CRYOTHERAPY CHAMBER

CryoStar
INFINITY OF RECOVERY
ANTARCTICA



ANTARCTICA OPEN HEAD NITROGEN

www.vacuactivus.com

WHAT IS CRYOTHERAPY?



Cryotherapy is a special type of low-temperature treatment used in ports rehabilitation for fast recovery f rom injuries, reduce inflammation and painful effects, as well as for weight loss and magical makeover of the body. The word cryotherapy consists of two parts: “cryo”, which means “cold”, and “therapy”, which means “treatment”. Using the right equipment for cryotherapy turns the science of exposing the entire human body to ultra-low temperatures for the recovery of the circulatory, nervous and energy systems into an effective healing technology. According to scientific and medical research, the optimal efficiency of cryotherapy procedures for the whole body is achieved by placing the body in temperatures up to -120-170°C (- 184-280F) for 1-3 minutes, which lowers the temperature of the skin surface. Applied non-invasive, short and extremely cold air pulses directed at a human body, provoke physiological reactions that promote treatment and recovery, which is used in many fields, including cosmetology, sports rehabilitation and medicine. Also, it is proven that controlled low-temperature conditions have an analgesic effect at the neuron level, which leads to positive mood, and therefore act as an antidepressant and treat sleep disorders. Cryotherapy treatment has become a popular practice that is increasingly used around the world, especially in sports rehabilitation where most professional athletes use cryotherapy as an effective method to improve muscle tone and accelerate regeneration after trauma. Attempts to use cryotherapy are aimed at getting rid of muscle pain, sprains and swelling after soft tissue damage or surgery. Cryotherapy includes a number of procedures: from the use of ice packs or immersion in ice baths (commonly called cold therapy) to the use of lowtemperature chambers called cryochambers. It is documented that whole-body cryotherapy is used daily around the world to treat pain, inflammation, restore energy, improve health and reduce stress. Cryotherapy brings to the public attention the benefits of cold therapy at extremely low temperatures. Whole-body cryotherapy is a therapy known for its fat-burning and analgesic properties obtained through exposure to ultra-low temperatures. Ultra-low temperature stimulates skin receptors, activating the reaction of the cent ral nervous system, which releases endorphins, produced by the human body (natural pain inhibitors and improve the mood). Also, cryotherapy improves blood and lymph circulation, relieves inflammation by cleansing from toxins and metabolic products, supplying the blood with oxygen and nutrients necessary to stimulate cellular repair throughout the body. Many articles suggest that cryotherapy treatment has been accepted by many famous athletes and sports teams for muscle recovery

Essentially, cryotherapy is the process of using the therapeutic benefits of low temperatures. This form of therapy has been used variously since the 1700s to reduce pain and muscle spasms, speed up recovery, slow cell aging, and improve health. For decades, athletes have been soaking in barrels of cold water and ice baths, but thanks to a recent innovation, whole body cryotherapy (WBC) is now available in special chambers powered with liquid nitrogen and most often featured in modern references to cryotherapy. This type of therapy using extreme cold was invented in the 1970s in Japan, and it appeared in the United States, Europe, and other countries only in the last decade and gained wide popularity among athletes and people suffering from some chronic diseases, as well as among ordinary people and housewives who do not like ice baths.

MAIN USES OF CRYOTHERAPY:

Although cryotherapy chambers belong to the group of equipment associated with sports rehabilitation and wellness, they have a wide range of uses in the health care and rehabilitation system.

1. PAIN RELIEF AND MUSCLE RECOVERY

Cryotherapy can reduce muscle pain as well as joint and muscle disorders such as arthritis. Moreover, it helps to heal sports injuries faster. For a long time, doctors have advised applying ice packs to damaged and painful muscle areas, as when the pack is removed, blood circulation improves, assisting in healing and pain relief.

