

Editor`s note



Dear friends, welcome to the pages of the seventh issue of The Aqua Space magazine!

This diverse and springthemed issue is dedicated to World Water Day, celebrated on March 22.

Ironically, the first time we prepared an issue on this topic was 25 months ago when our home was engulfed in fullscale war. That issue never saw the light of day.

Today, we will be discussing water and its safety. The slogan of this issue — «Clean water matters» — best describes the problems that Ukrainian society has faced.

For us, clean water is not just about sanitation standards but also about protecting the water spaces surrounding our country. About the Azov and Black Seas, where there is no place for the Russian fleet with its warheads.

Of course, the focus of the magazine remains on pools. In this issue, we have gathered facts that disturb and impress, as well as stories that amaze and inspire. We've delved into the season's trends, the most desired items for every pool owner, discussed rehabilitation, and the year's main events.

Moreover, we have prepared a comprehensive material dedicated to ecological solutions in the pool industry. It's a must-have for everyone: from those who are only planning to build, to those who have long been established. We've presented modern steel solutions for each stage: from design to maintenance. You can choose the best option for yourself and be ecological in a way that suits your financial and time constraints.

We hope you are ready to dive headfirst into the next 19 pages. Wishing you clear skies, clean water, and a successful season.

Happy reading!

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front – the ecological one. ecological methods in production.

When it comes to pools, this industry is not lagging behind. We have already written several times about sustainable water purification methods and controlled water usage. Today, we want to summarize and discuss all possible ways to make your pool environmentally friendly in 2024. If needed, you can treat this article as a checklist.

Here, in general, we will only discuss the high-tech pools and bio-pools.

Pools

water purification technologies aimed environmental conservation. Innovations in this category focus on reducing chemical usage, minimizing waste, and lowering energy consumption.



While Ukrainians jest about the terms «economic and cultural front,» the Western community has long been focused on another

Conservation of resources and slowing the pace of global warming have become an international trend deserving respect. Consequently, more and more industries are striving to implement sustainable and

Stage 1: Planning Phase. What pools are considered ecological?

Bio-Pools or Natural Pools

Natural pools aim to choice between two types of pools harmoniously combine technology and nature. They mimic natural ecosystems and rely on biological High-Tech Water Purification filters, aquatic plants, and careful organism balance to maintain This involves the use of advanced water quality without resorting to aggressive chemicals.



Stage 2: Design Phase. How to minimize negative impact?

Rainwater Harvesting

Already in the design phase, you can incorporate

sustainable equipment into the plan. For example:

Natural Filtration Systems

Consider integrating natural filtration systems such as aquatic plants and biofilters into the pool project.

Energy-Efficient Pumps and Lighting

Use energy-efficient pumps, such as inverter pumps, which adjust power based on demand and are equipped with automatic timers to save electricity significantly. Also, opt for LED lighting. Implement a rainwater collection and storage system for use in the pool. We have discussed all the nuances of using rainwater in the previous issue of The Aqua Space magazine.

Steel Heating Systems

Utilize efficient heat pumps for heating, which extract heat from the surrounding environment, or switch to solar heaters and collectors, which are renewable and economically efficient alternatives to traditional heaters.

These methods will not only help conserve energy and natural resources but also, in the future, prove to be financially beneficial. water, releasing oxygen. This is a gentle but less effective approach to water disinfection and is not suitable for use in public pools.

Ozone

Ozone treatment is used to make water potable by destroying harmful microorganisms without forming byproducts. This environmentally friendly method ensures water safety without harming the environment, but it's important to ensure that no trace of disinfectant enters the pool water.

Neolysis

A new method that combines salt electrolysis technology with ultraviolet radiation. This innovation maximizes the benefits of two proven methods. There are also advanced systems with CO2 injection into the water, allowing for pH level

Choosing a Filtration System. What innovations are available on the market?

