CTN.FI

RECOVERY TECHNOLOGIES

OxyPro™

VS1 Mild Hyperbaric Oxygen Chamber

USER MANUAL

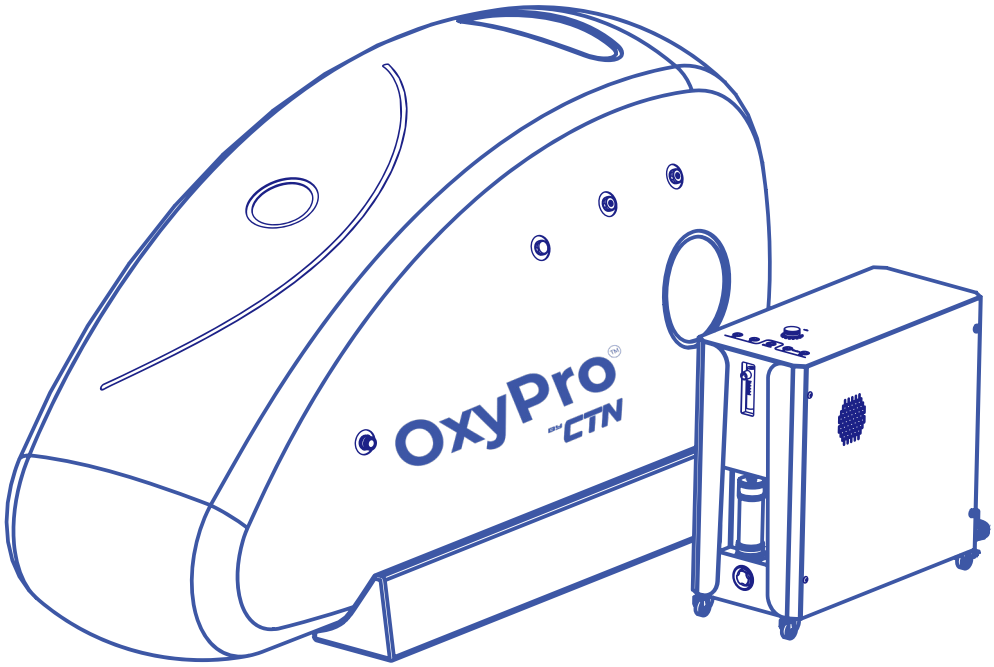
CTN.FI

05.2024

TABLE OF CONTENTS

INTRODUCTION

Thank you for purchasing a CTN hyperbaric oxygen chamber. The membrane of this product is made of polyurethane composite and environmentally friendly materials, pressurized with clean air that has been filtered through multiple times. The pressure in the cabin is adjustable from 1.1 to 1.5 ATA. This product is foldable and portable, safe to use, reliable, and easy to operate without third party assistance.



PRECAUTIONS AND WARNINGS

- Please read the instructions carefully before using the device.
- Use a dedicated power outlet for the cord. Make sure that the power plug is fully connected and not loose. Do not pull or twist the power cord with force
- Do not use the device in wet or humid conditions. The indoor temperature should be maintained below 24°C and humidity below 50%.
- When cleaning or servicing the device, unplug the power wire.
- Stop using the device in case of any uncomfort.
- If an abnormal smell occurs during use, turn off the power and pull out the plug.
- Do not attempt to disassemble the machine or make modifications.
- Children can only use this product under adult supervision.
- Do not place heavy objects on top of the machine
- Do not touch electrical components with wet hands.
- Do not open the inner or outer zippers during use or before the chamber has depressurized to 0kPa.

BEFORE FIRST USE:

- Test an empty chamber first to make sure that the device is operating normally.
- If the equipment is operating abnormally, please do not use it and contact support.
- When using the device for the first time, people can feel uncomfort in the ears, which is normal. Swallowing saliva or yawning can help adapt to the change in pressure, just as one would do during a plane takeoff. This is a normal phenomenon caused by increased pressureand should disappear once the pressure in the chamber has stabilized at 35-40kPa. After several times of use, this phenomenon will gradually disappear.

