

SHALLOW DIVE



Congratulations on choosing one of the most innovative and safe hyperbaric chambers.

In addition to this manual we have an easy to follow instructional video available

<https://www.summit-to-sea.com/instructions>

Click on “Shallow Dive”

Our patented designs are like no other on the market.

Now that you have all the equipment to begin your treatments it is extremely important to watch this entire video and read the manual that was included on a thumb drive in your packet before operating your chamber.

SAFETY FIRST

Safety is one of our main priorities at Summit to Sea. It is our policy and practice to extensively test all of our chambers to ensure that Summit to Sea chambers have the highest quality, comfort, and safety.

We have implemented **4 safety features** that are unique to Summit to Sea chambers.

- **Dual compressor system**
- **Two pressure relief valves and one safety back up valve**
- **Zipper stress relief system**
- **Failed Circuit Alarm**

SAFETY FIRST

Dual Compressor System

For safety Summit to Sea has multiple redundant systems and components. One of these is the dual compressor system.

In the event one of the compressors fails you would still receive ample fresh air delivered into the chamber allowing you to deflate the chamber and safely exit.

Summit to Sea uses these two independent compressor systems which attach to the chamber independently offering safety and comfort.



VERY IMPORTANT: All compressors need to be running during treatment.

SAFETY FIRST

Pressure Relief Valves

Your chamber also has **dual air relief valves**. When you are at full pressure air will release from the blue valves. Your gauge needle should be in the blue range. The yellow valve is a safety back up valve set at a slightly higher pressure which acts as a safety backup valve.



SAFETY FIRST

Zipper stress relief system (buckles)

It is very important that when operating the chamber all belts are buckled and both zippers are completely closed.

The belts reduce stress on the zippers extending their life.



SAFETY FIRST

Failed Circuit Alarm

Summit to Sea is the only company in the mild hyperbaric industry whose chamber system will alert you to a power outage. In the event that there is a power outage which would prevent the compressors from supplying fresh air into the chamber the user would be alerted with a loud alarm.



COMPLIANCE

Our hyperbaric chambers are Class II medical devices cleared by the FDA requiring a prescription.

As we are constantly developing new technology to improve our chambers, there may be a photo or video footage that doesn't quite match your chamber.

WHAT IS INCLUDED

- Chamber with carry bag and two cradles
- Frame
- 2 Compressors
- In the OPEN ME FIRST BOX
 - Silicone and Zipper cleaner
 - Auxiliary Valve
 - Thumb drive with set up instructions
 - Failed Circuit Alarm with battery included
 - Screw driver
 - Foam mat

ONLINE MANUAL

If you ever misplace this thumb drive you can log on to:

www.summit-to-sea.com/instructions to find you chamber's manual.

OVERVIEW

1. Connecting the compressors to the electric outlets and the chamber
2. Use of Summit to Sea's unique zipper system
3. Inflating the chamber
4. Connecting the stabilizing cradles to the chamber
5. Connecting the chamber to the frame
6. Mat installation

SET UP

Now it is time to connect the compressors to the electrical outlet.

Please note that some wall outlets are configured so that one of the sockets is connected to a light switch.

Avoid using any of these outlets as they could result of in loss of air flow to the chamber.

SET UP

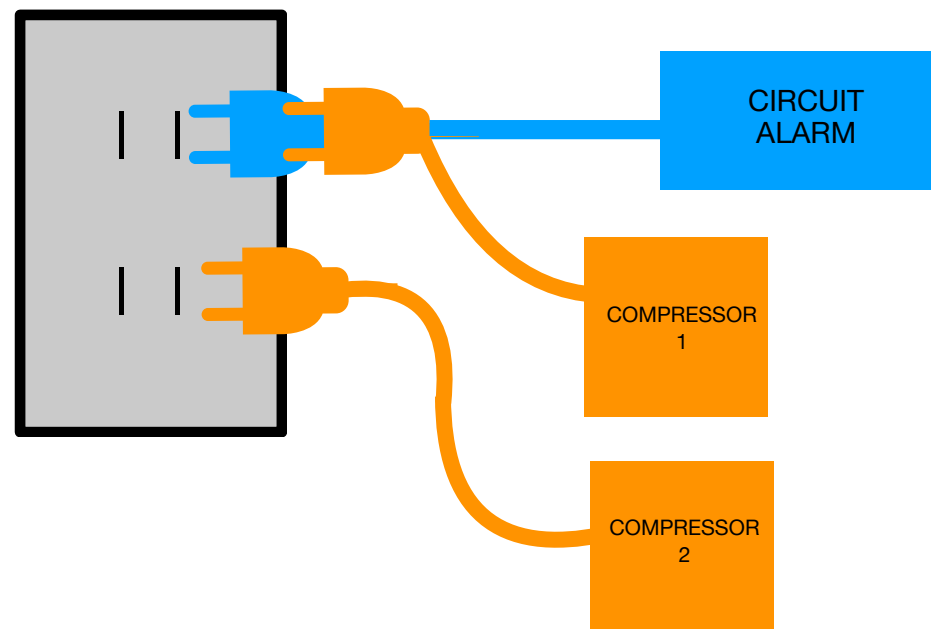
The following diagrams will describe several options for connecting your compressors to the electric wall outlet.

- Directly connecting the compressors to the wall outlets
- Using a power strip
- Using a remote switch
- Using both the power strip and remote switch

