

# THE DIVE



# SAFETY FIRST

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Summit to Sea has made every effort for your hyperbaric experience to be safe, comfortable and beneficial.

We have implemented **3 safety features** that are unique to Summit to Sea chambers.

- **Zipper stress relief system (buckles)**
- **Two compressors**
- **Failed Circuit Alarm**

# SAFETY FIRST

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## **Zipper stress relief system (buckles)**

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

The belts reduce stress on the zipper extending the life of the zipper.

# SAFETY FIRST

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## Two compressors

For safety Summit to Sea has multiple redundant systems and components.

One of these is the compressor system.

In the event if one of the compressors failed you would still receive fresh air into the chamber allowing you to deflate safely.

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



**VERY IMPORTANT:** Both compressors need to be running during treatment.

# SAFETY FIRST

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## **Failed Circuit Alarm**

Summit to Sea is the only company in the 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.

# WHAT IS INCLUDED

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- Chamber
- Zipper lubricant and Zipper cleaner
- Auxiliary valve
- Thumb drive with set up instructions
- 2 Round cradles
- Mat
- Frame
- 2 Compressors
- Failed Circuit Alarm

# STEP BY STEP

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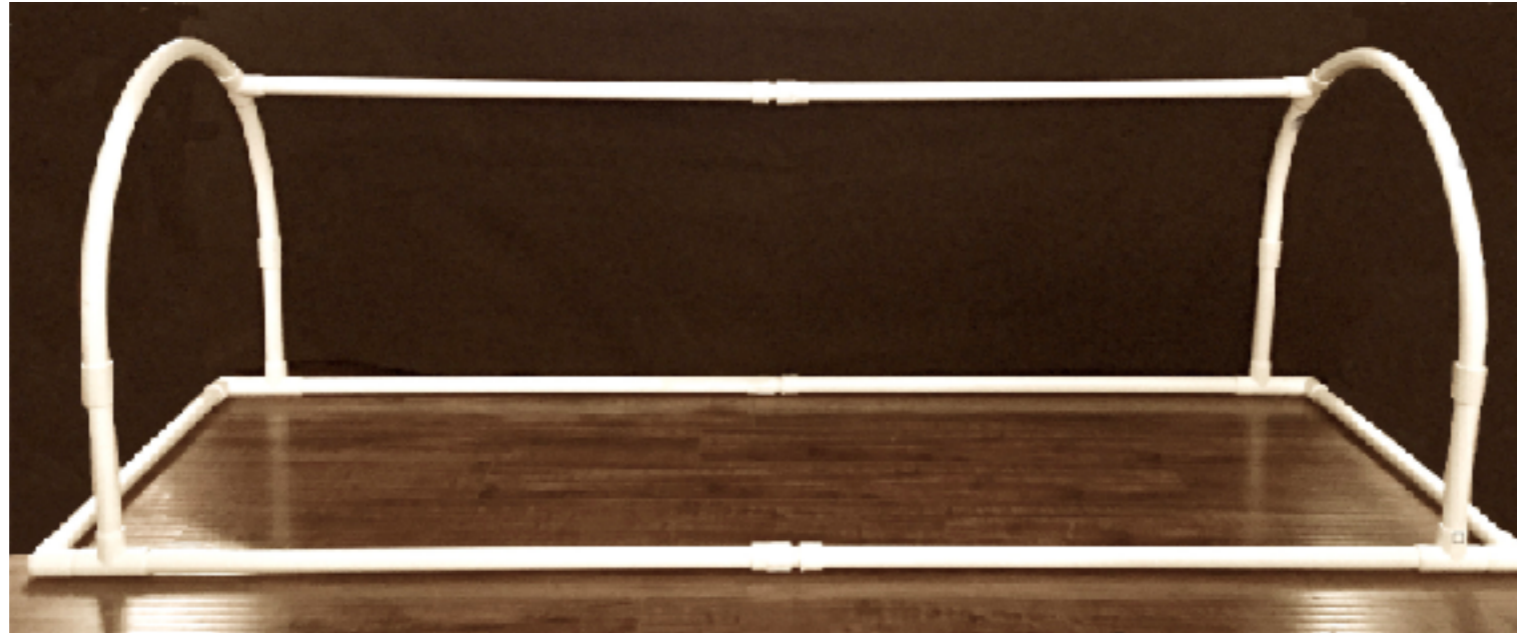
A quick overview of the steps to easily set up your chamber.  
Please read through all instructions before doing the following steps

- Build the frame
- Lay the deflated chamber inside the frame
- Close both zippers and buckle all belts
- Click the compressor hoses onto the chamber, make sure red knob is closed.
- Inflate the chamber without anyone inside.
- Connect the frame to the chamber using the velcro straps
- Open the red knob to release the air
- When gauge says zero unbuckle the belts and unzip the zippers.
- Put your mat inside the chamber.
- You are now ready to take your first treatment - after you have thoroughly read this whole manual.



# SET UP

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Summit to Sea is constantly making improvements to our chambers. Included in your shipment is our newest model frame.