IN CASE OF AN EMERGENCY OR WHEN THE MANUAL PRESSURE REDUCING VALVE FAILS TO WORK NORMALLY:

- Please press the emergency pressure reducing valve to relieve the pressure. When the pressure reaches 0 kPa, open the zipper and exit the cabin. Do not open the zippers by force during use or when the pressure relief is not completed.

CONTRAINDICATIONS

Whenever unsure about any listed or other potential contraindications, please make sure that the client consults their doctor or seeks medical advice from the treating medical professional before administering any treatments.

Below are some of the possible contraindications:

- Infectious diseases and other serious illnesses
- Open cuts or wounds
- Pregnancy
- Intoxication
- Chest or lung diseases, a severe cold
- Use of pacemakers
- Use of heavy medications
- Untreated pneumothorax (pneumothorax)
- Chemotherapy drugs (adriamycin, cisplatin and bleomycin)
- Acute sinusitis (inflammation of the sinus cavity)
- Severe imbalanced asthma
- Claustrophobia

INTRODUCTION

TECHNICAL SUMMARY OF DEVICE FUNCTIONALITY

CTN OxyPro™ devices are non-medical mild pressure oxygen therapy (mHBOT) devices and are intended to enhance overall well-being and recovery. The devices are produced in both soft shell (PVC Vinyl) or steel construction. The devices are available in single-seater, 2/3 person and four-seater. The information presented here applies to all CTN OxyPro™ models, regardless of size or material of manufacture.

DESCRIPTION OF THE TREATMENT EVENT

During operation of the device, the internal pressure of the OxyPro™ is raised from normal sea surface air pressure to slightly less than 0.5 atmospheres (ATA), which corresponds to a depth of about 4-5 meters underwater. An increase in pressure below 0.5 ATA means that the OxyPro device is not classified as a pressure vessel according to applicable EU laws and regulations and is not subject to EU classification and inspection regulations for pressure vessels. The non-medical oxygen concentrator attached to the device increases the oxygen concentration inside the device from 21% to a maximum of 33% of normal indoor air. Due to this relatively modest increase in oxygen content, phones, laptops, etc. can be used in OxyPro during its use. Unlike medical high-pressure HBOT devices, which, in addition to higher pressure, breathe 100% pure medical oxygen, which together make the chamber fire sensitive.

SUMMARY OF THE USE OF THE DEVICE AND MARKETING OF TREATMENTS

Because OxyPro devices are not medical devices, medical claims should not be used in connection with them or when marketing treatments made with them. The devices are designed and intended for general well-being therapy, and although breathing oxygen-rich air in a low-pressure space has been proven to be beneficial for the client and refreshing and restorative in various ways, not enough medical studies have been conducted on mHBOT treatments. Due to the modest increase in pressure and oxygen levels compared to normal indoor air, CTN OxyPro™ is safe and easy to use. Nevertheless, in commercial use, it is recommended that staff be present and the client monitored throughout the treatment to ensure that the client's treatment experience is pleasant and that treatment can be interrupted immediately if the client so wishes.

The following page lists the most significant differences between HBOT and mHBOT devices: https://hyperbarium.com/en/blog/different-hyperbaric-chambers.