SET UP

COMPRESSORS CONNECTED TO THE WALL OUTLET

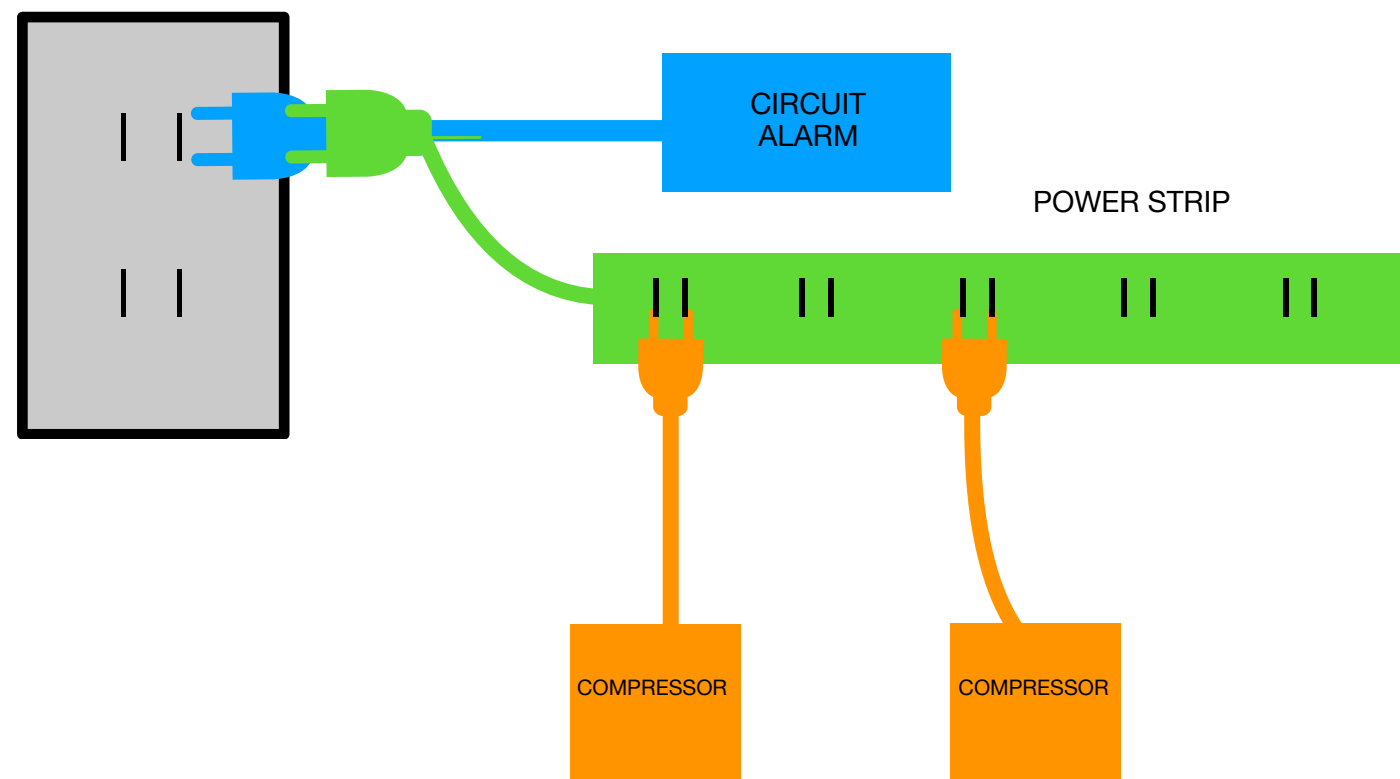
Plug the circuit alarm into the wall outlet.
Next plug one of the compressors into the back of the circuit alarm plug.
Then plug the second compressor into the other wall outlet.



SET UP

USING A POWER STRIP

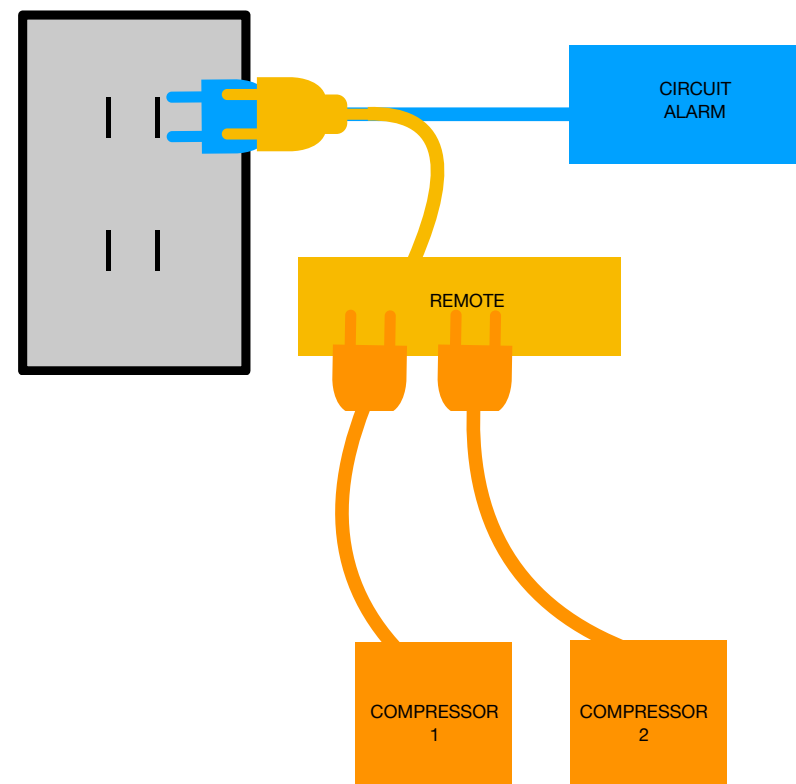
Plug the circuit alarm into the wall outlet.
Next plug the power strip into the back of the circuit alarm plug.
Now you can plug your compressors into the power strip .