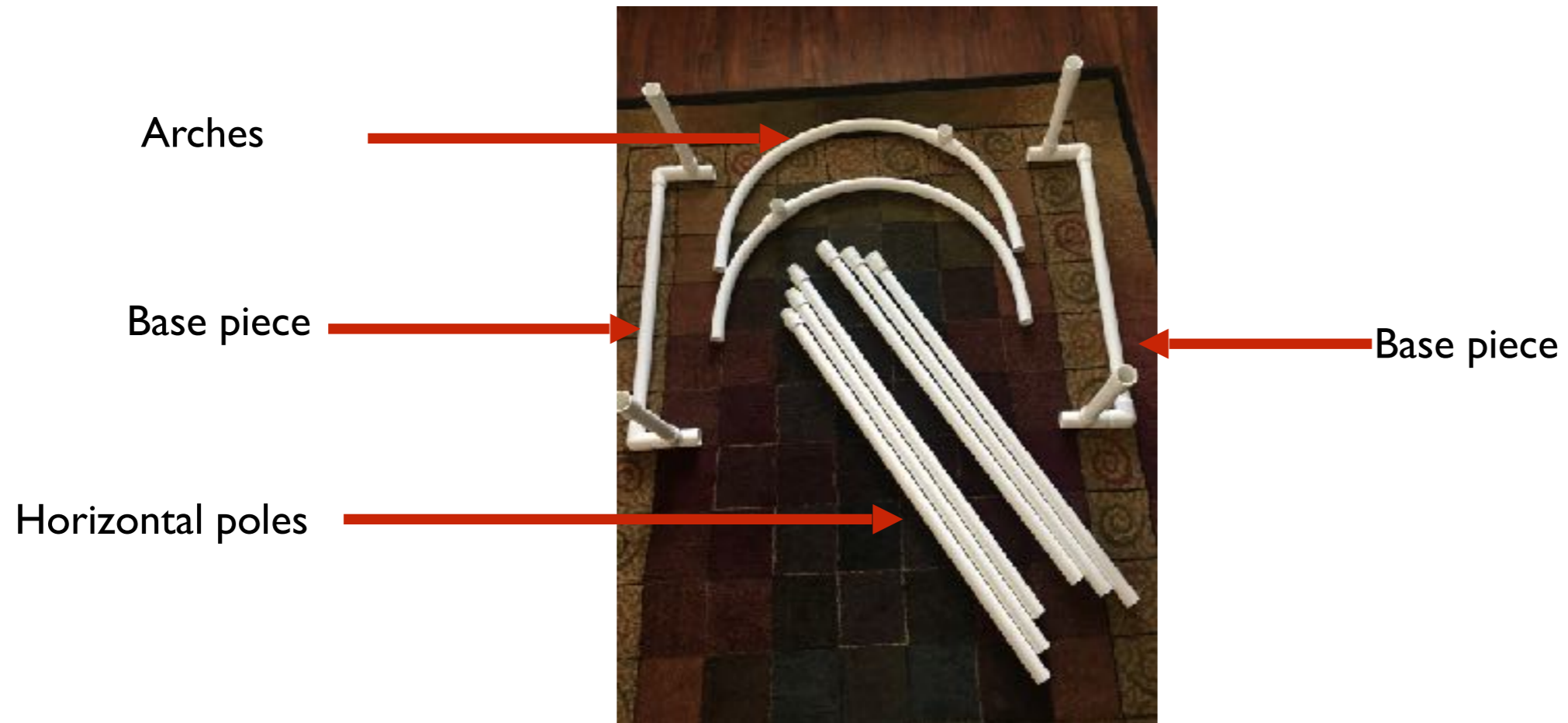
You will notice that the chamber has velcro loops at each end to attach the white PVC frame.

Most people find it easier to attach the frame **after** the chamber is inflated. Follow the set up instructions to inflate the chamber first.



# SET UP

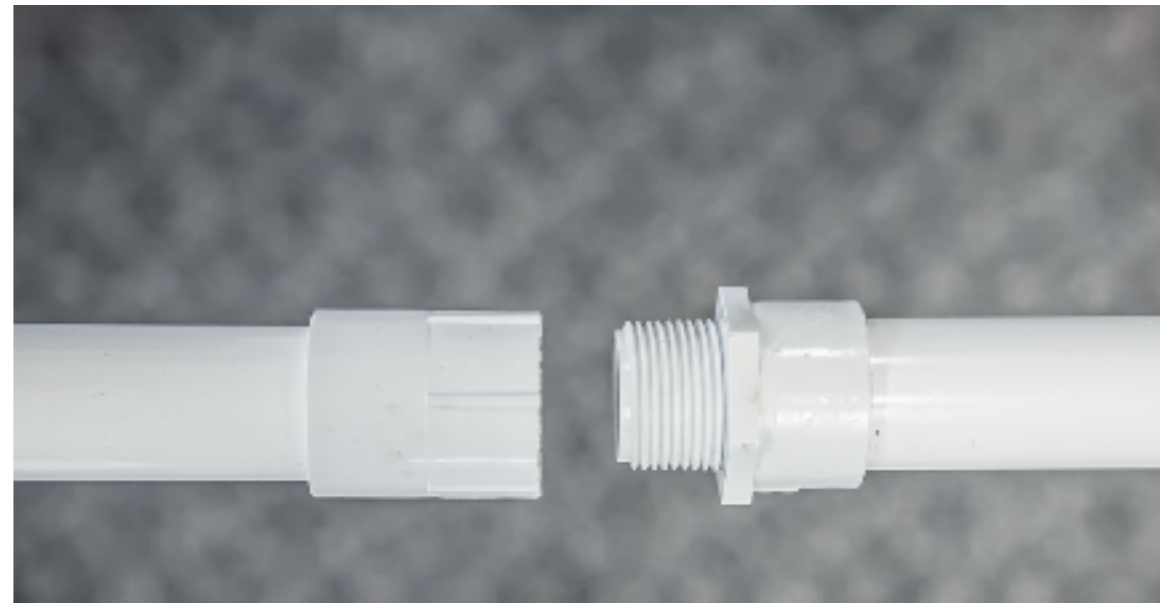
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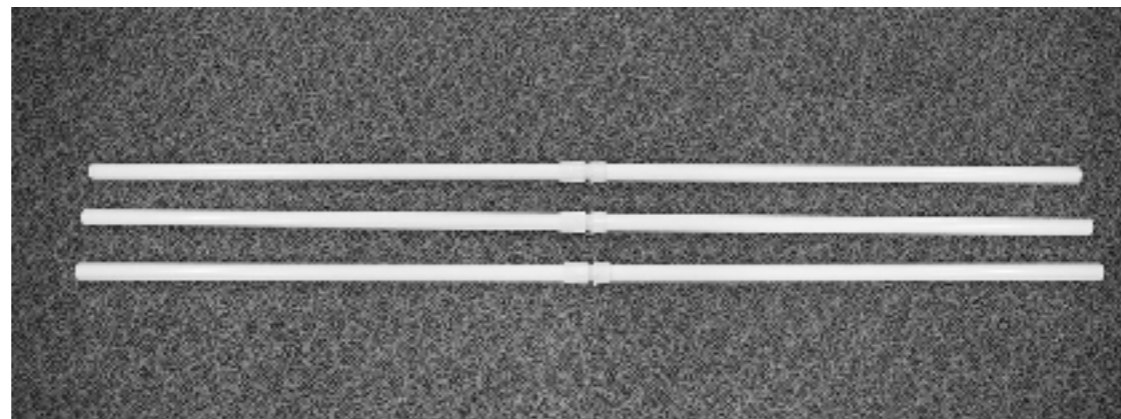
The frame is very simple and easy to build.