HBOT chambers	mHBOT chambers
Maximum working pressure	
3 ATA (tested up to 6 ATA)	1.4 ATA
Quality of inhaled oxygen	
Pure medical oxygen (100%)	Pure oxygen 24% - 90%
Personnel requirements for the operation of the device	
At least one clinical specialist with hyperbaric medicine skills + At least 2 hyperbaric operators, certified + medical assistant	mHBOT chambers do not require the presence of a certified user or medical professional
Materials of the chamber	
C-Steel hard shell, PED certified + acrylic PMMA, PVHO-1 and NFPA 99 certified	May have a hard or soft shell. There are no separately set standards for materials
Authorisation requirements	
HBOT chambers require medical permission	mHBOT chambers do not require medical permission
Classification and certification in the USA and EU	
Class IIb medical device	Not classified as a medical device
Fire extinguishing system	
HBOT chambers are equipped with an effective fire mist and water extinguishing system (HSFS) as a mandatory feature	There is no need for a fire extinguishing system in mHBOT chambers
Duration of treatment	
Most often from 120 to 150 minutes	60 - 90 minutes
Site requirements	
HBOT chambers can only be used in authorized hospitals or medical clinics	mHBOT devices are often used in beauty salons, gyms, various wellness clinics and home use
Medical examinations	
More than 300 published medical studies proving the effectiveness of treatment in HBOT chambers	The number of studies demonstrating the effectiveness of medical treatment in mHBOT devices is limited
Protection against voltage drops	
A system of protection against voltage fluctuations or drops in electrical voltage is mandatory	mHBOT chambers do not have mandatory protection against voltage fluctuations or drops
Medical recognition	
The FDA approved 14 different diseases, the European Committee of Hyperbaric Medicine (ECHM) approved more than 30 different diseases, the Society of Hyperbaric and Underwater Medicine (UHMS) approved 14 different diseases, the Society approved the European Baromedical Association (EUBS)	The FDA and the Underwater and Hyperbaric Medicine Society (UHMS) recommend one disease: acute altitude sickness (AMS) and its associated mild symptoms. It has not been approved or recommended by the European Committee of Hyperbaric Medicine (ECHM). It is not approved or recommended by the European Baromedical Association (EUBS)

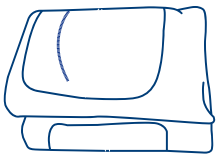
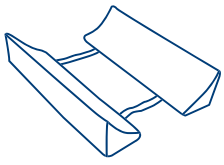
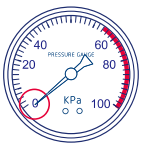
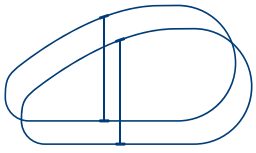
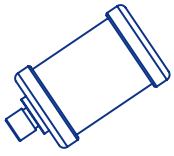
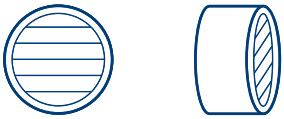
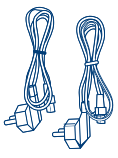
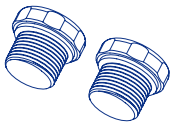
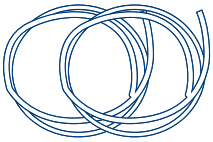
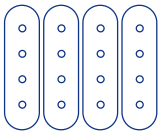
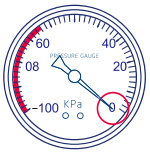
Source: https://hyperbarium.com/en/blog/different-hyperbaric-chambers

TECHNICAL SPECIFICATIONS

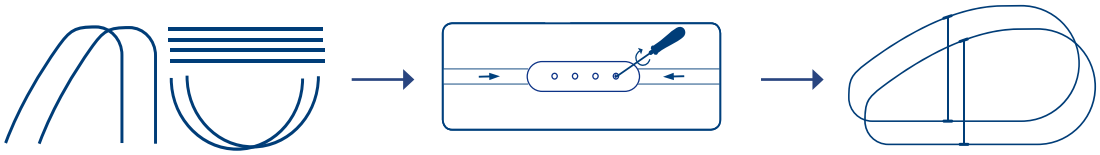
Chamber:	**OxyPro™ VS1**
Pressure:	1.5 ATA
Material:	TPU
Size:	L2300 x W1000 x H 1200 (mm)
Weight:	46 KG
Colors:	White/ grey exterior, white interior.
Compressor:	
Size:	L 766 x W 350 x H 750 (mm)
Flow of air:	72L/min
Weight:	110 KG
Power:	1100 W, 110 V/60 Hz, 220 V/50 Hz
Flow of oxygen:	10 L / min
Features:	Functions as an air compressor, O_2 concentrator, dehumidifyer, ozonator.
Concentrator:	Included with the compressor
Additional info:	Single-person device, easily portable. Controllable internally and externally.