2. WEIGHT LOSS

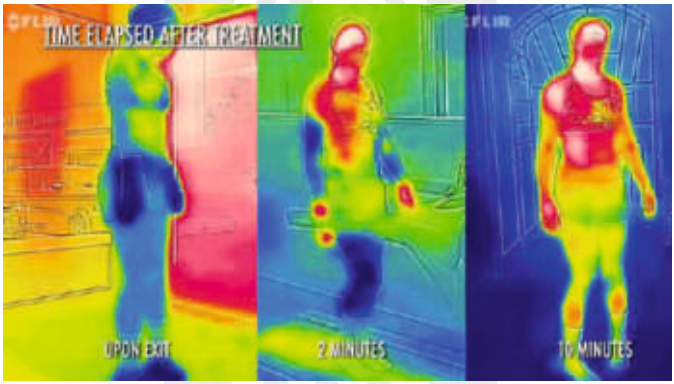
Cryotherapy alone will not cause weight loss, but it could help. In theory, cooling the body makes it work harder, activating its latent recovery potentials to keep warm. A few minutes in the cold can improve metabolism for the whole day.



People no longer feel cold as their metabolism has adapted and accelerated in response to cold temperatures. Since cryotherapy helps with muscle pain, it can facilitate the recovery of physical fitness after injury. This potential weight loss is limited to people who are unable to exercise because of pain.

3. SOOTHING THE INFLAMMATION

Inflammation is the way the immune system fights an infection. Sometimes the immune system overreacts to stimuli, leading to chronic inflammation, which is associated with problems such as cancer, diabetes, depression, dementia, and arthritis. Thus, the soothing inflammation could, among other things, improve overall health and reduce the risk of many chronic diseases.



4. PREVENTION OF DEMENTIA

Since cryotherapy soothes inflammation, there is a possibility that it may reduce the risk of dementia. A 2012 academic paper suggests cryotherapy may reduce inflammation and oxidative stress associated with dementia, mild cognitive impairment, and other agerelated forms of cognitive decline.



5. CANCER PREVENTION AND TREATMENT

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6. REDUCING ANXIETY AND DEPRESSION

Scientific information about the ability of cryotherapy to soothe inflammation suggests that it could treat mental disorders associated with inflammation. Some preliminary studies in such fields as cryotherapy and mental health also support this assumption.

7. REDUCING THE SYMPTOMS OF ECZEMA

A chronic inflammatory skin disease known as eczema can cause severely itchy dry areas on the skin. In 2008, there was a small study of people with eczema who stopped using drugs and tried cryotherapy. Many of them showed a reduction in eczema symptoms, although some complained of frostbite on small areas of the skin.

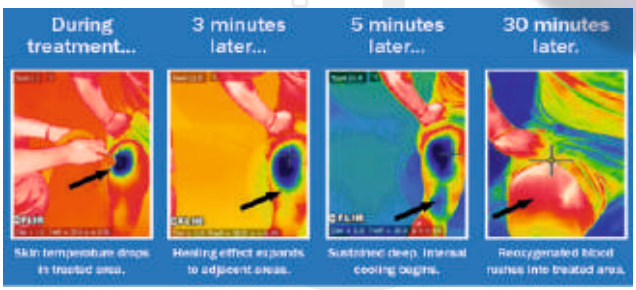
8. MIGRAINE TREATMENT

Cryotherapy against a headache carried out on the neck, can prevent migraines. In a 2013 study, scientists applied cryotherapy to the necks of people suffering from migraines. This treatment reduced their pain.

HOW DOES CRYOTHERAPY WORK?

Cryogenic medicine has been used for hundreds of years. The most common form is the use of ice baths to reduce muscle swelling and pain and to accelerate the healing of injuries. At ultralow temperatures, the skin thermoreceptors are stimulated by the strong energy of vapor. As the skin cools to the required temperature, the injury healing cycle is activated. Cryostimulation causes constriction of blood vessels, followed by rapid expansion, which has a natural analgesic effect on the patient and generates microcirculation in the affected area. NATURAL HEALING: Cryostimulation activates natural defenses of a body. Short-term exposure to ultra-low temperatures does not affect the temperature inside a body. The procedures are safe for the environment.





During the procedure...	In 3 minutes...	In 5 minutes...	In 30 minutes
Skin temperature drops in the affected area.	The healing effect extends to the adjacent areas.	Sustaining a deep inner cooling.	Oxygenated blood enters the affected area.