# SET UP

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You will take the 3 sets of poles and screw each set together so that you will have 3 long poles



# SET UP

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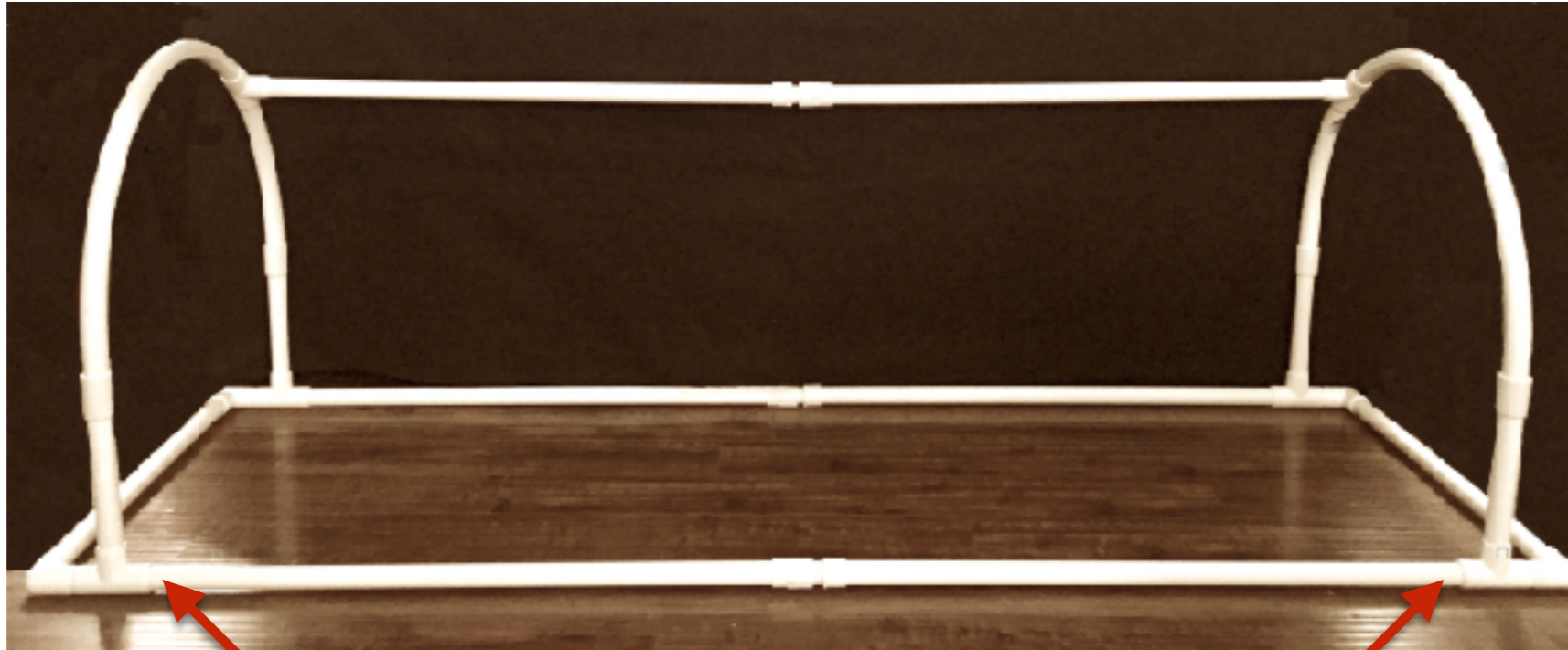
Place the arches into the base piece.

The T connections should be facing inside.

The base should look like this picture.

