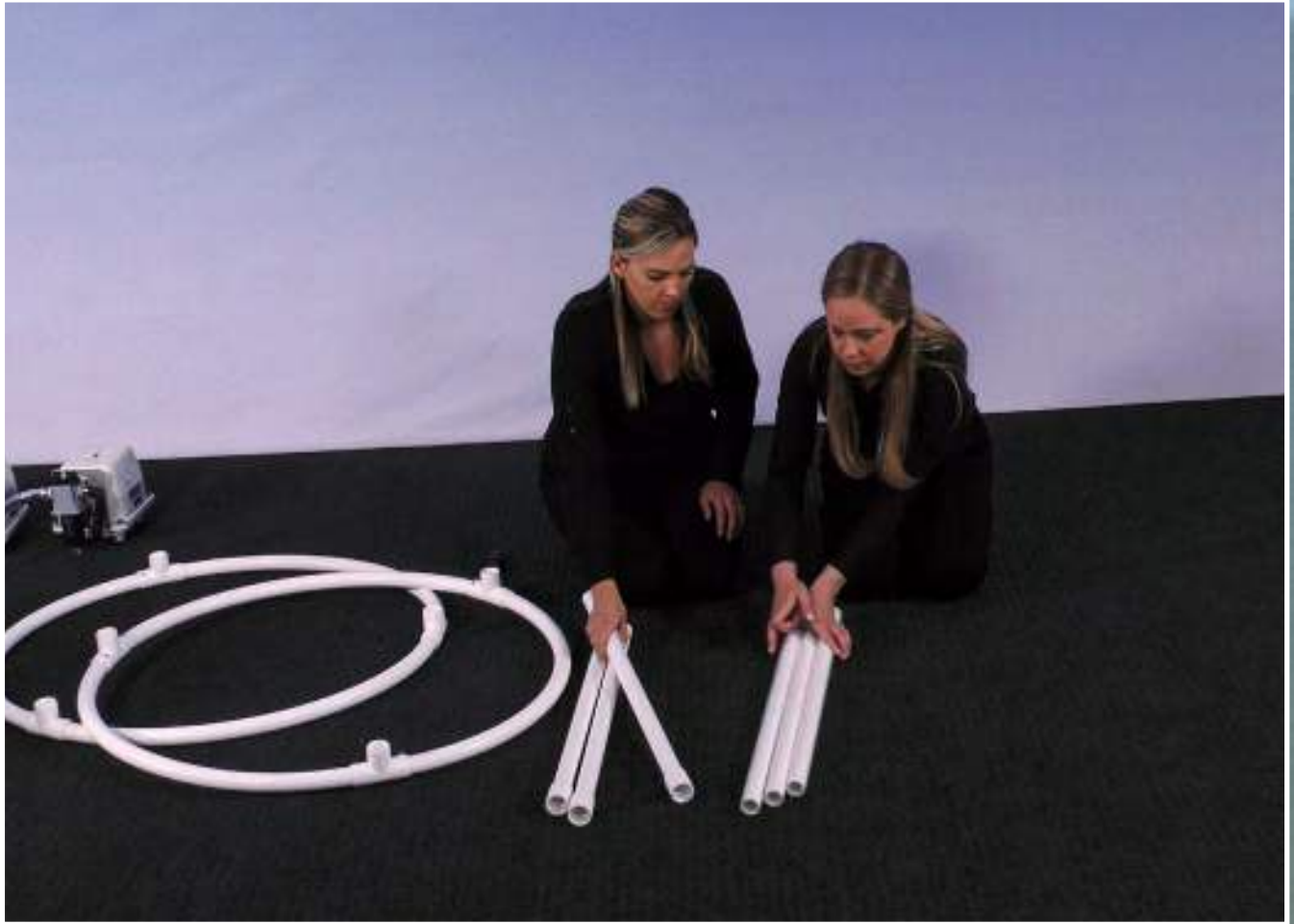
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BUILDING THE FRAME