ASSEMBLY

1. Please make sure to unpack all of the components before assembly. The AIO compressor unit has straps at the bottom that need to be loosened up and removed.

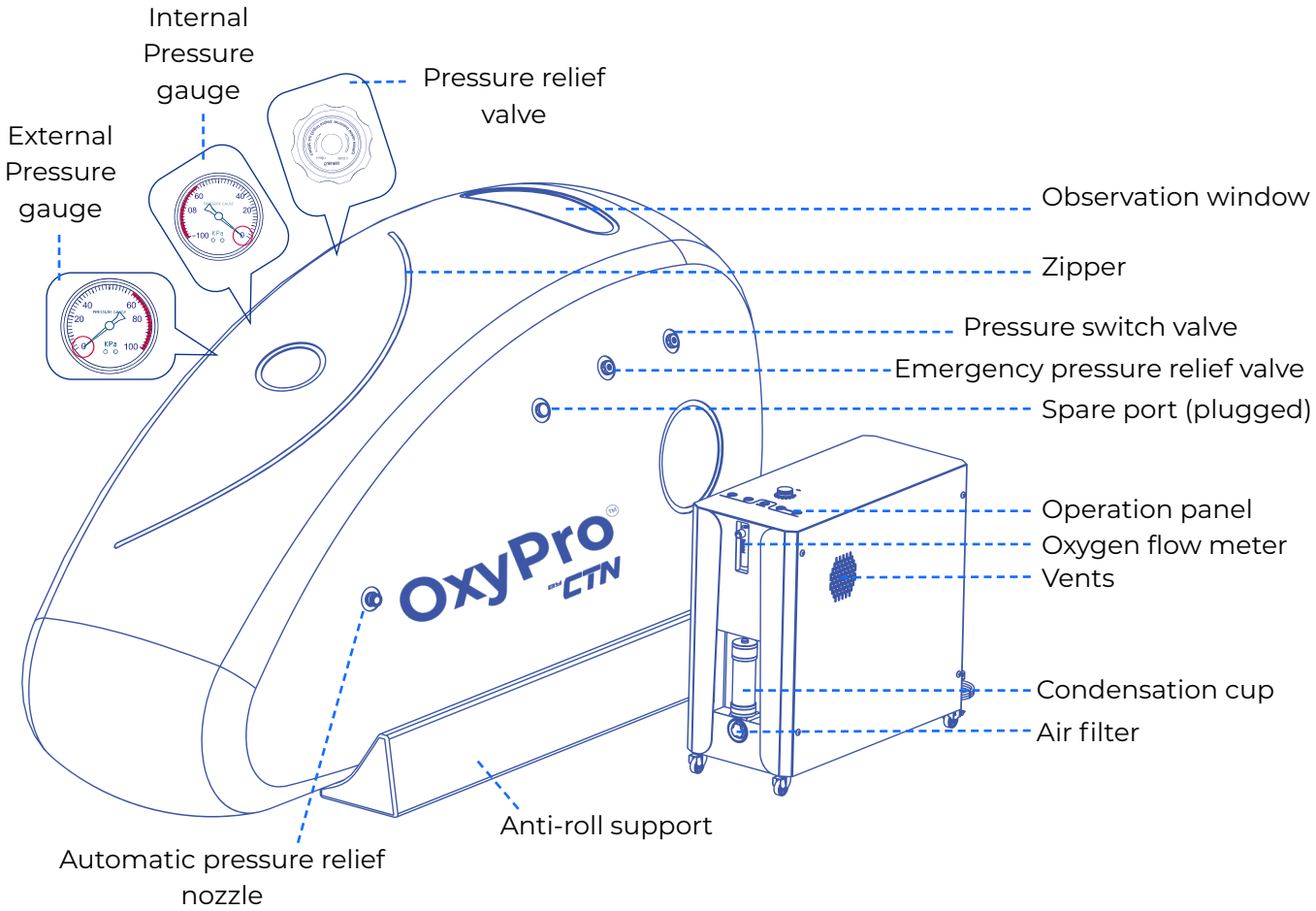
 Chamber	 Anti-roll support	 External pressure gauge
 Metal frame	 Silencer	 Filter sponge
 Matress	 Power cable	 Plug
 Oxygen/ air tube	 Frame connectors	 Internal pressure gauge