HOW DOES CRYOTHERAPY WORK?

ANESTHESIA: Cryostimulation has an analgesic effect on the body, so after the procedure, the pain is significantly reduced. Reducing the level of pain promotes natural movement. Increasing the strength and flexibility of joints and bones is the key to improving the metabolic process, as inflammation is delayed in the joints.
TIME SAVING: Unlike other "cooling" procedures, like the use of ice packs, where the patient has to remain motionless for a long time, cryotherapy procedures last up to 3 minutes. Cryostimulation shortens the healing period of the injury, so athletes can complete rehabilitation earlier and with fewer medications.
PLEASURE: Bathing in cold air vapors is much more comfortable than cold water methods since at ultra-low temperatures the vapors have almost zero moisture content. As a bonus, the cold triggers the production of endorphins called happiness hormones, which inspires follow-up visits.
New energy: the client feels a surge of energy and improved well-being after receiving the therapy sessions. That is why many well-known athletes recommend doing cryotherapy sessions before exercise to improve endurance and to gain additional energy for the body. -
PRODUCTION OF ADDITIONAL COLLAGEN: Collagen is a special protein that can be found in all tissues of our body. It is synthesized by fibroblasts, connective tissue cells and, like all proteins, consists of amino acids. This protein provides firmness and elasticity of cartilage, joints, bones and mucous membranes. Collagen is the basis of connective tissue and represents one-third of all proteins in the body and three-quarters of the lean body weight. Under the influence of some factors, it can be destroyed, with the possible occurrence of various diseases associated with the brittleness of joints and bones. With increased stress, as well as with age, the amount of collagen in the body decreases, which can lead to injuries and diseases. Therefore, to athletes, the elderly and those who complain of problems with joints, cartilage, and tendons it is recommended to conduct cryotherapy sessions as a supplement every day to increase the production of collagen in the body. We can get this protein with food, in addition, our body can produce it on its own, but most often this amount is not enough, and it is the reason why cryotherapy is a good way to increase the amount of collagen in the body
IMPROVEMENT OF BLOOD AND LYMPHATIC
CIRCULATION: skin receptors sense extreme temperature and trigger the natural process of increasing blood circulation and lymphatic outflow to heat the body and keep the body temperature normal. Extreme body functions, failing to be started at normal temperature and associated with vital functions, are activated, which leads to hardening and training of the body against negative influences.

WHAT IS CRYOSTAR CHAMBER AND WHAT DISTINGUISHES THEM FROM OTHERS?



You could probably find a lot of offers on the market for cryotherapy chambers. But what is the difference between CryoStar and others? In most cases, the cryosaunas offered by our competitors, developed on an outdated platform, released over 25 years ago and is still used by competitors with a small number of updates. Therefore, customers could meet a lot of similar cryosaunas in an old-fashioned cubic design. Some competitors tried to introduce new technologies into their equipment, such as thermal cameras, wi-fi and indirect nitrogen spraying in the middle of the cryosauna, which made their product unreasonably expensive. Vacuactivus developed a modern cryosauna with the latest functionality and acceptable price, capable of destroying the established monopoly of the old-fashioned cryochambers. In 2019, after extensive research and hard work of the best designers and technicians, we put on sale our most advanced CRYOSTAR cryosauna models Simple and Grand. In just a short time, CryoStar has become a bestseller in the world markets. Over the past few years, our company has produced more than half a thousand units of cryosaunas, which have been successfully installed and continue to operate smoothly in more than 50 countries. CryoStar is the latest model available on the market and has collected all the latest achievements in the cryotherapy industry. CryoStar has a modern futuristic design with an ergonomic exterior and functional interior. These models are superior to all competing ones due to their built-in technology.