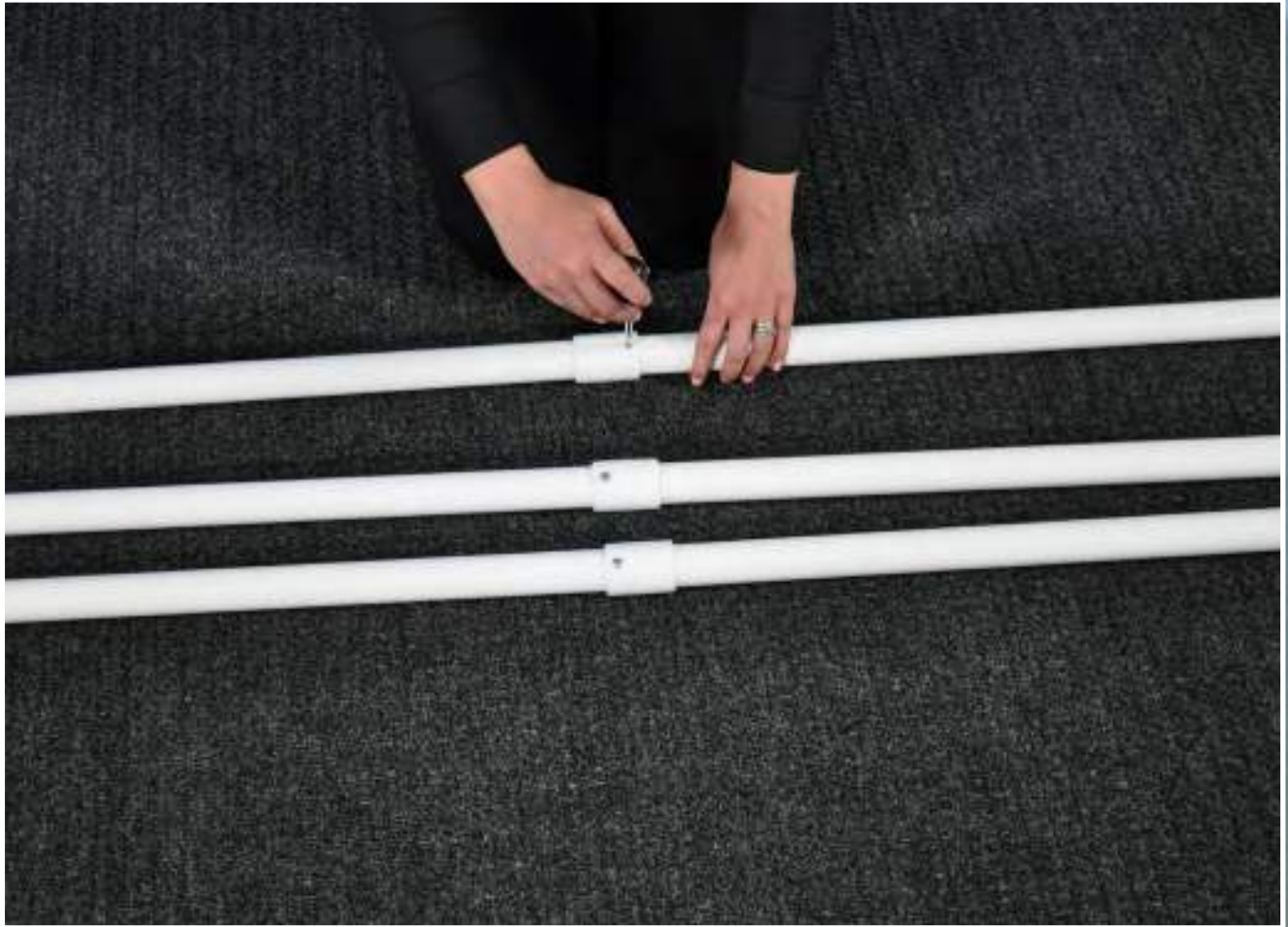
Your ring should like the picture above. (*repeat this step to build the other ring)

BUILDING THE FRAME



Now you will assemble the six short poles into three long poles.

BUILDING THE FRAME



Push each set of two short poles together and align the holes to insert and tighten the screws.

BUILDING THE FRAME



Now it is time to connect the poles with the rings. Place the poles into the Tees on one of the rings like above.

BUILDING THE FRAME



At this point, your frame should look like this, 3 of the poles in one ring.