SET UP

USING A REMOTE SWITCH

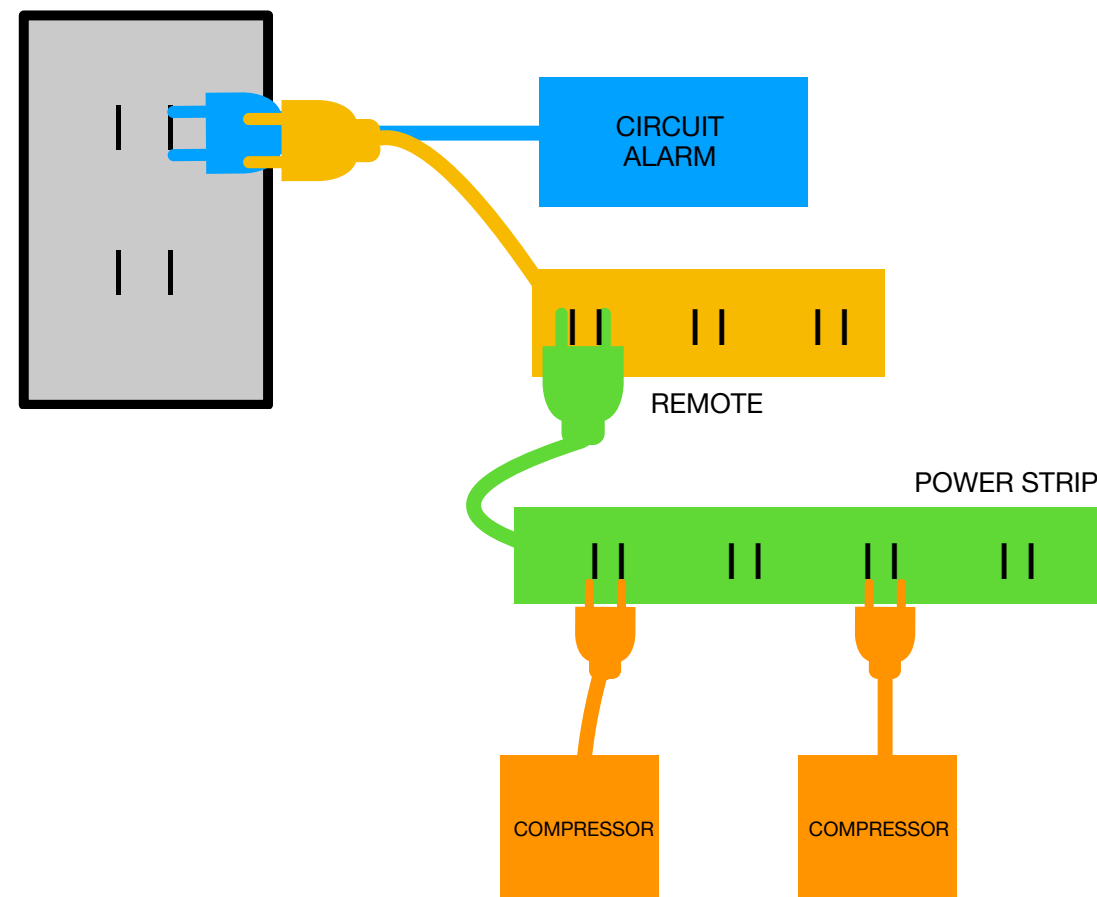
Plug the circuit alarm into the wall outlet.
Next plug the remote into the back of the circuit alarm plug.
Now you can plug your compressors into the remote.



SET UP

USING BOTH THE POWER STRIP AND REMOTE SWITCH

Plug the circuit alarm into the wall outlet.
Next plug the remote into the back of the circuit alarm plug.
Then plug the power strip into the remote.
Now you can plug your compressors into the power strip.



SET UP

Remove the chamber from the carry bag.

Lay out the chamber so the zipper is facing up.

Summit to Sea provides a unique two zipper combination, one internal air tight zipper and one external mechanical zipper.

SET UP

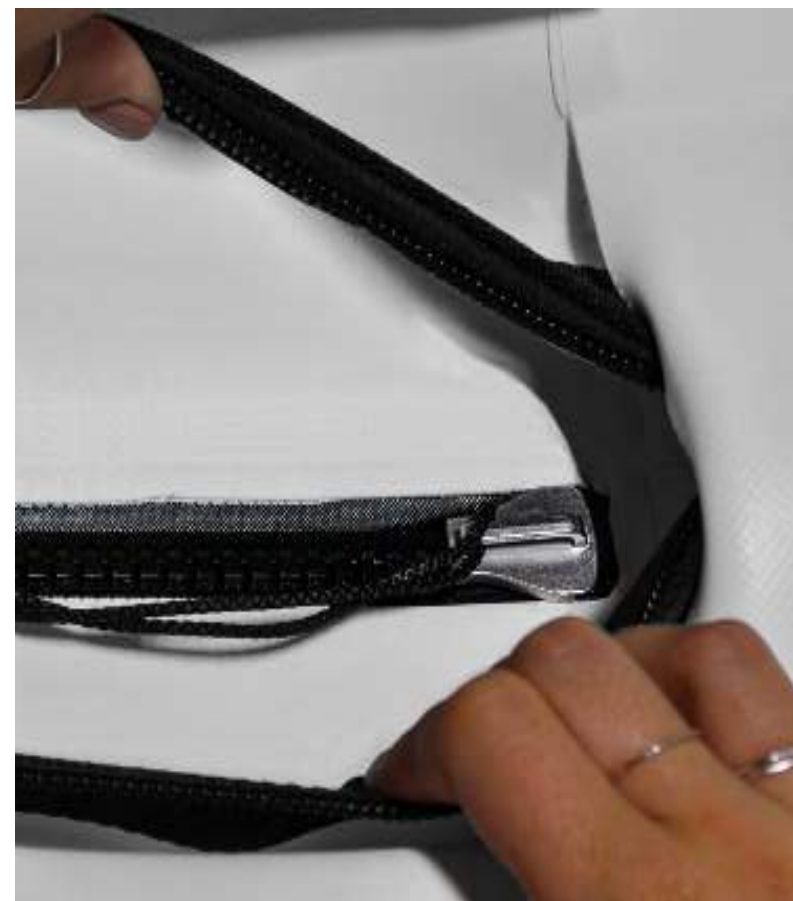
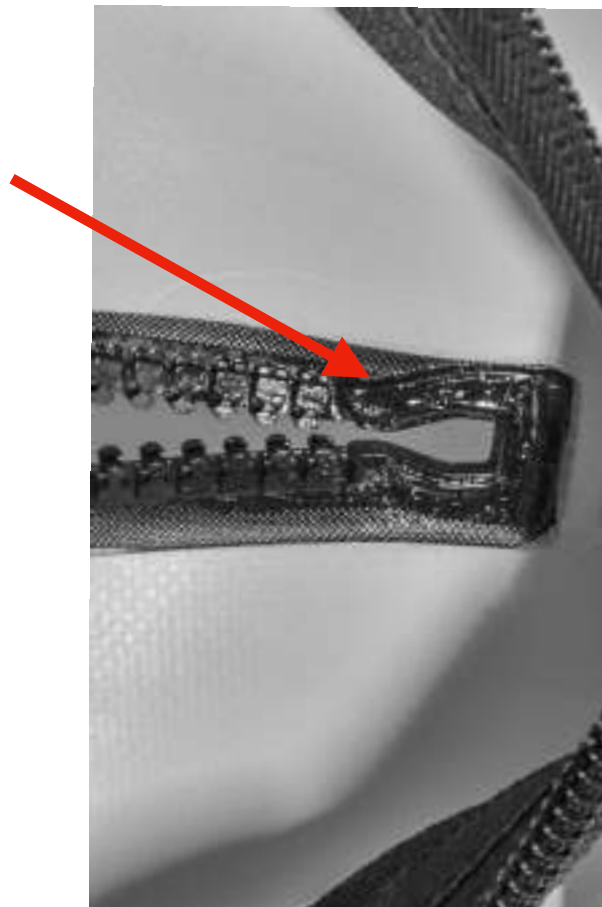
First press the two sides of the buckle together until you hear the click.