# SET UP

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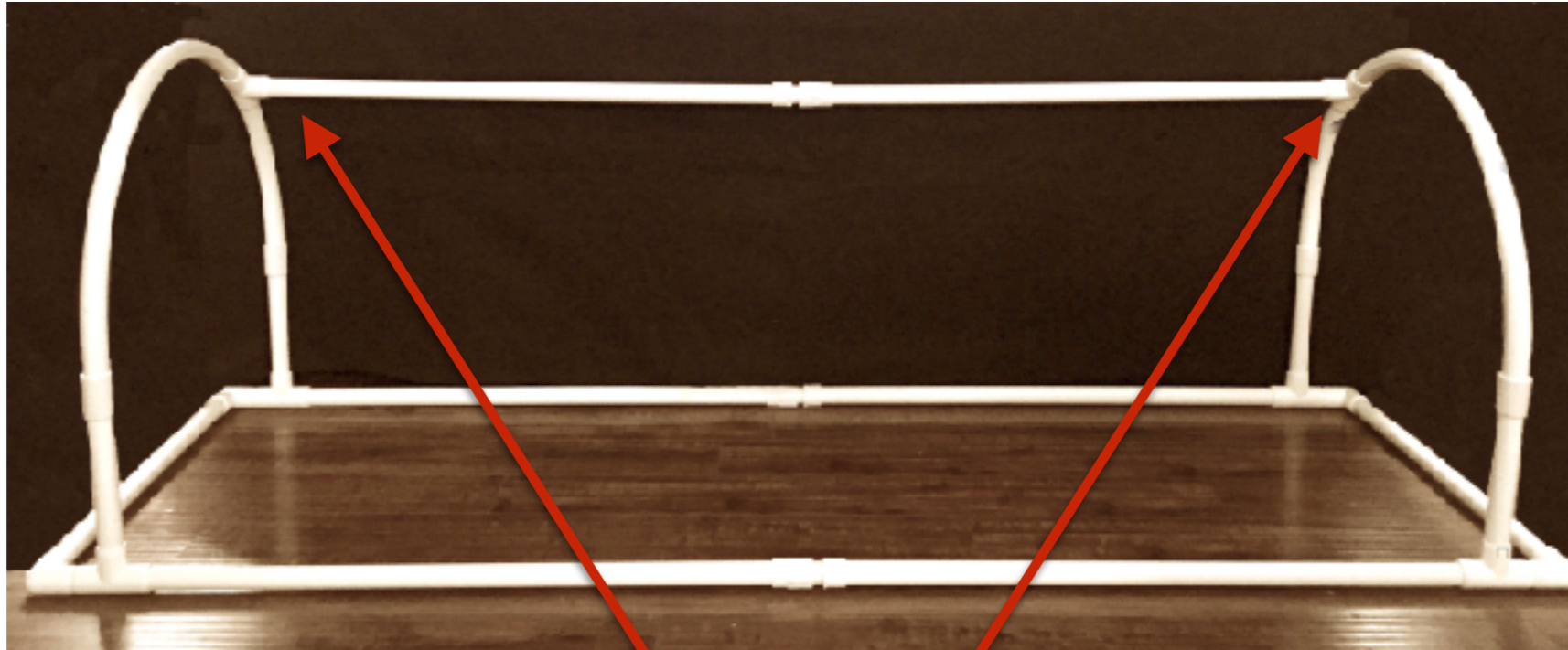


Next you will take the 2 base pieces and connect them to the long poles.



# SET UP

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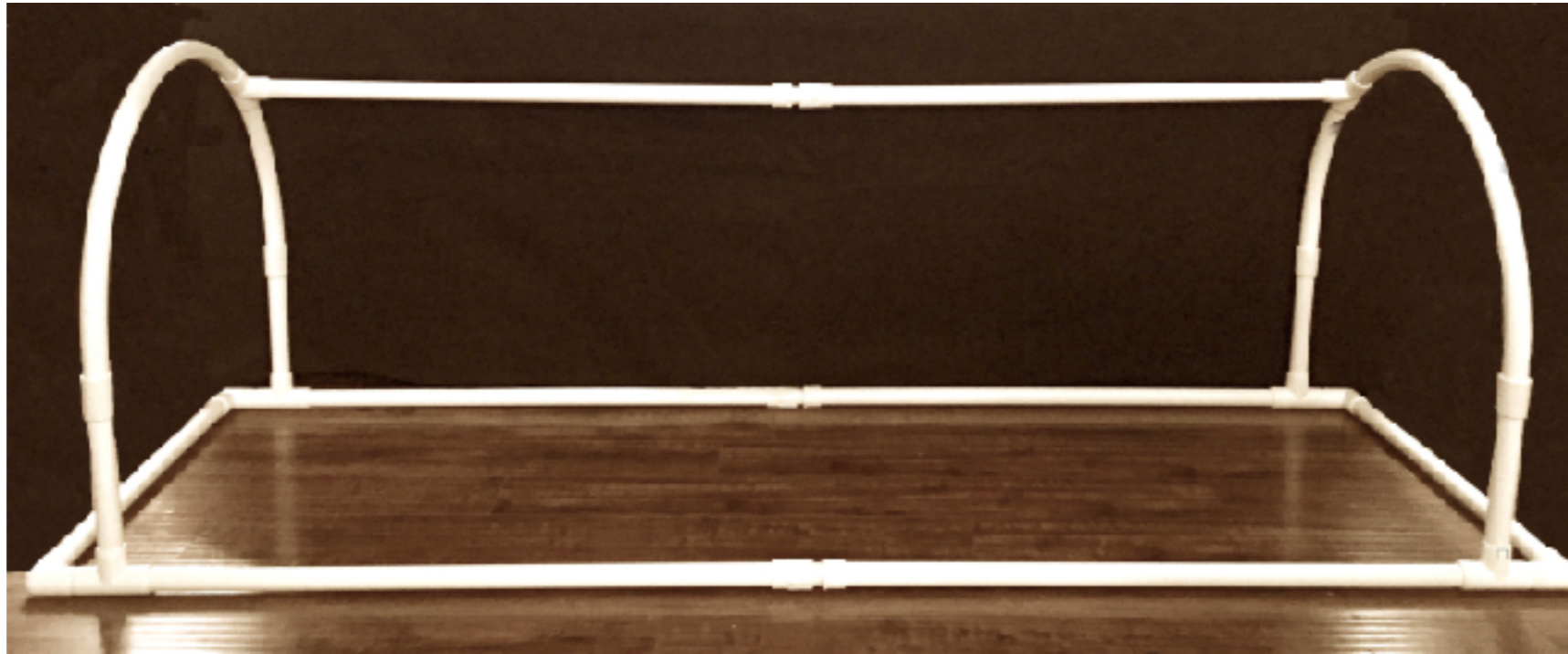


Finally, connect the third long pole to the arches.