BUILDING THE FRAME



Place the second ring onto the poles as shown, by lining up the Tees to fit the poles. (*note the rings are the same).

BUILDING THE FRAME



This is what your assembled frame will look like. *Note for operation of the chamber, the frame will be built inside of the chamber.

BUILDING THE FRAME



Next, it is time to install the carpet and build the frame inside of the chamber. Make sure you have the frame pieces (3 poles and 2 rings) and carpet next to the deflated chamber.

BUILDING THE FRAME



Have someone get inside of the chamber while someone holds the chamber making it easier to enter the chamber.

BUILDING THE FRAME



With someone inside the chamber, hand them the carpet. This allows them to place the carpet securely on the ground before the frame goes in.

BUILDING THE FRAME



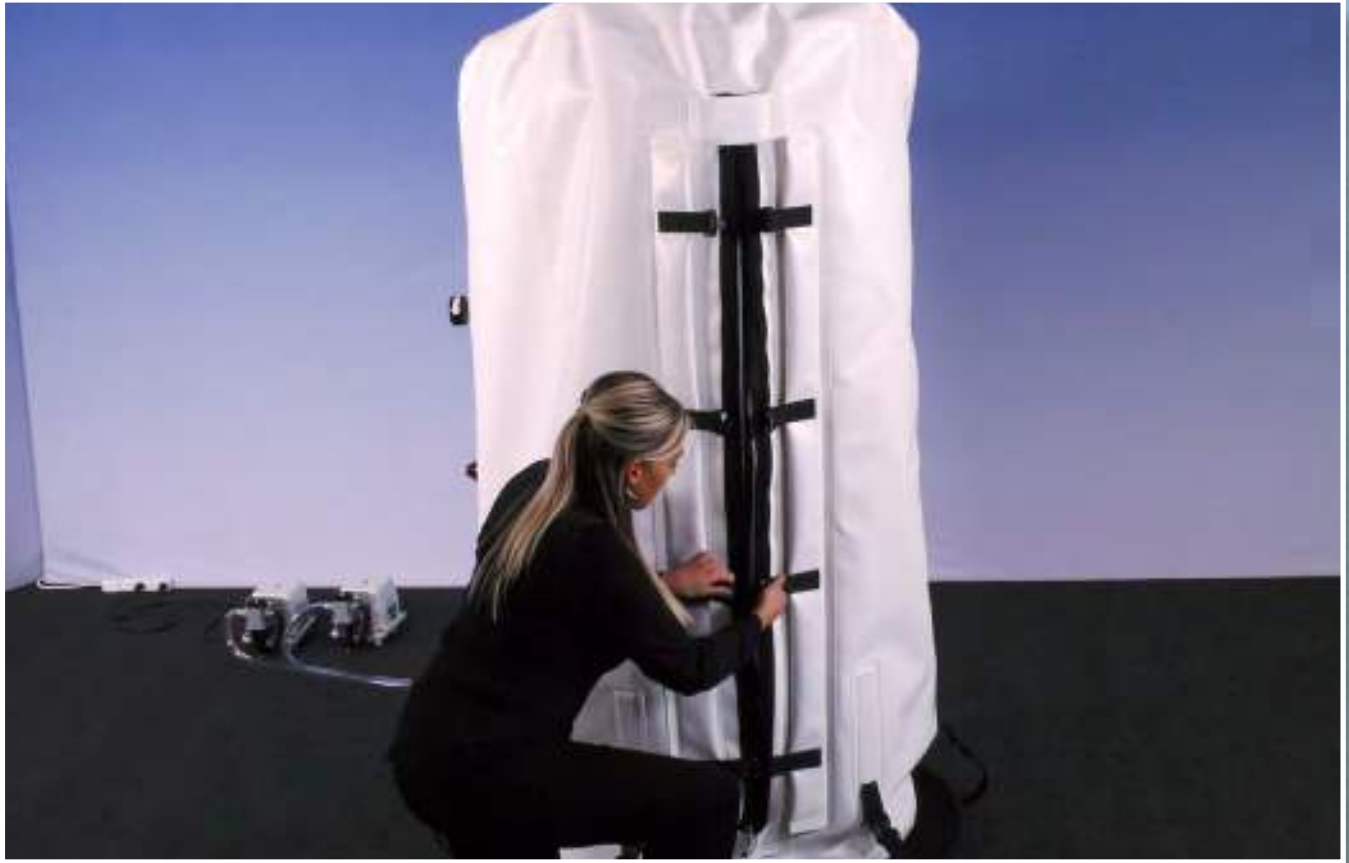
Hand the rings to the person inside so the bottom ring can be placed on top of the carpet.