THE MAIN ADVANTAGES OF CRYOSTAR CRYOCHAMBERS:

- The technology of indirect nitrogen spraying using platinum injection nozzles in the middle of the cryochamber, which helps to reduce the consumption of nitrogen to 3-5 liters per session and avoid injuries due to hypothermia or direct ingress of liquid nitrogen into the cryosauna. This innovative technology, developed by the leading specialists of our company, helps to achieve an even distribution of nitrogen inside the chamber and low-temperature retention for all parts of the body

THE MAIN ADVANTAGES OF CRYOSTAR CRYOCHAMBERS:

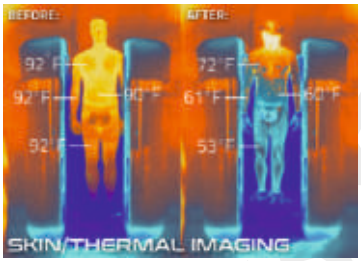
- Latest 10.1 " touch screens and updated menu with 3 automatic and 1 manual program
- Easy installation and use
- Automatic door opening with push button and remote control
- Thermovision technology and mounted oxygen level sensors (in the model CryoStar Grand)
- Does not require special service or maintenance, just put the container with nitrogen
- High-qulity parts manufactured in Europe, as well as the long service life of the equipment
- Simple and Grand models can satisfy the needs of any customer who is looking for the best price and the latest features
- Ability to choose the color of the custom-made equipment and add the customer's logo
- The latest design and new features. The combination of glass and plastic in a luxurious modern design
- Best customer and technical support worldwide



WHAT IS THE DIFFERENCE BETWEEN CRYOSTAR SIMPLE AND GRAND MODELS?

Functions	CryoStar Simple	CryoStar Grand
The technology of indirect injection of nitrogen and air mixture through a system of platinum nozzles	+	+
Automatic lift with a weight limit of 150 kg	+	+
Automatic door opening using the button on the door and remote control	+	+
Manual door opening	+	+
Software and menu	MedStarCom V1.11 PRO	MedStarCom V1.12 PRO
Main control display located on the door	10.1"/800Hz Kinco	10.1"/800Hz Kinco
Second display	7 " only shows the temperature in the cryochamber	10.1" touch screen video wi- fi
Thermal imaging camera and video playback on top display	-	+
Hose to connect the nitrogen tank included	-	+
Interior color	Black	Black, grey, blue, purple, red
Plastic exterior color	White or black	Any colors at the customer's choice
Exterior finish with glass elements of decoration and illumination	-	+
Wheels for transportation	+	+
Emergency stop button	+	+
Automatic door opening using button on door and remote control	+	+
Session counter and timer	+	+
Wi - Fi connection and synchronization	-	+
3 automatic and 1 manual program	+	+
Standard lift position control	+	+
Minimum temperature	-120C/-184F	-120C/-184F
Maximum temperature	-180C/294F	-180C/294F
LED illumination and remote control change of illumination	+	+
Precolling and Drying programs	+	+
Set of accessories (bathrobe, slippers and mit tens made of natural sheep wool)	-	+
Warranty and maint enance	1 year included, up to 3 years when choosing a special service plan, not limited after warranty service	1 year included, up to 3 years when choosing a special service plan, not limited after warranty service

WHAT IS THERMOVISION TECHNOLOGY?



Thermovision camera (thermal+ lat. vīsio "vision") is a device for monitoring the temperature distribution of the examined surface. The temperature distribution is shown on the display as a color picture, where different temperatures correspond to different colors. The study of thermal images is called thermography. All bodies whose temperature exceeds the temperature of absolute zero emit electromagnetic thermal rays under Planck's law. The spectral power density of the radiation (Planck's function) has a maximum, which wavelength on the wavelength scale depends on temperature. As a rule, modern thermal cameras are based on special matrix temperature sensors called bolometers. They represent a matrix of miniature thin-film thermistors. Infra-red lights, collected and focused on the matrix with a thermal camera lens, heats the elements of the matrix in accordance with the monitored object's temperature distribution that is displayed on the liquid crystal display as a color image, where the cool places are blue and the warm ones are yellow or red. Thermovisor technology built into cryotherapy chamber is very innovative, as it allows you to see how the body reacts to the temperature and blood circulation with increased regeneration in the areas of the body that are subjected to cryotherapy. CryoStar Grand model has a built-in thermal camera and video monitor which displays data obtained from the thermal imaging camera.

HOW MANY PROCEDURES ARE REQUIRED?