Make sure the T connections are facing inside.

# SET UP

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Now it is time to put the deflated chamber inside the frame and inflate it to shape.

# INFLATING

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Inside zipper



Outside zipper

There are two zippers that stretch nearly the length of the chamber. These zippers are dual-triggered and can be opened and closed from inside or outside the chamber.



# INFLATING

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It is important that the inside zipper is totally closed into the dock.

# INFLATING

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# CAUTION

At first, follow these instructions to inflate and deflate the chamber without any person inside the chamber.

## **WARNING**

Never take a treatment alone.

Always have someone outside the chamber to assist you.

# INFLATING

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Pictured is the right and wrong way to close the inside zipper.

# INFLATING

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Next close the outside zipper all the way so that the pull tab is past the white strap.

Failure to do this may cause damage to the zipper.

# INFLATING

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You will then need to buckle each belt.

Once you have the zippers completely closed and the belts buckled you are ready to connect the compressors to the chamber.



# SET UP

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To inflate the chamber you will need to take each compressor hose and click them onto the chamber.

Plug each compressor into the electric socket in the wall.

**It is very important that when using the chamber both compressors are running.**

# INFLATING

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Now that you have  
both zippers completely  
closed,  
belts buckled,  
compressors connected  
to the chamber and  
running,  
you will need to check  
the red dump valve to  
make sure it is closed.



Line the dot on the red knob with the dot on  
the black ring for the closed position



# INFLATING

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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 valve.

# INFLATING

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You will notice that there are two relief valves on your chamber. The blue valve is factory set to release air when the chamber reaches 1.3 ATA. The yellow valve is set at a slightly higher pressure for redundancy and safety.

# INFLATING

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This picture is showing the underneath side of the chamber so that you can see how the bolster cradles are connected.

It is easiest if after your chamber is inflated someone helps you lift the chamber from each end and you place the bolster cradles to the underside on the velcro patches.

# INFLATING

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Once the chamber is inflated to shape you are ready to connect the velcro straps.

# SET UP

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Connect the 3 velcro loops on each end of the chamber  
around the frame

# SET UP

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Congratulations! You have successfully set up your chamber

- Open the red knob to release the air
- When gauge says zero unbuckle the belts and unzip the zippers.
- Put your mat inside the chamber.
- You are now ready to take your first treatment - after you have thoroughly read this whole manual.



# SET UP

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Each time you take a treatment...  
If you are operating from the OUTSIDE

- First plug the compressors into the electric outlets
- Once the person is inside the chamber completely close the inside zipper, then completely close the outside zipper.
- Close all buckles
- Inflate the chamber, relax and enjoy your treatment
- When you are ready to deflate the chamber turn the red knob to let the air release.
- Once the chamber sides are soft and the gauge reads zero you are ready to exit.
- Unbuckle the belts, open the outside zipper, then open the inside zipper.
- Help the person exit the chamber
- Unplug the compressors



# SET UP

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Each time you take a treatment...  
If you are operating from the INSIDE

- First plug the compressors into the electric outlets
- Once you are inside the chamber snap the buckles closed
- Completely close the outside zipper.
- Completely close the inside zipper.
- Inflate the chamber, relax and enjoy your treatment
- When you are ready to deflate the chamber turn the red knob to let the air release.
- Once the chamber sides are soft and the gauge reads zero you are ready to exit.
- Open the inside zipper
- Open the outside zipper
- Unbuckle the buckles
- Exit the chamber
- Unplug the compressors

# INFLATING

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# CAUTION

Make sure both the inside and the outside zippers are **completely closed** each time the chamber is in use. Failure to do this may result in damage to the chamber.

# INFLATING

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## CAUTION

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

**The compressor must remain on for the entire treatment period to ensure the circulation and exchange of fresh air, which provides a safe and comfortable treatment.**

# INFLATING

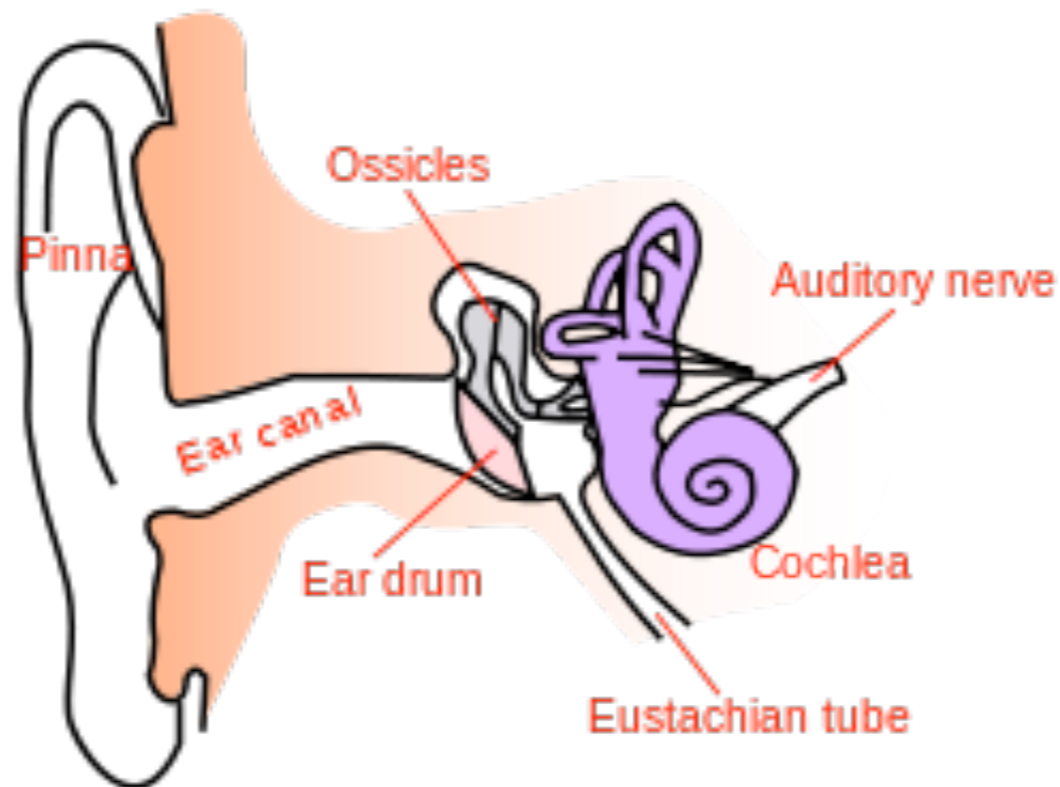
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Notice that the gauge is reading zero when you begin. It will then reach the blue section on the gauge which is 1.3 ATA. You will hear air being released from the blue valve.