It is important to connect the buckles before closing the zippers. This allows the zipper to line up making it easier to zip and taking stress off the zipper.



SET UP

Close the internal zipper. If there is any resistance, back up a few inches, realign, then slowly continue to close it. Notice the zipper has a dock at each end of the zipper. You can apply zipper lubricant on the dock to ease the closure. When the internal zipper pull is placed into the dock an air tight seal is created.



SET UP

The picture on the left shows the slider completely closed into the dock.
If it is not completely closed the chamber will not fully pressurize.



RIGHT



WRONG

SET UP

Next close the external zipper.

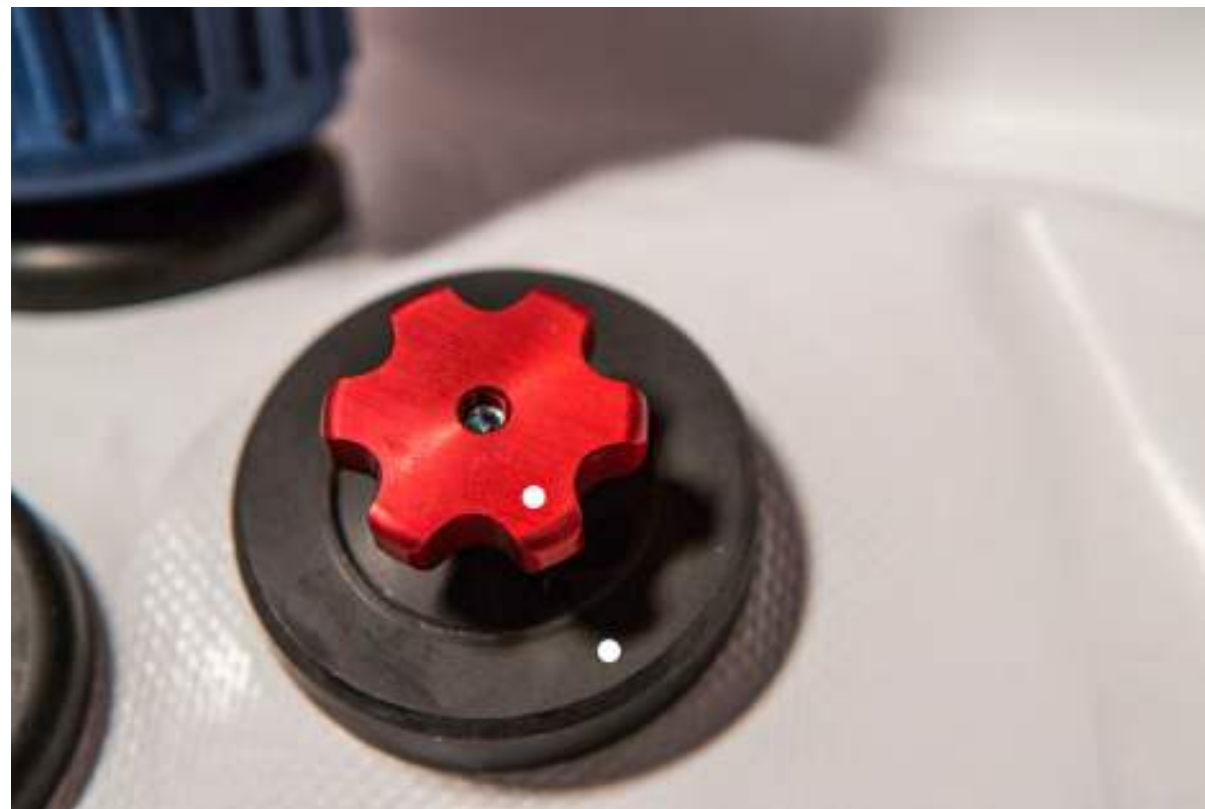
To be sure it is fully closed, pull the zipper string through the safety strap.

You will not see the slider when it is fully closed.



SET UP

Now that you have both zippers completely closed make sure the red deflation knob is in the closed position.



SET UP



Connect the compressor hoses to the chamber. These fill valve connectors are located on the back of the chamber.

Simply click the hose onto the fill valves.

It is recommended to put a small dot of silicone lubricant on the O ring on the end of each fill valve connector.



Now turn on the power to the compressors and inflate the chamber.

SET UP



Now that the chamber is to shape connect the stabilizer cradles to the bottom of the chamber.

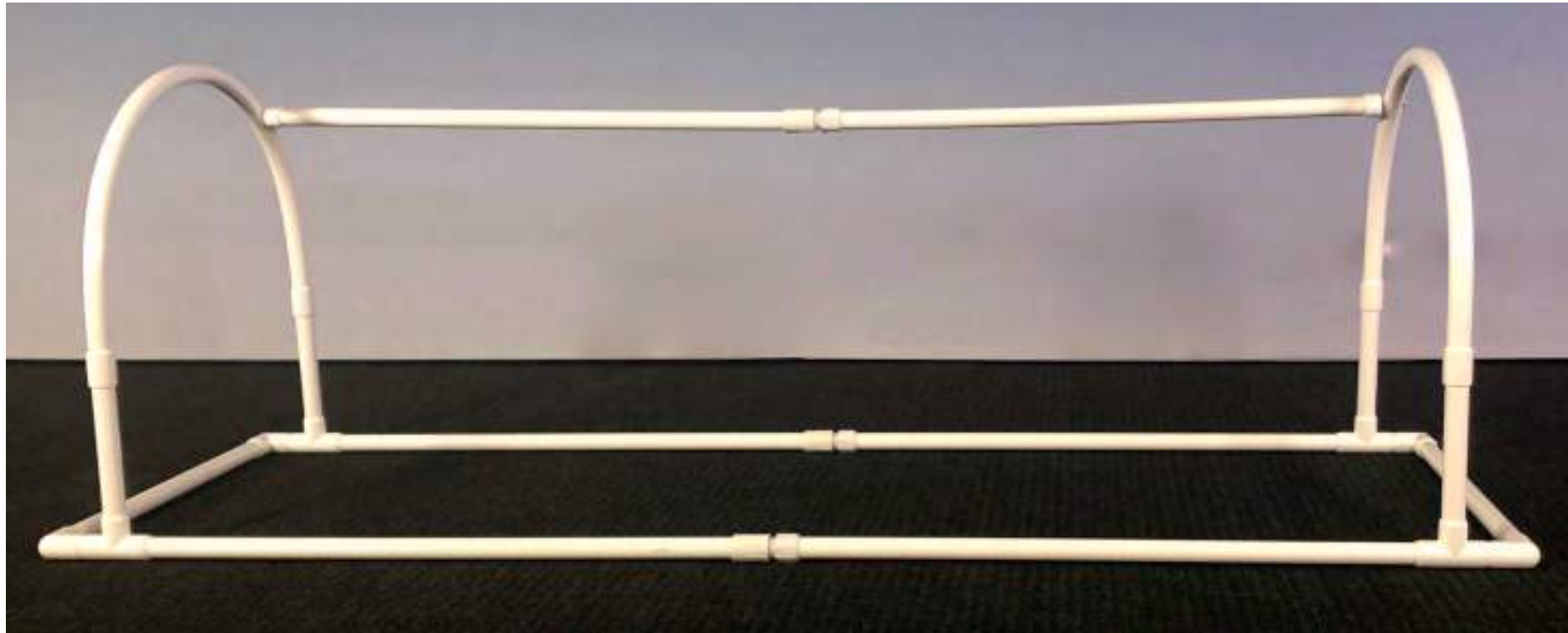
Lift the chamber one end at a time sliding the stabilizer cradles under the chamber and connect them to the velcro patches that are located on the chamber.