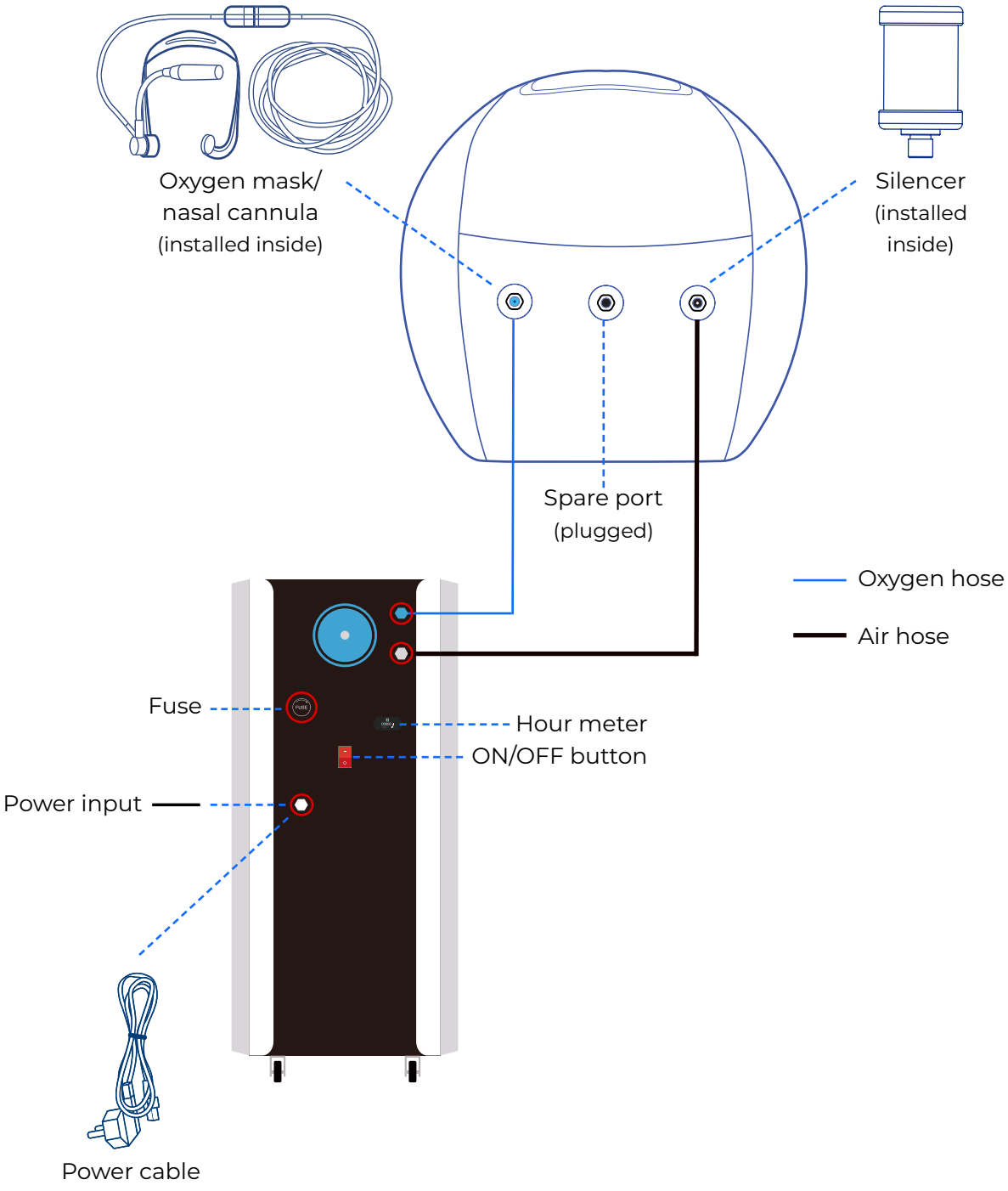
2. Assemble the frame. It is easiest to assemble the frame outside of the chamber first, then remove the center pieces and put the curved ends inside the chamber. When everything has been placed inside, reinstall the middle parts.