BUILDING THE FRAME



Once the rings are in the chamber then hand the three poles to the person inside the chamber.

BUILDING THE FRAME



Inflating the chamber to shape makes it easier to build the frame inside. Inflate the chamber as previously demonstrated (*[click here for inflating](#)). Make sure both compressors are on, the red deflation valve is closed and the belts are buckled before inflating the chamber.

BUILDING THE FRAME



The chamber will start to take shape. While this is happening, build the frame as demonstrated previously.

BUILDING THE FRAME



Once the person inside has the frame assembled deflate the chamber ([reference page 19](#)). When the chamber is deflated the person can safely exit the chamber.

SETUP COMPLETE



Congratulations you have successfully set up your Dive Vertical chamber. In the following pages we will discuss the operation of the chamber.

OPERATION OF CHAMBER



First turn on the power to the compressors. The person will then enter the chamber. From the outside you will buckle the belts and close both zippers (***Reminder buckle the belts before zipping the zippers**).

OPERATION OF CHAMBER



Make sure the red deflation valve is closed. Your chamber will now automatically pressurize to the factory set pressure of 1.3 ATA or 4.4 PSI. You will know your chamber is fully pressurized when you hear the air releasing from the pressure relief valves and your gauge reads in the blue.

OPERATION OF CHAMBER



When it is time to end your treatment, turn the red deflation valve to deflate the chamber. Once the chamber sides are soft and the gauge reads zero unbuckle the belts and unzip both zippers. Now the person can exit the chamber.