The number of procedures varies depending on the goals of the patient and the reaction of their body to treatment. The use of cryostimulation for muscle recovery is a daily auxiliary method that can be carried out in cycles of 10-20 sessions to achieve a full sustainable effect of treatment. Injuries vary in severity, so the number of procedures is hard to calculate in advance. The physiotherapist and the patient should assess when, in their opinion, the injury will fully recover. The number of sessions may vary depending on the severity of injuries and diseases and will be individual in each case. The patient may feel a full recovery after 3-4 sessions, but it would be more effective to carry out a cycle of 10-20 procedures to obtain the full effect of treatment. This will help prevent regularly recurring injuries and strengthen the impact zone. If the patient needs to get in shape as soon as possible, sessions can be held twice a day, but there should be 4-6 hours break between them. The reason why cryostimulation procedures are recommended every day or every other

day is the ability of cryostimulation to cause increased blood circulation lasting for several hours in the affected area. When carrying out procedures with small breaks between them, the patient experiences sustained increased blood circulation and a natural analgesic effect for a long time. This speeds up the healing and rehabilitation process, as well as making the treatment more effective than procedures carried out with long breaks.

COMBINING CRYOTHERAPY SESSIONS WITH OTHER THERAPIES, FITNESS EXERCISES OR TREATMENT

When cryostimulation is used in combination with physiotherapy or cryolipolysis, the patient should perform aftercare exercises, as strengthening and developing the flexibility of joints and bones is the key point of recovery. Post-treatment exercises involve a series of exercises or movements recommended by the physiotherapist and aimed at strengthening the joints and muscles of the affected area. Sometimes patients can feel great after the first few sessions, and then, a few days later, they suddenly feel pain again. This is a good sign that cryostimulation works effectively as joints and muscles were developed and moved more freely during the recovery process. After 6-7 days, these symptoms will completely go away. After cryolipolysis procedures, it is essential that the patient performs the prescribed exercises (the patient can take sportswear with him for the treatment). To enhance the effect of the treatment the patient should train afterwards. Cryostimulation in the CryoStar cryotherapy chamber promotes the release of a large amount of anti-inflammatory protein into the affected area, and exercises improve blood circulation, which helps to distribute them throughout the body. With a rapid heartbeat, blood circulation increases not only in the affected area but throughout the body,. Therefore, metabolic processes work more intensively, and microcirculation stimulated throughout the body creates energy deficiency. Post-treatment training can consist of a 20-minute jog or a series of exercises to increase the patient's heartbeat

CRYOTHERAPY PROCEDURE IN CRYOSTAR CRYOSAUNA

CryoStar cryotherapy chamber can reach temperatures up to -180'C equivalent -294'F. This temperature creates ideal conditions for maximum cryostimulation. Therefore, the operator can treat patients at this maximum temperature, allowing the patient's skin to cool to the desired temperature and obtain rapid results after receiving cryotherapy procedures. The patient feels relaxed and warm immediately after the procedure, as there is almost no moisture in the nitrogen vapor, which means that there is almost no penetration into the tissues. Also, when cryostimulation starts, the blood temperature in the affected area rises and

improves blood flow, causing a "rush" and a strong increase in microcirculation throughout the body. Cryotherapy is a completely painless procedure. Nitrogen vapors create a dry cold without moisture and instead of chills, the patient will feel a dry coolness on the skin and it will be very comfortable to carry cryotherapy procedures. Cryostimulation is shock therapy, so the patient may experience a slight "dull pain" due to the peculiarities of the blood vessels structure, which will pass immediately after the procedure. A minute after the session, heat will be felt in the affected area, as well as redness caused by microcirculation around the affected area. The procedure does not involve any tissue damage or period of disability.8 Nitrogen is used to cool the skin, which is absolutely safe. This is the same nitrogen that we breathe in with the air (78% of the air). The goal is to cryostimulate the region. It reduces the skin temperature to about 10-11C (50-55F). Whole-body cryotherapy can reduce unwanted pain and nervous irritation, sometimes it can lead to unusual sensations on the skin, such as numbness or tingling.