# DURING TREATMENT

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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

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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



Yawning or opening your mouth wide will also help.



Lastly, chewing gum may help relieve this pressure.



If the above 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.

# DURING TREATMENT

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## 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

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## WHAT TO BRING INTO THE CHAMBER

Feel free to bring food, drinks, books and personal computers, DVD players 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.

# DEFLATING

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When operating from the outside you will first need to unbuckle the belts.

# DEFLATING

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Now it is time to 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

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Next you will open the inside zipper.

Pull the zipper tab on the inside zipper.

the zipper all the way.

Open

# DEFLATING

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## DEFLATING THE CHAMBER FROM INSIDE

If you will be deflating the chamber from the inside please follow these instructions:

Turn the red knob to release the air

Before opening the zipper, press on the chamber walls to make sure they feel soft

Open the inside zipper

Open the outside zipper

Unbuckle the belts

Step out of the chamber

# DEFLATING

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Your deflated chamber should look like this.



# REMINDERS

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## 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 **compressor 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

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Congratulations on the purchase your Dive Chamber.

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.

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

If you have additional questions please call us at

1-877-PSI-DIVE  
(1-877-774-3483)

# CHAMBER CARE

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## **ZIPPERS**

The outside zipper requires no maintenance.  
Periodically, wipe the outside open zipper with a damp cloth.

# CHAMBER CARE

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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

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## **CLEANING THE CHAMBER**

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

We have provided an antibacterial silver-based microfiber cloth with which you will only use water. Do not use any other cleaning product with this cloth.

## **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

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## COMPRESSOR & FILTER

There is an intake fabric filter on the compressor that has the curved plastic cover.

Instructions for cleaning the filter are on the cover.

The recommendation on the compressor cover is to replace the filter once per year based on 24 hour per day usage. Since average usage will be much less, the filter life is expected to be five years.

The output filter (black) requires no maintenance. There is a green ball visible from the top of the filter. When this ball turns red, it is time to change the filter.

Contact your distributor to reorder.



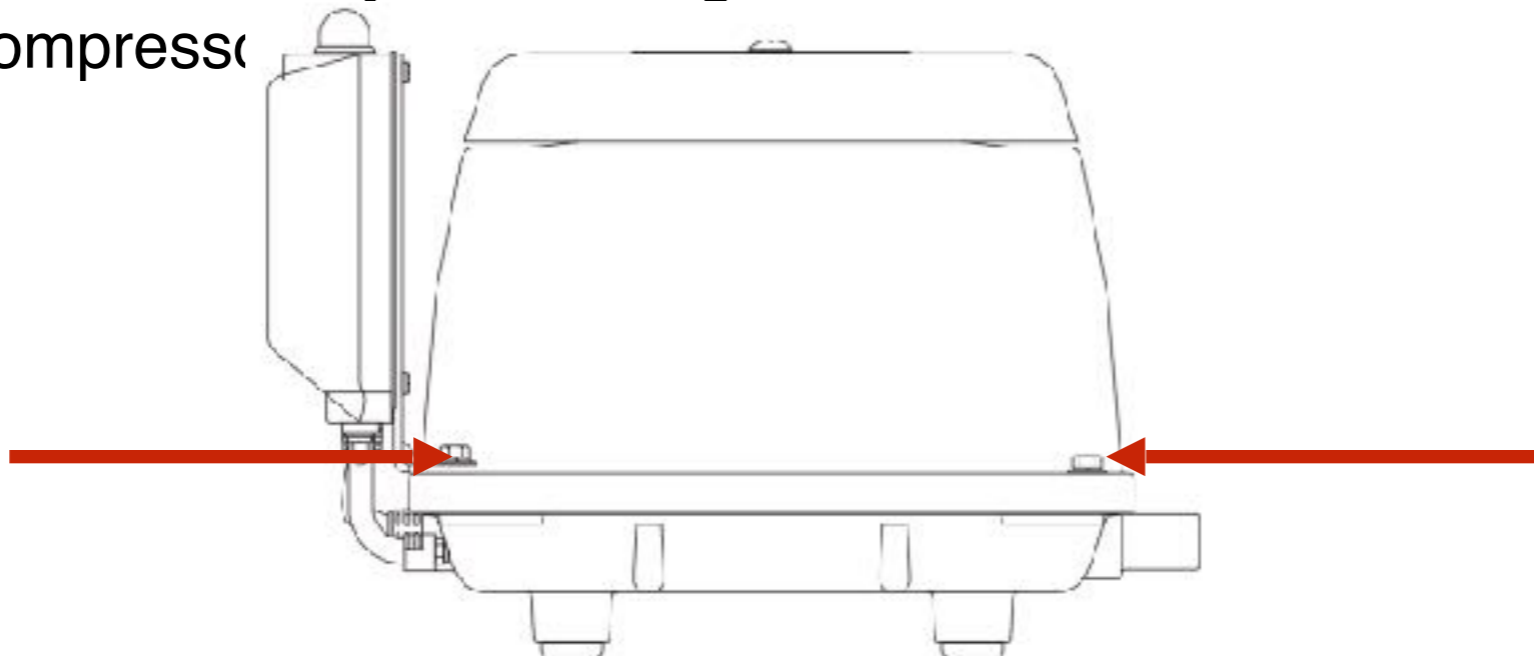
# CHAMBER CARE

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## Resetting the Safety Switch

If your compressor is jarred during shipment or operation in your home the shut off switch may be triggered and your compressor may not turn on. If this happens follow these instructions to reset the safety switch.