INDIVIDUAL USE

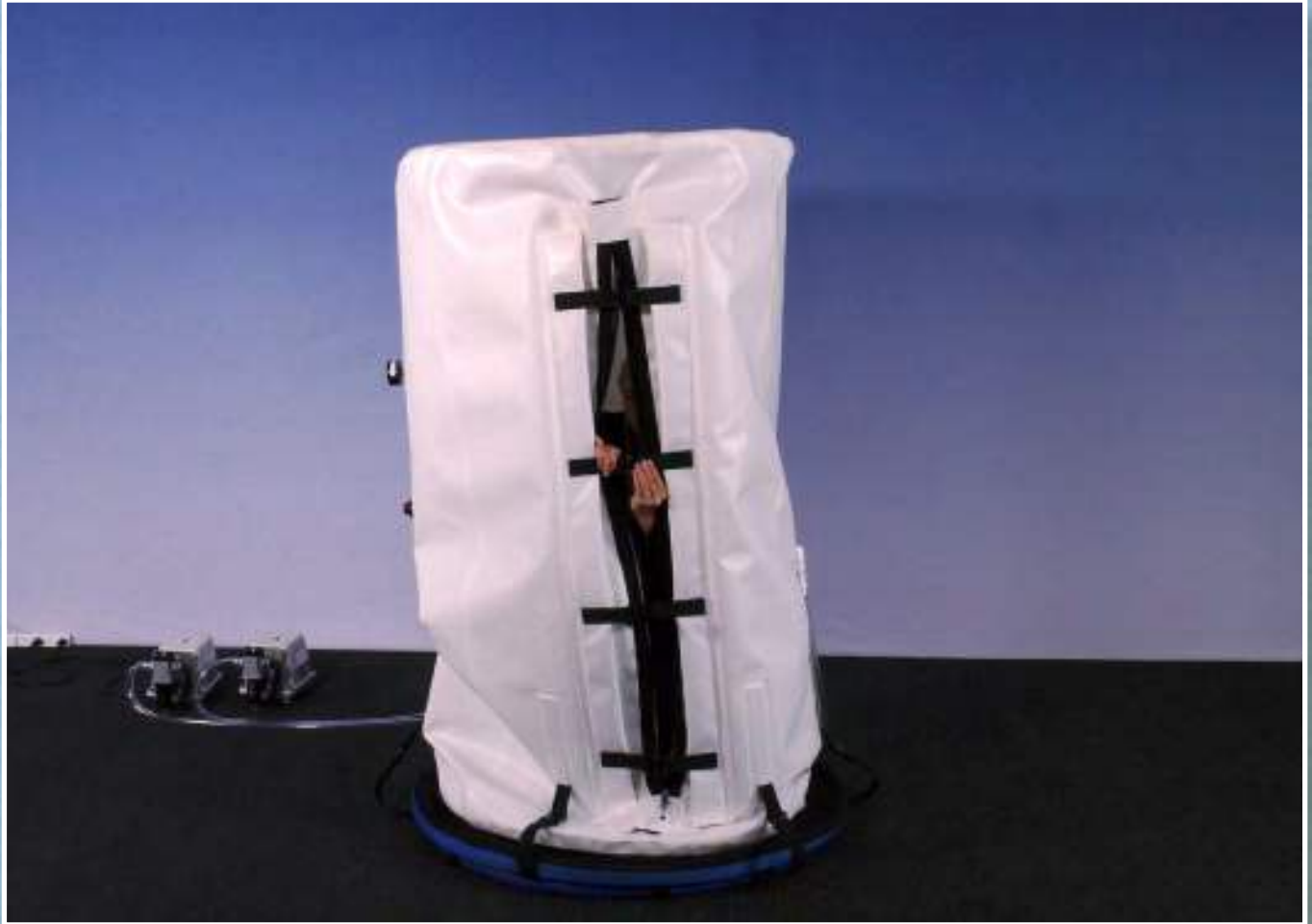


For independent use do the following. First ensure that both compressors are on. Before entering you may want to close the bottom or top buckles, to make it easier to close from inside.

[Click for video reference](#)

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INDIVIDUAL USE



Once you're in the chamber, reach out and close the remaining buckles. Once all of the buckles are buckled, reach out and close the EXTERNAL zipper. When the external zipper is closed, go ahead and zip the internal zipper.

INDIVIDUAL USE



You will know your chamber is fully pressurized when you hear the air releasing from the pressure relief valves and your internal gauge reads in the blue.

INDIVIDUAL USE



When you have finished your treatment turn the inside red deflation valve to depressurize the chamber. Once you feel the sides of the chamber are soft and your internal gauge reads zero you may unzip the internal zipper. Next open the external zipper and unbuckle the belts. Then exit the chamber.

[Click for video reference](#)

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COMPONENTS

It is important to understand the functions of the individual components of your chamber. On the following pages we will explain what the individual components on your chamber do.



COMPONENTS



There are two pressure relief valves with blue circles. During treatment air will be released from these 2 valves. They are designed and factory calibrated to equalize the pressure at 1.3 ATA. or 4.4 PSI. One is located on top of the chamber and the other one is located above the window.

COMPONENTS



There is a safety backup pressure relief valve with a yellow circle which is set to open at a slightly higher pressure than the blue valves. This valve is located on top of the chamber. There may be a slight venting of air which is normal.

COMPONENTS



Next you will see the color-coded gauge. The needle will start at the bottom of the black area at zero. Once the chamber is fully pressurized air will be released out of the blue pressure relief valves and the needle will appear in the blue area. If the needle is anywhere within the blue area you are at full pressure. These gauges are accurate to plus or minus 5%. If the needle appears past the yellow area call your distributor.

COMPONENTS



There is also an internal gauge which operates similar to the exterior gauge. The only difference is the external gauge needle moves clockwise and the internal gauge needles moves counter clockwise.

COMPONENTS



On the back of the chamber are two fill valves. This is where the compressors connect to the chamber.

COMPONENTS



To the left of the red deflation valve is an auxiliary port where the auxiliary valve attaches. This small auxiliary valve is located in your packet along with the zipper cleaner, zipper lubricant and thumb drive.