Cryotherapy can cause skin redness or irritation. The main contraindications for treatment are:

- Intolerance to cold
- Open wounds or ulcers
- Gangrenous lesions
- Hypothyroidism
- Skin or other cancers
- Other doctor's orders

HOW LONG DOES THE PROCEDURE TAKE?

Physical therapy sessions range from 1 to 3 minutes. The device has 3 automatic programs (120-160C) and 1 manual program (up to-170C). Sensitivity to cold depends on age, muscle mass, and physical fitness, so a trained cryotherapist can determine the time of the treatment. All patients are different in terms of desired results, physique and severity of the injury, so each course of treatment is individual.

WHAT ARE THE DIMENSIONS OF CRYOSTAR CRYOSAUNA?

The dimensions in the images are in centimeters Dimensions in inches: CryoStar Grand and Simple models are delivered as a fully assembled unit with the packing pallet dimensions: Length x Width x Height 200x120x220 cm / 79x51x86" inch Weight 450kg/ 990LB Available custom package, dismantled in 2 parts, pallets with dimensions: the first pallet 200 x 120 x 130 cm 225 kg and the second pallet 200 x 120 x 110 cm 225 kg



WHAT IS THE NITROGEN FLOW RATE AT CRYOSTAR?

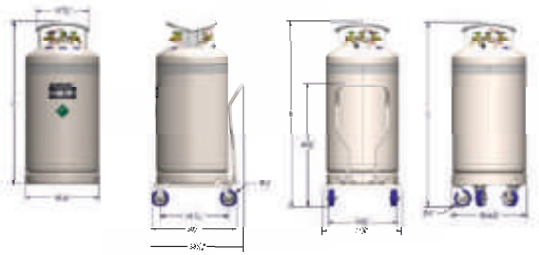
The flow rate of liquid nitrogen is 1-1. 5 l* per minute, or 3-5 l* for a three-minute session (*may vary at elevated temperatures or humidity in the room, improper pressure in the nitrogen tank and depending on the quality of nitrogen)

HOW TO CONNECT CRYOSTAR TO THE TANK WITH NITROGEN?

The CryoStar is connected to the nitrogen tank with a special nitrogen hose. The capacity of the nitrogen tank is from 160 to 5000 liters. The most popular and common volume is 230- 240 liter capacity (Dewar flask). The nitrogen hose and nitrogen storage tank must be provided by the cryosauna manufacturer or rented from a local nitrogen supplier.

WHAT IS THE VOLUME AND PRESSURE OF THE NITROGEN TANK?

The working pressure inside the tank should be 28-35psi (equivalent to 1.8 Bar or 0.15 kPa to 3 Bar), the discharge valve 35 psi (equivalent to 2.2 Bar or 0.22 kPa). The CryoStar requires to operate at a pressure between 28 and 35 psi and with the same value for the discharge valve mounted on the tank. Any pressure that is lower or higher than the recommended pressure range should cause the machine to malfunction or excessive nitrogen consumption. In our Vacuactivus company, you can also purchase nitrogen storage tanks or get advice on how to rent them from a local nitrogen supplier.



EVAPORATION RATE IN DEWAR FLASK



Liquid nitrogen evaporates in a volume approximately equal to 5-35 liters per week, depending on the serviceability of the discharge valve. The following actions may increase evaporation:

- broken or faulty discharge valve. Please contact your nitrogen supplier in case of increased nitrogen evaporation
- It is forbidden to shake the tank
- Elevated indoor temperature or overheating of the nitrogen tank. Do not place the nitrogen tank near heating elements or air conditioning.

WHERE TO BUY LIQUID NITROGEN?

Vacuactivus cooperates with many nitrogen suppliers around the world. Upon customer request, our company can recommend several available local nitrogen suppliers who could provide nitrogen delivery to your business.