Stage 3:

Salt Chlorinators

Thischemical water purification process eliminates the need for storing toxic products and does not create harmful byproducts. Salt chlorinators are a safer and environmentally cleaner alternative to traditional chlorine treatments.

Ultraviolet (UV)

The use of ultraviolet radiation directly affects the DNA of microorganisms, halting their development. This method reduces chemical consumption by an impressive 80-90%, but it is subject to restrictions on usage in some countries.

Active Oxygen

It does not negatively affect the skin or mucous membranes and consists of a natural molecule that dissolves in

Enterprises, especially in the hospitality sector, often utilize sustainability to attract the attention of socially conscious consumers. This trend is reinforced by the influence of social media, where a positive image of ecofriendly pools contributes to increased public perception and market competitiveness. As a result, environmental friendliness has evolved into something more than just a trendy term, and now it shapes the design, operation, and perception of pools worldwide.

When selecting sustainable methods listed above, we strongly recommend consulting specialized professionals. Only they can correctly choose filtration and purification methods that meet the requirements and ensure water purity, based on the size and type of your pool.

adjustment and significantly reducing water consumption.

pH Reduction

Acids are used for this purpose, but a more ecological and economical option is to use tanks and special dosers to saturate the pool water with CO2. Under minimal pressure, CO2 in the water converts to carbonic acid, effectively lowering the pH of the water.



Stage 4: Pool Maintenance. What methods are sustainable?

Chemical-Free Water Treatment Alternatives

Choose one of the sustainable purification methods listed above to minimize chemical usage in the pool.

Natural Cleaning Agents

Give preference to biodegradable and environmentally friendly agents rather than those with a chemical composition. They are available and help maintain water quality without harming the environment.

Regular Technical Maintenance Practice

Adopt a proactive approach to pool maintenance by promptly addressing leaks and ensuring proper filtration. Regular technical maintenance not only extends the lifespan of your pool but also reduces the need for significant repairs and chemical usage, minimizing waste.

Here's to clean water and happy swimming!



AMMO UKRAINE PRESENTS

MULTIFUNCTIONAL MILITARY BOATS

AMMO Ukraine presents innovative multifunctional unmanned boats distinguished by high quality and versatility. Made of high-density polyethylene (HDPE), these boats are becoming indispensable assistants in performing various tasks on water, from cargo delivery to conducting combat operations.

Material— HDPE

HDPE is a material that combines strength, flexibility, and impact resistance. Additionally, it is corrosion-resistant and inert to magnetic fields, making it an ideal choice for boat construction.

Usage

Multifunctional boats serve multiple purposes. They can be used for:

- Combat operations: equipped with heavy machine guns and remote control, they provide fire support without crew on board.
- **Rescue operations:** they allow for efficient evacuation of the wounded and rescue operations in hard-to-reach places.
- Reconnaissance and demining: they can be used for reconnaissance and demining in areas inaccessible to other types of equipment.
- **Cargo delivery:** boats are capable of transporting large volumes of cargo over long distances.