SET UP



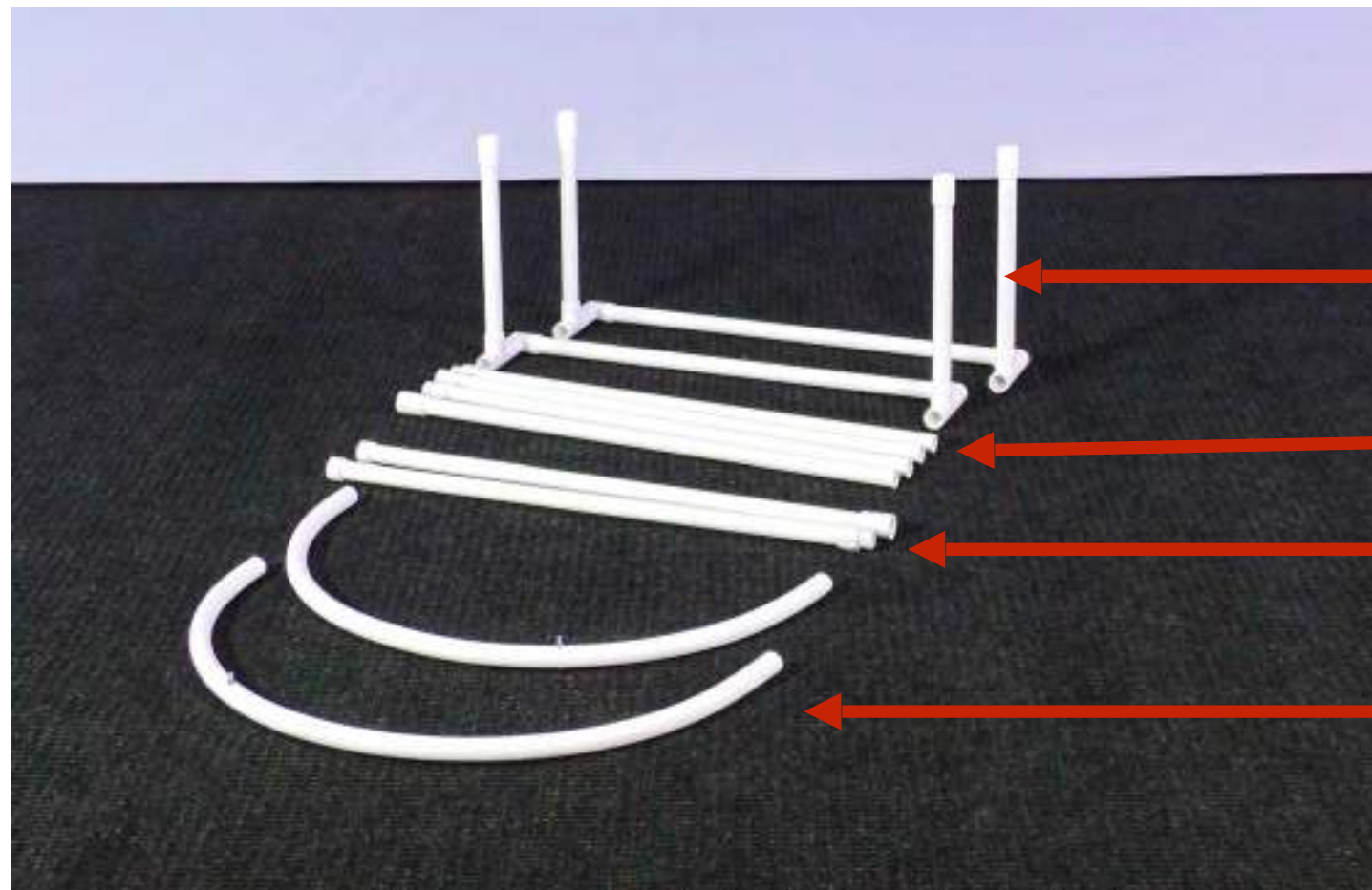
Now that the stabilizers are attached you will build the frame around the chamber. You will notice the chamber has velcro loops at each end to attach the white frame.

SET UP



For you to better understand how the frame will look when it is built
this picture shows the frame without the chamber.

SET UP



End pieces

Floor poles

Top pole with end caps

Arches

SET UP



Place the end pieces at each end of the chamber.

Next place the arches into the end pieces.

SET UP



Place the end pieces at each end of the chamber.

Next place the arches into the end pieces.

Make sure the screws are facing towards the center.

SET UP



Two of the poles have end caps. These will screw together and go over the top of the chamber.

SET UP



Screw the other 2 pairs of poles without end caps together.

Place one of the poles in front of the chamber and insert it into the connector on the end pieces.

Repeat this on the back side of the chamber.

SET UP



Screw the other 2 pairs of poles without end caps together.

Place one of the poles in front of the chamber and insert it into the connector on the end pieces.

Repeat this on the back side of the chamber.

SET UP



Attach the last pole to the 2 arches using the included screwdriver.

Do not over tighten the screws.