Prices for cryostimulation treatment depend on location, reputation and whether, for example, physiotherapy treatment is supplemented. One cryotherapy session in the cryotherapy chamber costs an average of 50 to 120 USD / EUR depending on the region. The average price for a course of 20 sessions can vary from 700 to 1200 USD / EUR

CALCULATION OF PROFIT FROM THE USE OF CRYOTHERAPY CHAMBER

Expected monthly sales

	New companies	Established companies more than 3-5 years on the market
Number of clients per day (people)	5	15
Number of clients per month (people)	150	450
Average cost of a procedure (USD/EUR)	65	50
Total income for the month (USD/EUR)	9750	22500

The cost of equipment CryoStar Simple and Grand models

Model	US market 110V	European market 220V
CryoStar Simple	29 999 $	29 999 €
CryoStar Grand	33 999 $	33 999 €

THE PAYBACK CALCULATION OF THE CRYOSAUNA

USD / EUR per month	New companies	Established companies more than 3-5 years on the market
Gross sales	9750	22500
Liquid nitrogen costs	800	2400
Other expenses, including electricity, etc.	100	400
Room rent of 10 sqm/100 sq ft	1000	2500
Salary costs	1000	4000
Total expected expenses	2900	9300
Estimated profit	6850	13200
Budget for the purchase of cryosauna	35000	45000
Calculation period of return on investment	5 months	3,5 months

Technical and service support is available worldwide. Our company has technicians who can carry out installation and maintenance for all international customers anywhere in the world.

Warranty period is 1 year	FREE
Extended warranty up to 3 years	Choose a plan from $ 159 per month
Service call charge (at the end of warranty support)	From $ 250 + technician's travel expenses + replacement parts
Customer's installation costs	FREE video installation support
Installation expenses of the manufacturer's technicians	Basic installation - 750 USD/EUR, the mid-level installation - 1500 USD/EUR, the highest level installation - 2500 USD/EUR + technician's travel expenses + parts for installation

IS TRAINING INCLUDED AND HOW MUCH DOES THE CERTIFICATE COST?



Yes, Vacuactivus representatives will provide training on the operation and maintenance of equipment. Such training is free of charge in the remote video conference system. Also, the owner of the equipment can order a specialist visit and be trained personally by the specialist in the owner's facilities. In this case, the owner of the equipment shall reimburse the instructor's travel expenses to the destination. Safety training should be carried by a local nitrogen supplier for free or you can check this opportunity with Vacuactivus representative. After training, the employee is issued with the certificate that costs 25 USD/EUR for the electronic version and 199 USD/EUR for the printed on the aluminum surface in a wooden frame that can be hung on the wall.

CAN I IMPORT A CRYOTHERAPY CHAMBER FROM ABROAD? ARE FDA APPROVALS OR ANY OTHER MEDICAL APPROVALS REQUIRED FROM LOCAL GOVERNMENT HEALTH AUTHORITIES?

A cryotherapy chamber is not medical equipment and related to physical rehabilitation and wellness, so the FDA or any other medical permits from public health authorities are not required to import such equipment from abroad. Please contact our international sales department by e-mail vacuactivus@gmail.com and our experienced sales representatives will provide more detailed information about importing and shipping to the destination.

WHAT ADDITIONAL TAXES AND FEES ARE APPLIED?

For international customers, no additional taxes are charged by the seller on the export value. Each individual country may impose local charges and taxes on equipment imports and this information should be checked with the local customs broker. For more information, you can contact our sales specialists by sending a request on email vacuactivus@gmail.com.

LEASING AND FINANCE OPTIONS

Our partner finance companies can offer leasing and finance options for our products (available only for US and UK customers). For other countries only purchase is available. Loans can have different terms from 12 to 36 months with a possible discounted interest rate. Any lease or financial proposal is subject to approval by the Lender and depends on the Borrower's financial records. Please contact the sales department vacuactivus@gmail.com to find out more information about the lease/finance.

RISK ASSESSMENT GUIDELINES

Vacuactivus, as a manufacturer of cryotherapy equipment, works side by side with local nitrogen suppliers to provide our customers with the best possible support in terms of nitrogen supply as well as health and safety. We will contact your local nitrogen safety specialist so that you can arrange for a safety assessment of nitrogen storage at your premises.