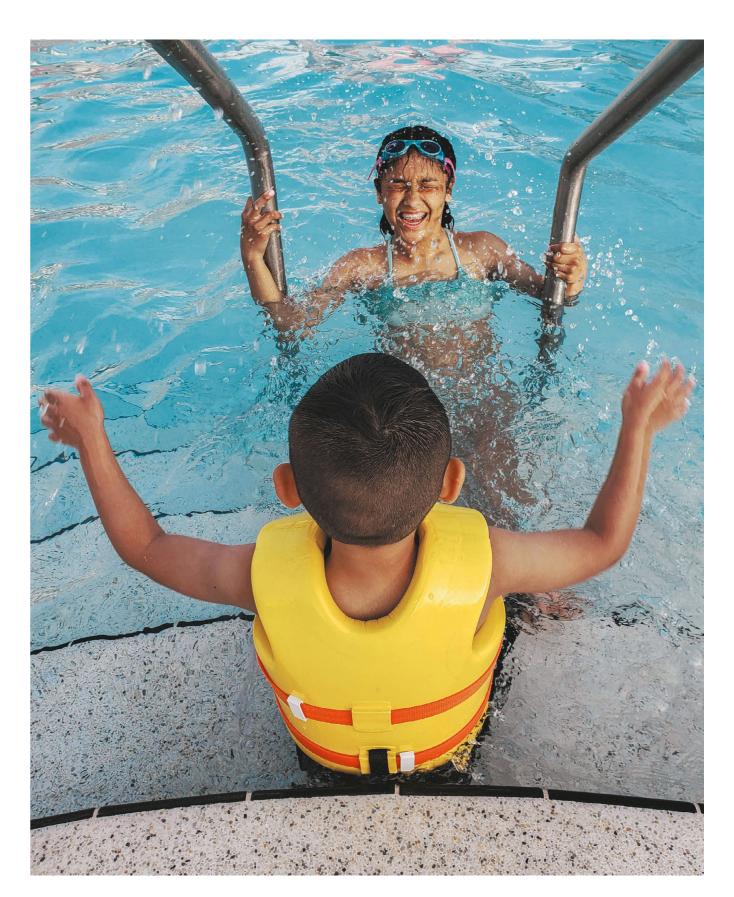
Characteristics

The dimensions and sizes of the boats vary from 3 to 12 meters in length and from 1 to 4 meters in width. Additionally, they are equipped with one or two engines of different power, and there are also modifications with machine guns and water jets on board.

One of the main advantages of boats from AMMO Ukraine is their versatility. They can operate in any bodies of water: on the sea, rivers, lakes, etc. Moreover, fast production and the ability to modify them allow their use in a variety of conditions and for solving various tasks.







NEW SEASON: The most desired accessories for the pool

Another hot season is approaching, which means only one thing: it's time to prepare your lounge area and pool for opening! We have prepared for you a list of the most desired purchases for every homeowner that will help make the space modern, comfortable, and aesthetically pleasing in 2024.



01. MODERN CHAISE LOUNGE

This is the most essential accessory for every pool owner who values comfort and style. Choose models that are resistant to moisture and UV rays, allowing you to adjust the backrest position and accentuate the style of your pool. Choose from dozens of modern models and enjoy flawless comfort with every moment of relaxation!

02. SUN UMBRELLA

A reliable and modern umbrella is the key to a healthy and comfortable poolside relaxation. Umbrellas with high-quality UV filters protect from harmful sun rays. Available in a variety of designs and colors, umbrellas help create a cozy atmosphere. Choose foldable models for convenience and mobility. Ensure shade and sun protection by choosing an umbrella that perfectly complements the style of your pool.

03. PATIO DAYBED WITH CANOPY

A daybed with a canopy will be a true luxury relaxation accessory! There are many models on the market with high-quality waterproof mattresses, sturdy construction, and UV-resistant canopies. Pay attention to the adjustable backrest and builtin drink holders. Enjoy summer days in a cozy and stylish environment by choosing a daybed with a canopy that suits your taste and needs!

04. POOL GAMES

A volleyball, basketball, or tennis set for the pool will make your poolside relaxation even more exciting! It's a great way to stay in shape and create unforgettable memories with family and friends. Equip your pool with a set of active games and enjoy bright summer days filled with energy and fun competitions.

05. SWIM RING OR FLOAT

One of the most desired accessories for any pool owner! They not only ensure safety but also add variety to water relaxation. Choose models made of sturdy materials that provide comfortable swimming. Today, there are many models on the market for both children and adults, so you'll definitely find an option to your liking.