3. Install the following list of components according to the schemes on the following schemes:

- Internal pressure gauge
- External pressure gauge
- Oxygen hose
- Air hose
- Silencer
- Oxygen mask/ nasal cannula
- Power cable



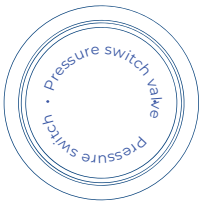


5. Connect the compressor unit to a power outlet and turn it on from the back of the unit. The chamber will begin to inflate. It will take about 5 to 7 minutes for the pressure to build up.

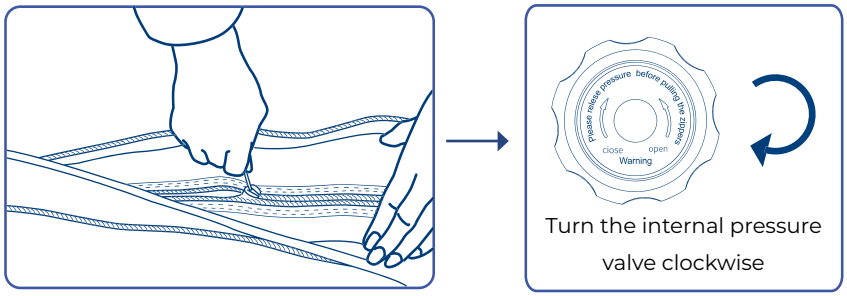
INSTRUCTIONS FOR USE

1. Power on the AIO unit. The timer indicator should should be at “ON” position for use without a time limit. The operating time in minutes can be selected by turning the knob clockwise. Turn on the ON/OFF, O_2, AirPurifier/ANION, Dehumidify and Refrigerate functions.
The indicators will turn green.

2. By turning the pressure switch valve, the user can switch between 1.1 - 1.2 - 1.3 - 1.4 - 1.5 ATA pressure according to preference.



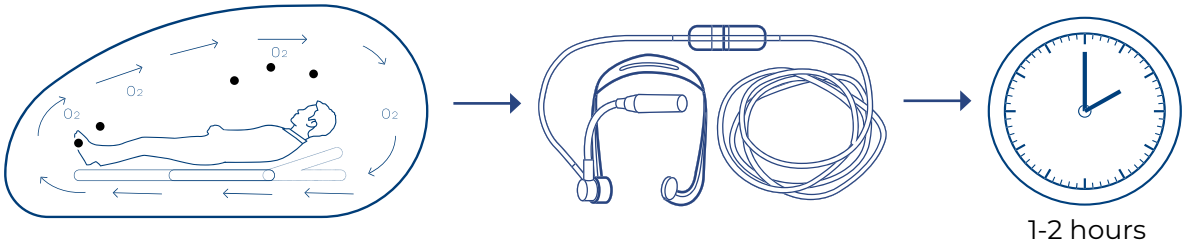
3. Enter the cabin, close the inner and outer zippers in turn, making sure to get a proper seal.
Then close the manual pressure relief valve.



The zippers and pressure valve can be operated both from the inside and outside of the chamber.

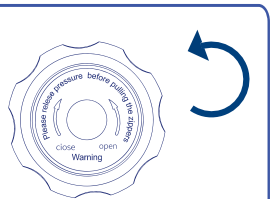
4. After entering the chamber, the pressure gauge will slowly rise to ~40kPa in about ten minutes. The automatic constant pressure valve will start to work and make a hissing sound as it relieves the excess air pressure.

5. Wear a connected nasal cannula for optimal results. The recommended session time is 1-2 hours.



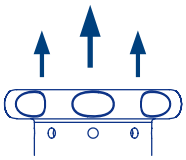
1-2 hours

6. Before leaving the cabin after use, please open the pressure valve. Wait for the pressure to drop to 0 kPa before opening the zippers.