SET UP



Now connect each velcro strap to the frame overlapping no more than 1"



Do not connect the zipper handle loops to the frame

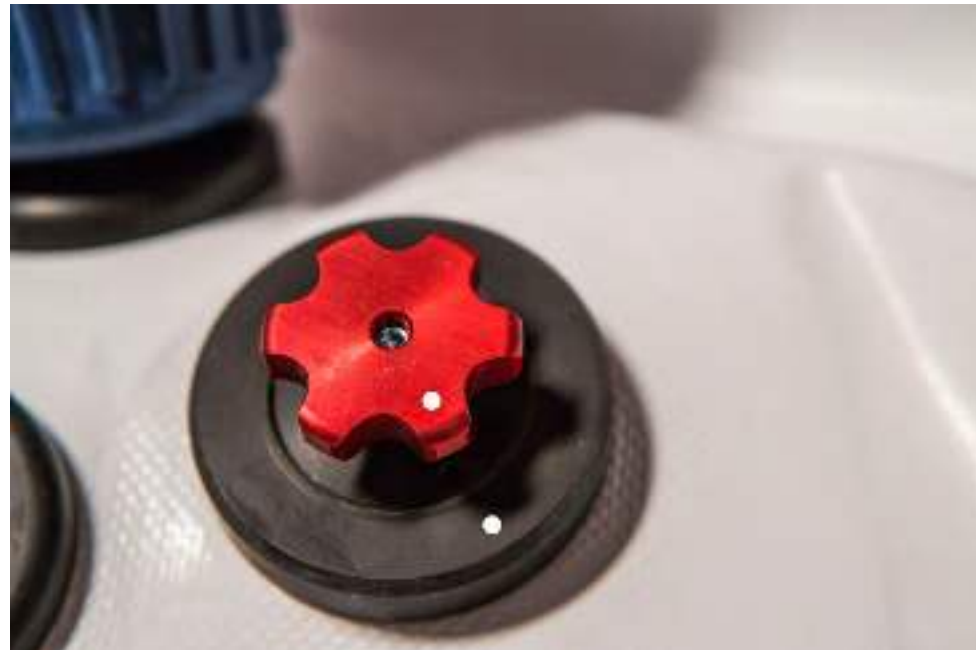
SET UP



Your chamber should look like this.

Do not put the frame through the zipper loops.

SET UP



Once you have completed the set up, turn the red deflation knob to release the air and deflate the chamber.

It is designed to turn in either direction to release air from the chamber. As you turn the knob you will notice that you have control of the speed of deflation.

SET UP

It is important that you do not open the zippers unless the gauge reads zero.



DEFLATING



With the buckles still connected unzip the outside zipper. Reach under the white strap to grab the pull tab.

Hold the black zipper loop and pull the zipper open.
Be sure to open the zipper all the way.



DEFLATING



Next you will open the inside zipper.

Pull the zipper tab on the inside zipper. Open the zipper all the way.

DEFLATING



Next unbuckle the belts.

SET UP

Now that you have deflated the chamber you
can place the mat inside.

REMINDERS

CAUTION

REMEMBER THESE IMPORTANT STEPS

Be sure both zippers are **completely closed**.

Do not open the zipper until the gauge reads zero.

Each belt must be **fastened** from the start of inflation to full deflation.

The **compressors must be running** during the whole time of treatment.
The blue relief valve must be **releasing air** when the chamber is at full pressure.

CONGRATULATIONS

Congratulations you have successfully set up your chamber.

Now we would like to review the operation of the chamber and give you a more detailed explanation of the individual components on your chamber and their function.

REVIEW

- First, the person will enter the chamber.
- From the outside you will buckle the belts and close both zippers.
- Make sure the red deflation valve is closed.
- The zipper can also be closed from the inside as our zippers have zipper pulls on both sides.
- When it is time to end your treatment, you will turn the red deflation valve to deflate the chamber and exit.
- Once the chamber sides are soft and the gauge reads zero unzip both zippers.
- Then unbuckle the belts and exit the chamber.

COMPONENTS

Pressure Relief Valves

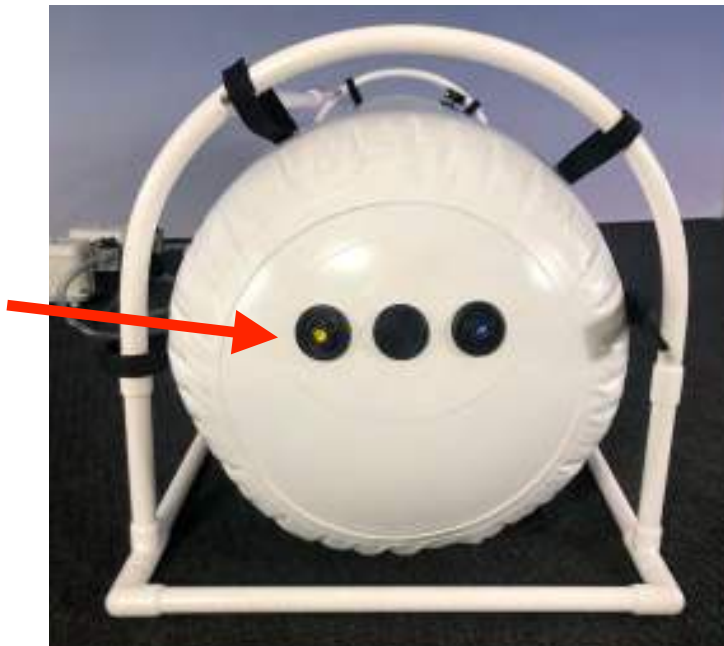
There are two **pressure relief valves with blue circles**. These are designed and factory calibrated to equalize the pressure at 1.3 ATA or 4.4 PSI. They are located at each end of the chamber.



COMPONENTS

Pressure Relief Valves

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. There may be a slight venting of air which is normal.



COMPONENTS

Color coded gauge

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



Notice that the gauge is reading zero when you begin.
It will then reach the **blue** section on the gauge which is 1.3 ATA.
You will hear air being released from the **blue** pressure relief valves.

COMPONENTS



On the end of the chamber are two fill valves.

Put a small amount of zipper lubricant on each fill valve O ring.



COMPONENTS

Red Deflation Valve

The red deflation valve 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 patient inside the chamber should never experience ear pain.



When inflating your chamber, it is important that the red deflation valve be in the closed position so no air will release.

COMPONENTS

Additional Ports

There are also two additional ports. One at each end of the chamber. These are for additional accessories.