First, make sure the compressor is unplugged. You will need to remove the cover by unscrewing the four screws at the base of your compressor

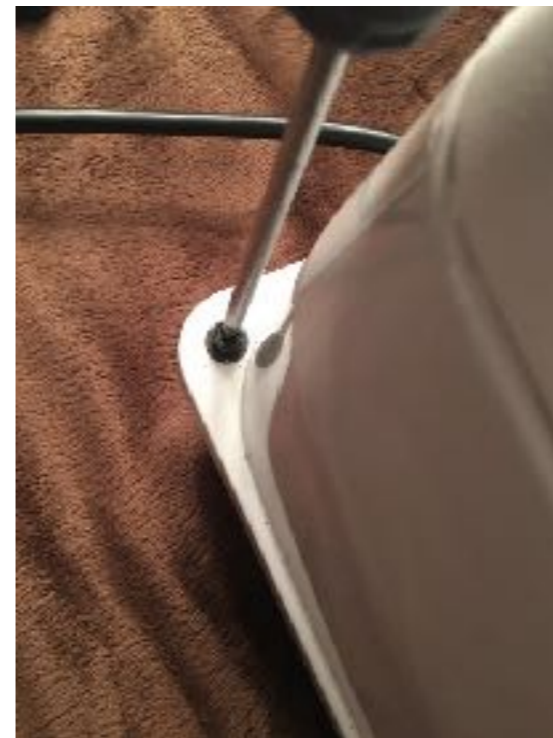
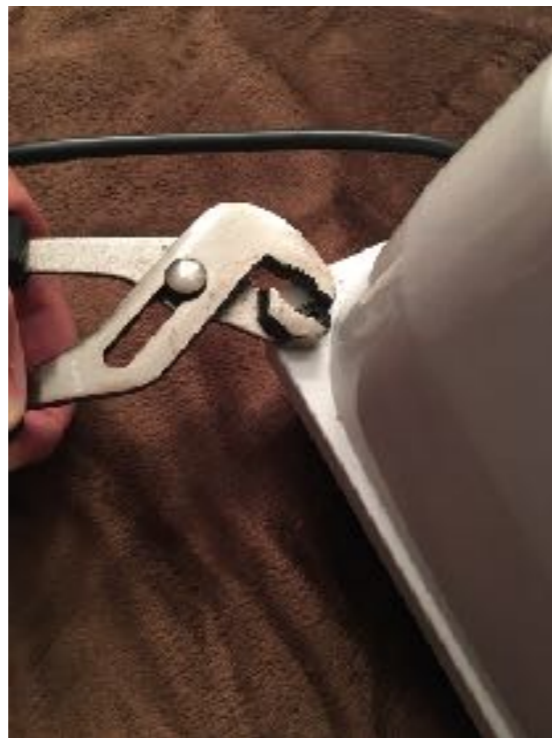


# CHAMBER CARE

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## Resetting the Safety Switch

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.



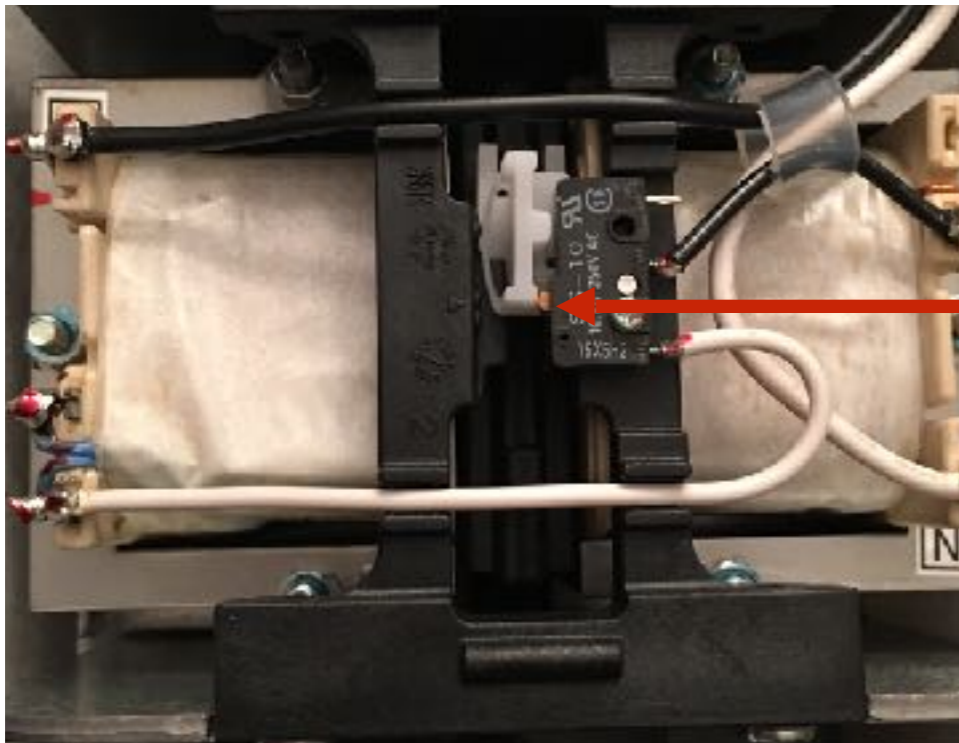
# CHAMBER CARE

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## 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

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## Resetting the Safety Switch

Next, be very careful to line up the cover with the screw holes in the base of the compressor. Tighten the screws with a Philips screwdriver. Then plug your compressors into the electric outlet.