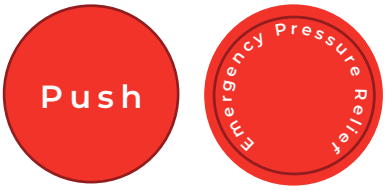
Turn the internal pressure valve anti-clockwise

or

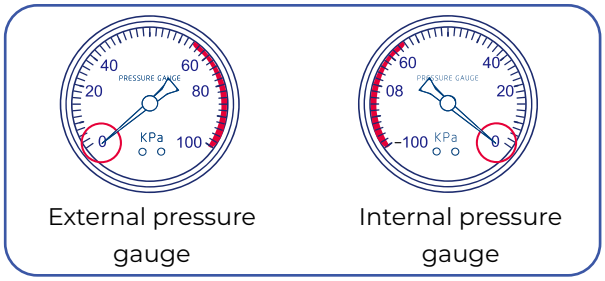


Lift the internal pressure valve to reduce pressure

In case of an emergency, push the emergency relief valve from the inside, or pull from the outside of the chamber

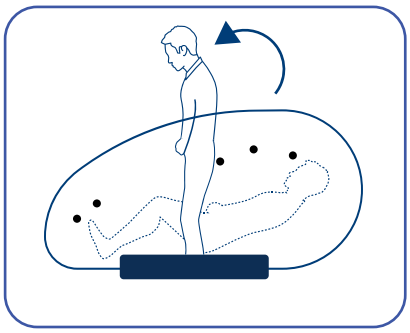


7. When the pressure gauge shows 0 kPa, open the inner and outer zippers one by one, get up and exit the chamber.



External pressure gauge

Internal pressure gauge



7. After exiting the chamber, press the power switch to turn off the AIO unit.

8. Clean and disinfect the cabin after use.

MAINTENANCE

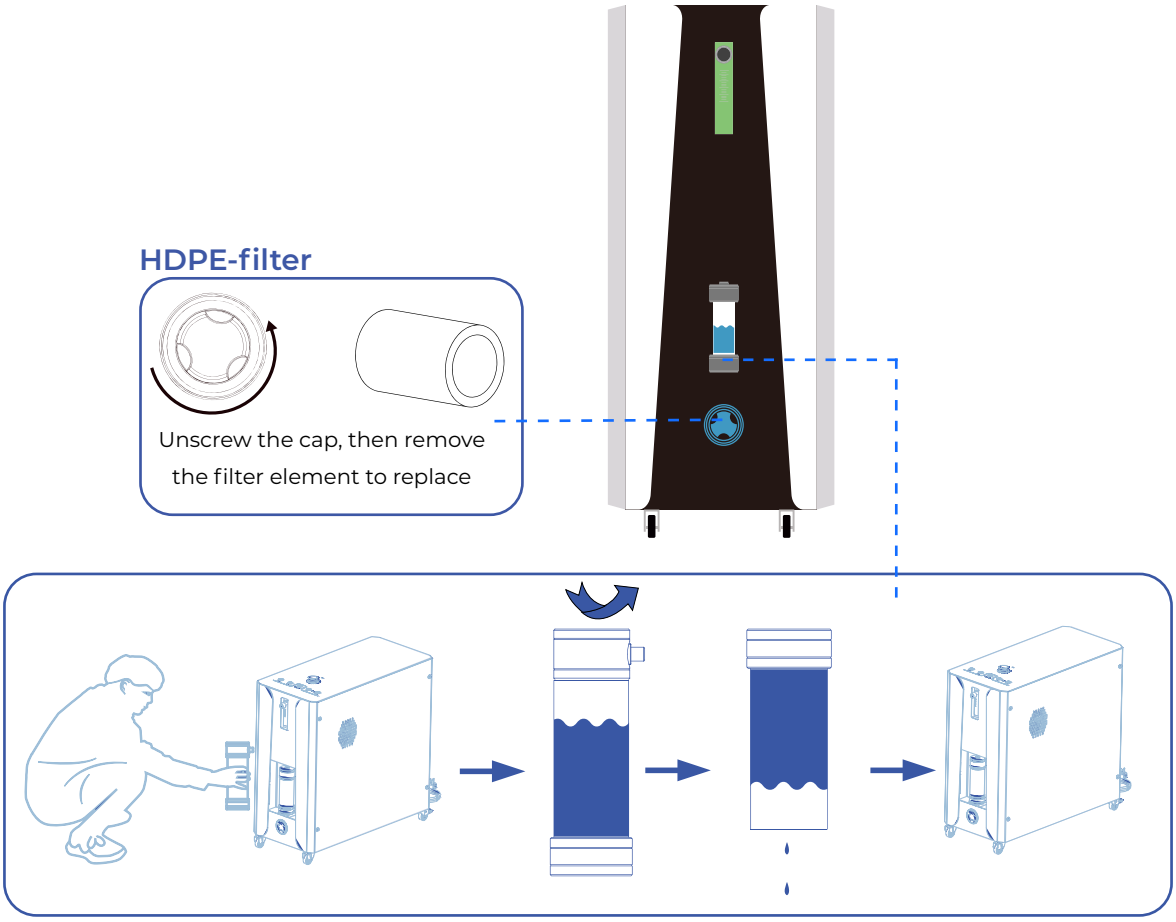
CHAMBER MAINTENANCE AND CLEANING

Maintain the chamber by using a deodorizing and sterilizing spray and/or alcohol wipes. The run the AIO machine for 20 minutes.

MAINTENANCE AND CLEANING OF THE AIO UNIT

While maintaining the air compressor, make sure that the device is turned off.
The activated carbon filter should be replaced every 12 months.

Regularly drain the condensed water out of the condensation cup. Make sure to correctly align the drainage port when reinstalling the cup.



WARRANTY INFORMATION

Void of factory warranty. A 36 months limited manufacturers factory warranty is applied to each sold CTN device, and is valid from the date of delivery. The term is 36 months for materials and manufacturing defects, and 12 months for computers and electronic components. Each device has its own specific requirements for the ambient conditions of the space it will be installed in or used. These include but are not limited to square meters, cubic meters, maximum ambient temperature and humidity, power feed etc. Non-compliance with the safety information, installation and operating instructions or specifications and ambient conditions of the space the device is used, can lead to danger for people, the environment, endanger the device and its functions, and lead to the loss of claims for damages of any kind.