COMPONENTS



The red deflation valve (inside or out) is used to deflate the chamber at the end of your treatment. It is designed to turn in either direction to release air from the chamber. As you turn the red deflation valve you will notice that you have control of the speed of deflation. This valve can also be used during pressurization to customize the speed of inflation for greater comfort and to aid in the equalization of ear pressure. The person inside the chamber should never experience ear pain.

REGULATE EAR PRESSURE



As the chamber begins to inflate, you may notice added pressure on the ears. This feeling indicates the need to equalize the pressure. This feeling is similar to that of landing in an airplane. There are several ways to relieve this pressure.

First, pinch your nose, close your mouth and try gently blowing out your nose. Repeat every time you begin to feel this pressure. This technique is called the Valsalva maneuver.

Drinking water during inflation can help the pressure on your ears as well.

Yawning or opening your mouth wide will also help.

Lastly, chewing gum may help relieve this pressure.

REGULATE EAR PRESSURE



If the previous suggestions do not resolve the ear pressure, open the red deflation valve until the feeling of pressure is gone. Then close the red valve to continue to pressurize the chamber.

SAFETY

REMEMBER

Make sure all buckles are closed and both the inside and the outside zippers are completely closed every time the chamber is in use. Failure to do this may result in inability to pressurize or damage the chamber.

If the relief valves do not release air when it is at full pressure, stop your treatment and call your distributor.

It is important that the relief valves are clear of all obstructions inside and out during your treatment.

The compressors must remain on for the entire treatment. This ensures the circulation and exchange of fresh air to provide a safe and comfortable treatment.

Do not open the zippers or unbuckle the straps until the gauge reads zero.



SUPPORT

Click [here](#) for an instruction video of the Dive Vertical chamber.

If you have any questions regarding your chamber please contact your distributor first.

If you have additional questions please visit our website at www.summit-to-sea.com/support and fill out the form.

If you need immediate assistance, you can call (1-877-774-3483) and choose option 3.



ACCESSORIES

Click [here](#) to go to our accessory page. There you can order a variety of accessories for your chamber including.

- Maintenance programs
- Zipper lubricant
- Zipper cleaner
- Compressor filters
- Additional frames
- Additional mats
- Magnetic utility hooks
- Auxiliary valve
- Gauges
- Red deflation valve muffler
- Extended warranties
- Cleaning supplies



CHAMBER CARE

It is recommended that the compressor filters are changed approximately every 6 months.

To learn how to change these filters go to

www.summit-to-sea.com/filters

To order these replacement filters go to

www.summit-to-sea.com/accessories



CHAMBER CARE



White Compressor Filter

To see a video on how to change the filters go to
www.summit-to-sea.com/filters

There is a filter right under the top plate of the compressor. It is recommended that you replace the filter every 6 months.

CHAMBER CARE

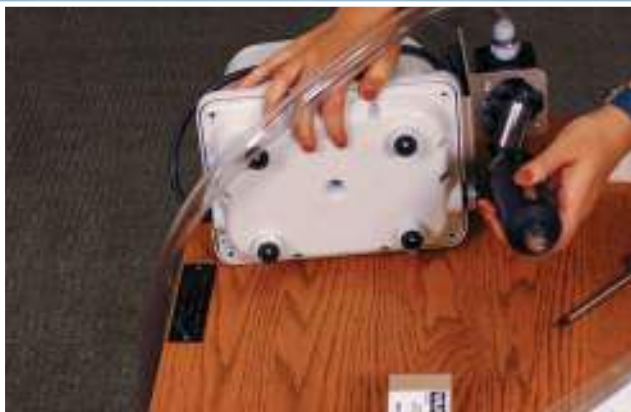
The .003 Micron Filter



Lay the compressor on its side



Push the black bulb up and give it a quarter turn to unlatch then pull down



Unscrew the silver filter element. Screw on the new silver filter



Put the black bulb back on pushing up and giving it a quarter turn to make sure it is securely connected.

To see a video on how to change the filters go to
www.summit-to-sea.com/filters

It is recommended that you replace the filter every 6 months.

CHAMBER CARE

ZIPPERS

The outside zipper requires very little maintenance.

A bottle of zipper cleaner lubricant has been included in your packet to use on a monthly basis.

Periodically, wipe the outside open zipper with a damp cloth.