# CHAMBER CARE

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## Compressor Filter

There is a filter right under the top plate of the compressor.

Clean with water every 6 months.

You will want to replace the filter every year.

You can order these filters on [www.summit-to-sea.com/accessories](http://www.summit-to-sea.com/accessories)





# CHAMBER CARE

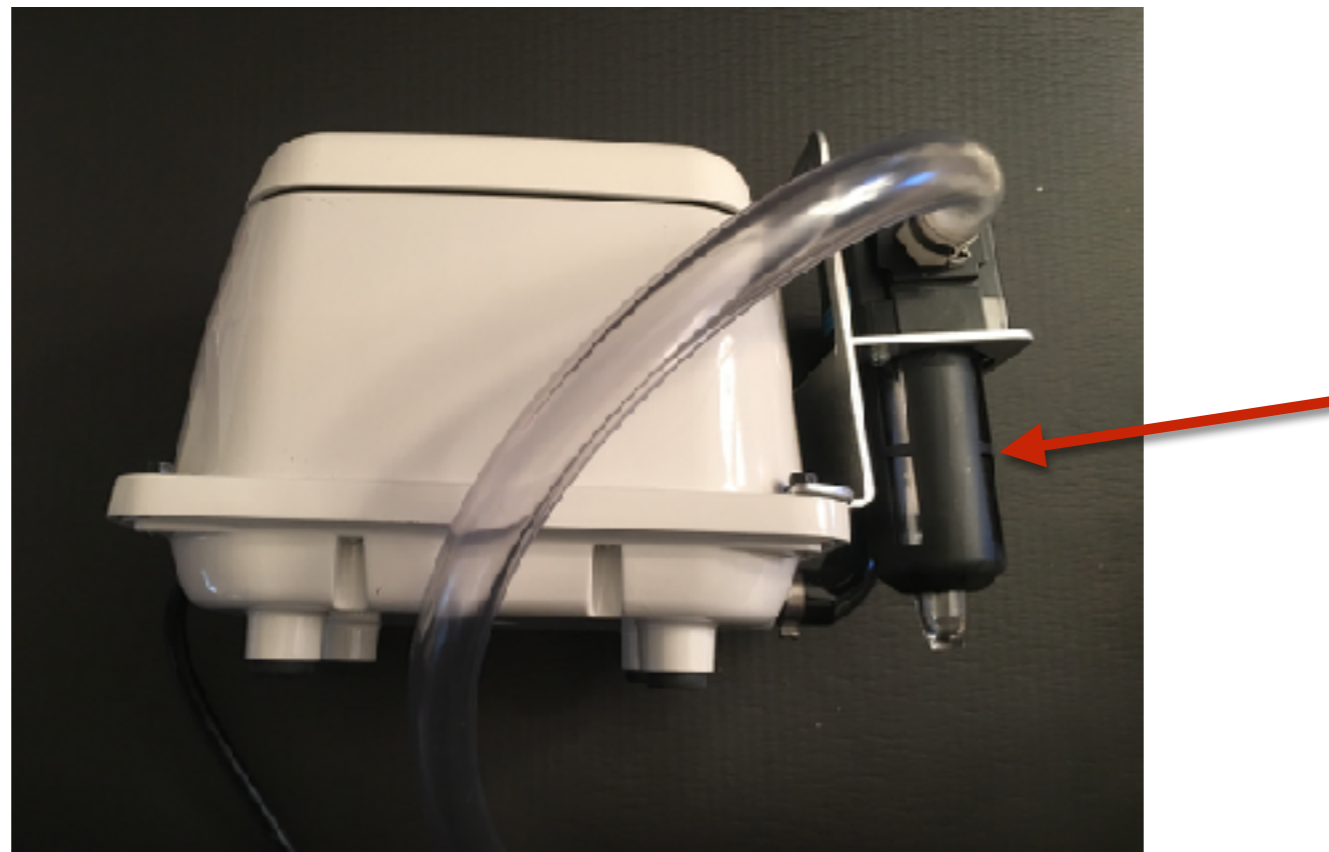
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## The .001 Micron Filter

There is another filter that is attached to the side of the compressor.

This filter needs to be changed every year.

You can order these filters on [www.summit-to-sea.com/accessories](http://www.summit-to-sea.com/accessories)





# CHAMBER CARE

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## The .001 Micron Filter

Follow these instructions to replace this 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 piece. 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

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## 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

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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

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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 \$650

2 Year Extended warranty \$750

3 Year Extended warranty \$850

# IMPORTANT TO READ

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## 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 CO<sub>2</sub> exposure

# IMPORTANT TO READ

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## 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

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**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

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## 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 CO<sub>2</sub> 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

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**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.

**Mat-**Our foldable, compact mattresses are made with an easytoclean surface. They are both comfortable and versatile.

# IMPORTANT TO READ

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**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 heavy duty 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

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**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.

# IMPORTANT TO READ

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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 510 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.

# IMPORTANT TO READ

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## **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

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To order additional:

filters

zipper lubricant

zipper cleaner

[www.summit-to-sea.com/accessories](http://www.summit-to-sea.com/accessories)

# SUMMIT TO SEA

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Hyperbaric Chambers

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