REQUIREMENTS FOR VENTILATION AND OTHER REQUIREMENTS FOR SAFE USE

A room with a cryotherapy chamber shall be equipped with an appropriate ventilation system. Ventilation should be sufficient to maintain oxygen at 19-19.5% (normal oxygen concentration in the atmosphere). If the size of the room is not enough to store nitrogen, ventilation is required so that the airflow can leave the building. This may mean that the vents must be installed at the bottom of the treatment room door or fans must be set there. If the treatment room has windows that open at or below waist level, this may also be sufficient. All nitrogen storage tanks (so-called cryo cylinders or Dewar vessels) undergo gas evaporation as a result of heat exposure from the atmosphere. Typically, 1% to 2% of the liquid is converted to gas in 24 hours. When pressurized nitrogen storage tanks are used, gas evaporated into the atmosphere through an exhaust valve mounted on the tank is not hazardous in a well-ventilated area. Alarm system To improve safety, it is recommended that all CryoStar operators have an oxygen meter (oxygen level sensor in the air) with an alarm. The alarm will monitor the oxygen level in the treatment

room, ensuring safety there. The estimated cost of a common oxygen meter (sensor level of oxygen in the air) can be 299-700 USD/EUR depending on a model and can be ordered from Vacuactivus or from a local nitrogen supplier. CryoStar Grand model has a built-in oxygen sensor, which is located near the upper display. Choosing this model will help you save money on buying additional accessories. Access to nitrogen storage tanks Nitrogen storage tanks should be located next to the cryosauna. The recommended location is near a vent or window. Avoid heating elements within a radius of 3 meters (10'). Nitrogen tanks must be filled outdoors or delivered by authorized personnel of the nitrogen supplier. Vacuactivus strongly recommends that you follow the installation guide, safety instructions, and liquid nitrogen usage requirements (contact our sales department for more information). CryoStar cryotherapy chamber has a 4"(100 mm) ventilation hood that must be connected to a separate or existing ventilation line in the room. The cryosauna has a built-in active fan that pushes nitrogen residues out of the chamber after the procedure. If the customer installs a separate ventilation line 100mm (4 inches), the manufacturer recommends installing an additional active fan, which will absorb the nitrogen residues from the ventilation outlet of the cryosauna and blow it through the ventilation system to the street.

Additional precautions The manufacturer requires to wear special gloves when disconnecting the hose from the tank with nitrogen. Do not touch extremely cold surfaces. Do not inhale nitrogen vapors, the client's head should not be immersed in cold vapors during cryotherapy. Do you need special clothing and accessories for the client during cryotherapy? Before the cryotherapy session, the client should remove all metal objects that touch their body, as at extremely low temperatures the metal can burn the skin. Cryotherapy session should take place at maximum temperature access to the exposed skin, the manufacturer recommends wearing swimming trunks for men and swimwear for women. Also, use protective gloves and shoes made of natural sheep wool and wear a bathrobe after the cryotherapy procedure. You can buy these accessories for cryotherapy sessions in our sales department. In the CryoStar Grand model, accessories such as a robe, mittens and a pair of shoes are included.

THE MINIMUM SIZE OF THE ROOM TO ACCOMMODATE THE CRYOCHAMBER

To accommodate CryoStar cryotherapy chamber manufacturer recommends a room of 9 sq m 100 sq. ft with ventilation and alarm sensor of oxygen level in the room.

ABOUT VACUACTIVUS

VACUACTIVUS is a leading global manufacturer and marketer of cryosaunas and portable machines for local cryotherapy. Our team of professionals helped equip many successful commercial facilities around the world, including cryotherapy and medical facilities, hospitals, beauty salons, luxury spas, recovery centers, rehabilitation clinics, gyms, and hotels. VACUACTIVUS is an innovative recovery solution using cryogenic equipment freezing. We implemented in our equipment the science of using low-temperature gases for treatment for protection and longevity of the human body and its environment. VACUACTIVUS focuses on the implementation of solutions for cryo recovery, which will allow you to achieve success in health, sport and beauty industry. VACUACTIVUS is a company of professionals who design and manufacture devices for daily use in hospitals, clinics, private medical, SPA and aesthetic centers around the world. VACUACTIVUS offers the latest models of cryotherapy equipment of excellent quality for an affordable price, which reduces the return on investment and increases the profitability of your business.



VACUACTIVUS MEDSTARCOM | World Leading Manufacturer

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