CLEANING THE CHAMBER

There is no maintenance needed other than cleaning with a non-petroleum based household cleaner.

An anti-bacterial cloth has been included with your chamber. To order these cloths go to www.summit-to-sea.com/accessories

FITTINGS & HOSES

Regularly check the fittings and hoses for cracks or damage.

If you see any damage, call your distributor for a replacement part.

CHAMBER CARE

STORAGE

Prior to storing the chamber, ensure that it has been cleaned inside and out by using a non-petroleum based household cleaner.

Carefully fold the chamber ensuring all gauges and fittings are protected with bubble wrap or a similar material.

Place the chamber in the carry case and store in a dry area between 40 and 80 degrees.

Upon first reuse, run the chamber for several hours to purge the chamber from any odors that may have collected during storage.

WARRANTY

Summit to Sea warrants our products and accessories against defect for two years from purchase.

The warranty covers parts and labor to repair the Summit to Sea system.

Summit to Sea, at our option and sole discretion, will repair or replace the warranty item.

The warranty does not cover damage as a result of misuse or modification.

Shipping to and from Summit to Sea is the customer's responsibility.

Summit to Sea has always and will continue to cover all components on our chambers — including zipper, windows, seams, valves, hoses... in other words, if it came from Summit to Sea we will stand behind our product.

EXTENDED WARRANTY

Extended warranties are available for purchase anytime within the two year warranty period. The extended warranties also cover all components on the chamber — including zipper, windows, seams, valves, hoses, etc. Contact your distributor.

1 Year Extended warranty- Available

2 Year Extended warranty- Available

3 Year Extended warranty- Available

SAFETY

Important Safety Considerations

You should NOT use this chamber without guidance and instruction from your health care provider.

Do NOT use the chamber if you have the following conditions:

- *Common colds or flu-like symptoms*
- *Recent alcohol consumption*
- *Blocked ear canals*
- *Blocked sinuses*
- *Otic barotraumas*
- *Excessive CO₂ exposure*

SAFETY

CAUTION: Federal law requires this device for sale by or on the order of a physician.

CAUTION: Do not inflate the chamber with only pure oxygen; use the compressor provided. It is designed to work safely with the chamber.

CAUTION: Inspect all seams and fittings prior to use to ensure they are secure. Failure to do so could cause leaks reducing the performance of the chamber.

CAUTION: If any unusual noise or odor is detected, immediately discontinue use and contact the manufacturer. This may be an indication of a problem with the normal operation of the unit that needs to be addressed. In most situations, a simple call can resolve the issue.

SAFETY

WARNING: In the unlikely event that there is a rapid decompression, the individual inside the chamber must EXHALE. Please make sure that each individual receiving treatment understands this precaution.

WARNING: Do not replace the compressor with any other model. The chamber is designed to work specifically with the compressor provided. For added safety, the compressor will not exceed the test pressure for the chamber.

WARNING: Do not tamper with the pressure regulation valves. These are factory set and there are no user adjustments. Any sign of tampering with these valves will void the warranty.

WARNING: Do not use the chamber in a manner where the chamber could roll off the surface causing a fall. Always use on a surface large enough to prevent rolling off and causing a fall.

WARNING: Never take a treatment alone. Always have someone outside the chamber to assist you.

WARNING: Do not use the electric compressor in the rain or around running water as this could cause electric shock.

WARNING: Wear comfortable clothing and lay on a mat, towel or blanket while in the chamber to limit contact with the chamber surface and to improve comfort and safety.

SAFETY

Pressure Regulation Valves (Relief Valves)

Summit to Sea Chambers utilizes redundant pressure regulation valves. These are factory programmed to ensure a steady, constant pressure. During treatment, there will be a steady flow of fresh air through the chamber. For proper operation, the air compressor is to be running throughout the entire treatment. This is important to ensure that CO₂ build up does not occur.

These valves exhaust the old air while maintaining the factory operating pressure. This pressure is set to 1.3 ATA (4.4 PSI).

WARNING: Do not tamper with the pressure regulation valves. These are factory programmed and have no user adjustments. Any sign of tampering with these valves will void the warranty.