COMPONENTS

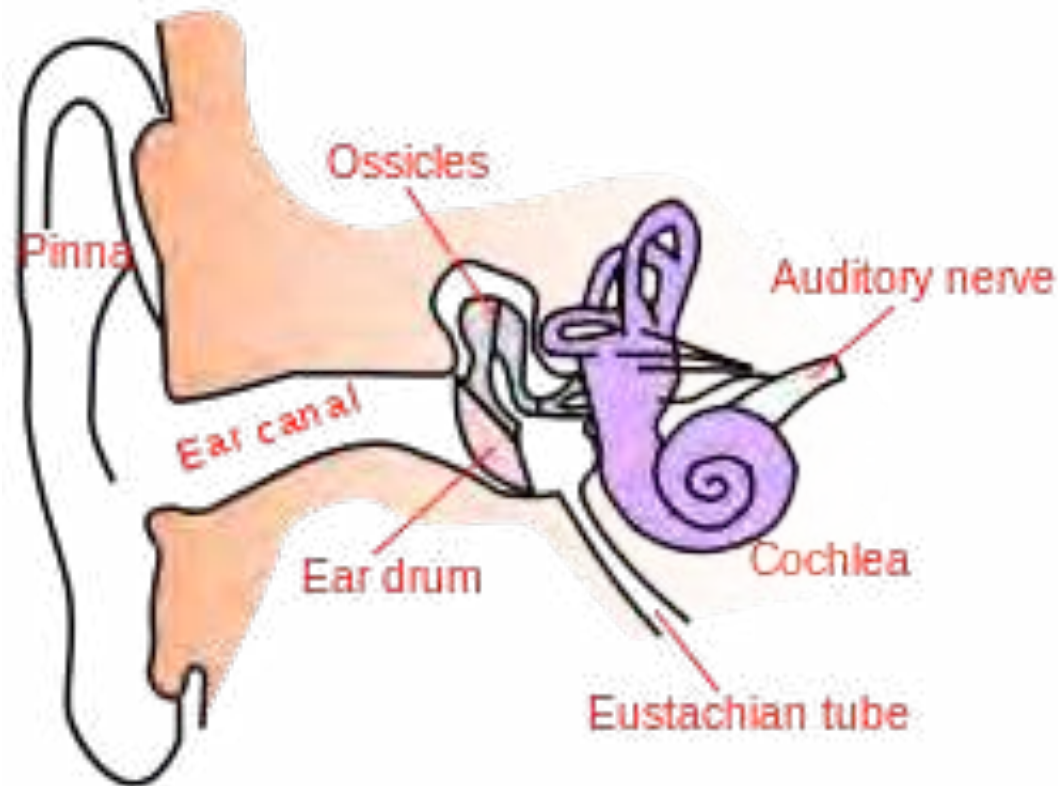
Auxiliary Valve

Next to the window is an auxiliary port where the auxiliary valve attaches.

This small auxiliary valve is located in your packet in a small red envelope along with the zipper cleaner, zipper lubricant and thumb drive.



DURING TREATMENT



As the chamber begins to inflate, you may notice added pressure on the ears. This feeling indicates the need to equalize the pressure. The pressure feeling is similar to that of landing in an airplane. This pressure is relieved through the Eustachian tube.

There are several methods for relieving this pressure.

DURING TREATMENT

The first, is the Valsalva maneuver. Pinch your nose, close your mouth and try gently blowing out your nose. Repeat every time you begin to feel that pressure



Drinking water



Yawning or opening your mouth wide will also help.



Lastly, chewing gum may help relieve this pressure.



DURING TREATMENT

If these suggestions do not resolve the ear pressure, open the red relief knob until the feeling of pressure is gone. Then close the red knob to continue to pressurize the chamber. The red relief knob will allow you to control the speed of pressurization to aid in equalizing the pressure on your ears.



REMINDER

It is recommended to change the air filters on your compressors every 6 months. To order these filters go to www.summit-to-sea.com/accessories

To better understand how to change your filters go to www.summit-to-sea.com/filters.

CAUTION

CAUTION

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.

CAUTION

CAUTION

If the blue 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.

CAUTION

CAUTION

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.

CAUTION

CAUTION

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

CONGRATULATIONS

Congratulations on completing your set up.

Summit to Sea believes that you have purchased one of the best chambers on the market and you will be totally pleased with the ease of use and the quality of craftsmanship.

Summit to Sea also believes that we have the best customer service of any hyperbaric chamber company on the market. We will always try our best to be available and give you prompt service.

TECHNICAL SUPPORT

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

If you have any additional questions please visit our website at www.summit-to-sea.com.

On our home page, scroll to the bottom, click on the word “Support”, and fill out the form.

If you need immediate assistance, call
1-877-PSI-DIVE (1-877-774-3483)

DURING TREATMENT

WHAT TO WEAR

You may wear any type of clothing in the chamber;
however, comfortable and soft clothing is typically used.
Do not wear shoes inside the chamber.

DURING TREATMENT

WHAT TO BRING INTO THE CHAMBER

Feel free to bring food, drinks, books and personal computers, or any other form of entertainment into the chamber.

It may also be helpful to have your cell phone with you.

We ask that you refrain from bringing in sharp objects such as forks or knives.

CHAMBER CARE

Filters

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

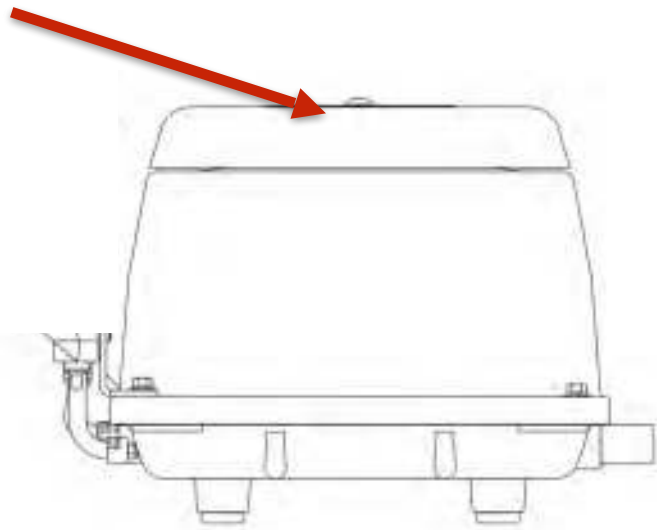
To order these replacement filters go to
www.summit-to-sea.com/accessories

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

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

Follow these instructions to replace this filter
It is recommended that you replace the filter every 6 months.