TROUBLESHOOTING

If your device does not function properly, please refer to the troubleshooting table below. If the problem can not be resolved, please contact the our support team at service@ctn.fi.

Description	Possible cause	What to do?
The chamber inflates slowly	1. The air hose is not properly connected or has a leak 2. The air filter is full of dust 3. The air inlet is blocked 4. The manual pressure reducing valve is not fully closed	1. Inspect the hose and connection points 2. Replace or clean the filter 3. Clean the air inlet of the air compressor 4. Close the manual pressure reducing valve
The pressure inside the chamber does not rise	1. The chamber is not fully sealed 2. The manual pressure reducing valve is not closed or not fully tightened 3. The air hose is not connected properly 4. The gray sealing strip is stuck in the middle of the inner and outer zippers, and it is not laid flat.	1. First release the pressure in the chamber, then open and close the zippers, restart 2. Please tighten the manual pressure reducing valve 3. Inspect the connections 4. Make sure the grey sealing strip remains flat
Abnormal noise or vibration inside the AIO unit	1. The air filter is clogged 2. The air intake of the air compressor is blocked 3. The air compressor screws are loose	1. Inspect, clean or replace 2. Clean the air inlet of the air compressor 3. Tighten the screws of the air compressor

WORLD'S #1 IN SPORTS RECOVERY

CTN.FI

CTN GROUP - IRELAND - FINLAND - ESTONIA - SPAIN

CTN CENTER - JAAKONKATU 2 - 01620 VANTAA - FINLAND

SALES@CTN.FI ADMIN@CTN.FI SERVICE@CTN.FI

The original language of this manual is English. Other versions are translations.
User manual version: 09.05.2025