SAFETY

Buckles- We have selected one of the most secure buckles on the market to ensure your safety and comfort.

Bolsters- All chambers come with fitted bolsters that are an integrated part of the chamber.

Compressor- Ultra quiet compressors provide patented sound suppression which permits a restful and relaxing dive experience. These highly compact compressors are designed for continuous operation providing you with a longlasting solution to hyperbaric pressurization needs. This compressor is small and compact making it easy to transport. With its small carbon footprint, this compressor will easily integrate into your environment.

Oil-less 80/120 with a flow rate of 80 to 160 liters per minute and a max operating pressure of 6 PSI. See compressor manual included in the compressor box.

CAUTION: Using any other compressor with the Hyperbaric Dive units will void the warranty and may cause injury to the occupant and/or the attendant.

Frame- We have designed this lightweight, highly durable frame. It is easily assembled and disassembled so that your chamber can be as mobile as your lifestyle.

SAFETY

Valves-The Grand Dive has three pressure release valves to ensure a safe and comfortable operation. This redundancy assures your safety. The Shallow and the Dive have two release valves.

Windows-The window has a five layer, one firm acrylic layer between four vinyl layers to ensure a long lasting, permanent seal.

Zipper- An airtight zipper securely seals the air pressure inside the chamber without the need to massage or manipulate the seal, along with a heavyduty zipper to ensure the integrity of the chamber.

With over thirty years of manufacturing experience of hyperbaric chambers, our group of experts have gained the experience and knowledge of hyperbaric chambers and have produced a high quality product that will meet your needs today, tomorrow, and additional products for your future.

SAFETY

USE CARE to avoid the use of any sharp objects that may penetrate the walls of the chamber.

WARNING: Never take a treatment alone. Always have someone outside the chamber to assist you.

CLEAN the inside of the chamber with a soft, damp cloth after each use.

INSPECT all hoses for leaks.

HUMIDITY - In humid climates, the chamber will create condensation. Simply dry with a soft towel.

EARS - Be sure to chew gum or swallow often during the pressurization.

ENJOY a beverage, read a book, or enjoy any other form of entertainment.

UNZIP the chamber and inspect for foreign objects.

ENSURE that all connections are tightly secured.

ENSURE the chamber is on a stable platform or on the floor.

ATTACH the compressor hose and any accessory hoses.

DURING TREATMENT - After entering the chamber, lie on the mat and get comfortable with your book, computer, etc.

INDIVIDUAL HELPER zips up the chamber and buckles all the straps.

FILL TIME - using the frame allows for the fill time to be greatly reduced.

AIR - Once the chamber is zipped tight, you will hear the air entering the chamber and see it start to inflate.

SAFETY

Be sure to swallow often during the pressurization process. If you cannot clear your ears, have the individual helping you temporarily stop the compressor until the pressure in your ears releases.

Once the chamber is at full pressure, you will hear the “hissing” of the exhaust valves. This is important as it will prevent CO₂ build up. It is important to relax. Sit back and let the chamber operate. Hyperbaric treatments usually last from 30-60 minutes or longer. Check with your medical provider for recommended duration.

Allow 5 to 10 minutes for the chamber to return to normal pressure. As air is released, check with the occupant to ensure they are equalizing the pressure at the same speed it is being reduced. Once the sides are soft, unzip the chamber.

When the chamber is clean and dry, it can be rolled up and stored or left for your next hyperbaric treatment (Be careful not to fold the window section).

CAUTION: Do NOT inflate the chamber with only pure oxygen. Use the compressor provided. It is designed to work safely with the chamber.

WARNING: If, in the highly unlikely event that there is a rapid decompression, the person inside must EXHALE.

Please make sure that each person receiving a hyperbaric treatment understands this precaution.

FDA 510K CLEARANCE

Portable Mild Hyperbaric Chambers are Class II Medical Devices.
They meet the FDA 510(k) Specifications. K072757

The chamber has been cleared by the FDA for the treatment of Acute High Altitude Sickness.

FDA WARNING

Increasing the percentages of oxygen content in the air delivery is considered the same as administering a drug under FDA regulations.

This device is intended for use with ambient air and is not to be inflated with enriched oxygen.