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



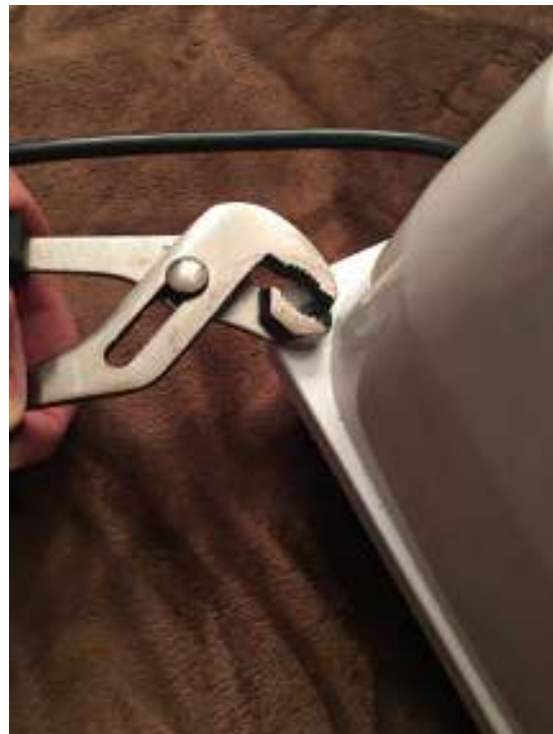
Put the black bulb
back on pushing up
and giving it a quarter
turn to make sure it is
securely connected.

CHAMBER CARE

Resetting the Safety Switch

To see a video of how to reset the safety switch go to
www.summit-to-sea.com/safetyswitch

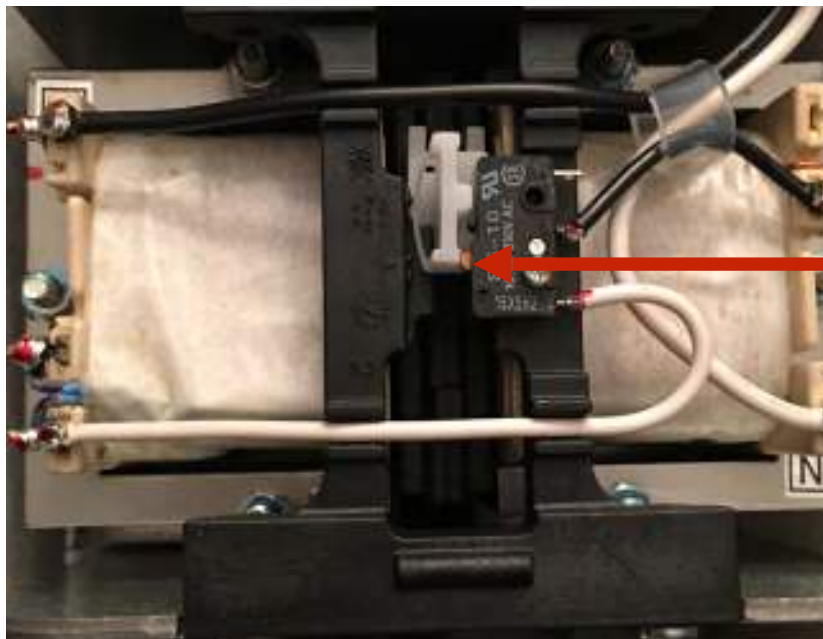
First you will need to remove the compressor cover by loosening the 4 screws with a pair of pliers and then using a Philips screwdriver to remove the screws.



CHAMBER CARE

Resetting the Safety Switch

If the safety switch has been tripped you will see this little red button.



Move the white switch to the center of the compartment.



CHAMBER CARE



On occasion the inside airtight zipper requires Tzip silicone lubricant. The chamber comes with this Tzip silicone to lubricate the docks where the zipper triggers are secured. It is necessary to keep this dock lubricated. Squeeze a small amount of the silicone onto your finger and spread it out on the dock. You will need to do this when it becomes difficult to seat the zipper into the dock. It is not necessary to put this silicone on the zipper itself. Periodically, wipe the open inside zipper with a damp cloth.

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.

CHAMBER CARE

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 \$450

2 Year Extended warranty \$700

3 Year Extended warranty \$950

TROUBLESHOOTING

COMPRESSOR DOES NOT TURN ON

Try another appliance (i.e. lamp) in the same outlet
If the appliance does not work use a different
outlet or call an electrician.

If the appliance does work see a short video on
resetting the safety switch

To order these replacement filters go to
www.summit-to-sea.com/filters

TROUBLESHOOTING

CHAMBER IS NOT GETTING TO PRESSURE

Double check the inside zipper to make sure both ends of the zipper are completely sealed and placed inside the dock.



If your chamber is not getting to full pressure check to see if the red knob is closed and no air is escaping.



TROUBLESHOOTING

It is highly recommended to watch the video several times. Also, anyone else who may be operating the chamber needs to watch this video. By doing this it will ensure a safe environment for all who will be benefiting from the use of the chamber.

Remember, if you have any questions regarding the operation of your chamber please do not hesitate to call your distributor.

IMPORTANT TO READ

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

IMPORTANT TO READ

CAUTIONS

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.

IMPORTANT TO READ

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.

IMPORTANT TO READ

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.

IMPORTANT TO READ

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 long lasting 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 120 with a flow rate of 120 liters per minute. 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.

Mat-Our foldable, compact mat is made with an easy-to-clean surface. It is both comfortable and versatile.

IMPORTANT TO READ

Valves-The chamber has three pressure release valves to ensure a safe and comfortable operation. This redundancy assures your safety.

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.

IMPORTANT TO READ

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 microfiber cloth provided 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.

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

IMPORTANT TO READ

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 5-10 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.

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.

IMPORTANT TO READ

FDA 510K CLEARANCE

Portable Mild Hyperbaric Chambers are Class II Medical Devices.

They meet the FDA 510(k) Specifications.

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.

SUMMIT TO SEA

Important links to know:

To order additional: filters, zipper lubricant, zipper cleaner

www.summit-to-sea.com/accessories

To learn how to change both filters

www.summit-to-sea.com/filters

If you have questions or need technical support

www.summit-to-sea.com/filters

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Hyperbaric Chambers

PO Box 339
Mound, MN 55364
Phone 1.877.PSI.DIVE
(1.877.774.3483)
Fax 1.877.420.7622

www.summit-to-sea.com

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