06. FLOATING DRINK AND SNACK HOLDER

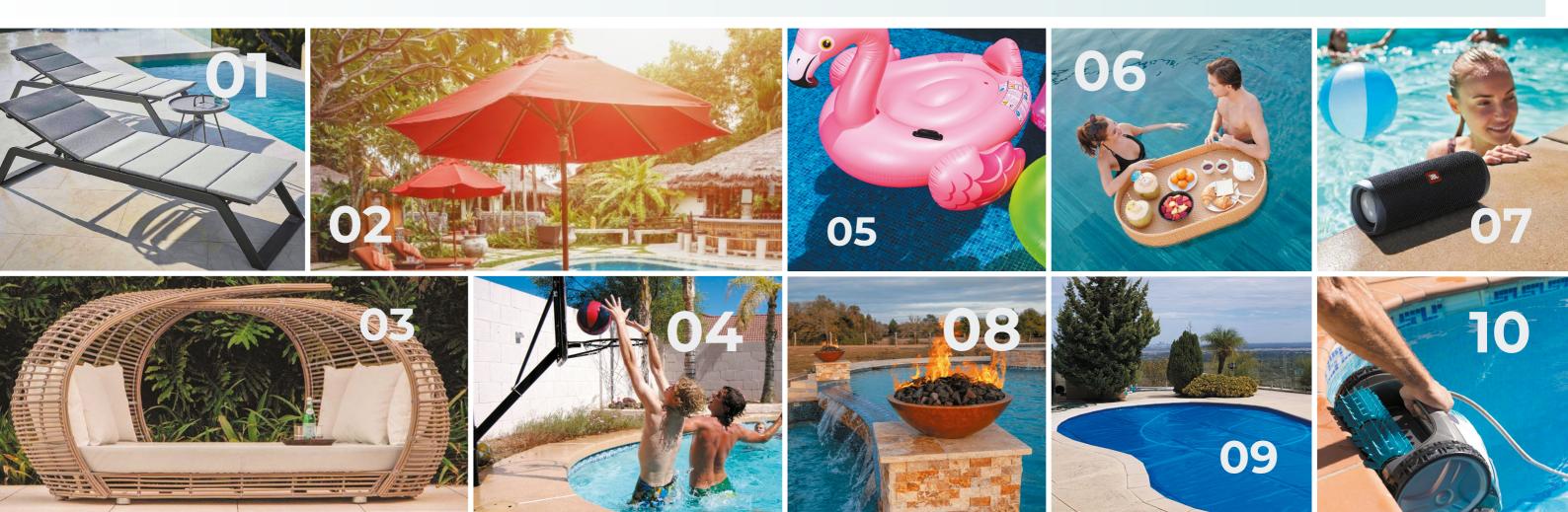
Forget about the need to leave the pool to refresh your drink – this stylish accessory will provide your comfort. Moreover, you can enjoy your favorite beverage right in the water without losing a sense of luxury. Choose a floating holder made of sturdy materials with a cup holder to prevent spills. By the way, there are already models on the market with a built-in portable cooling chamber. Such an accessory will add charm to your pool, providing an elegant way to enjoy the water.

07. WATERPROOF SPEAKER

A poolside speaker is a perfect purchase for a homeowner who can't imagine life without guests and parties. Enjoy your favorite music right in the pool, thanks to powerful waterproof speakers. Choose a model with wireless connectivity and long battery life. Select a speaker that matches your stylistic preferences and ensure comfort at every moment by the pool.

08. FIRE PIT BOWL

A fire pit bowl is a wonderful accessory that creates an atmosphere of warmth and luxury. The fire pit adds a unique charm to evenings by the water, creating an unmatched atmosphere. Choose a bowl made of waterproof materials that withstand external conditions. Choose a design that matches your style and make poolside evenings unforgettable.



09. PROTECTIVE COVER

Don't worry about the cleanliness and transparency of the water before the next swim, as the cover will provide protection from leaf litter, dust, and other debris. The optimal choice of cover depends on the size of the pool and climatic conditions. Models with sturdy materials and watertight fasteners guarantee durability and effective protection. By choosing the appropriate protective cover, you'll maintain water cleanliness and extend the service life of your pool.

10. POOL VACUUM ROBOT

At the end of the list, we have the most essential item for every pool owner – the pool vacuum robot. Modern models efficiently clean the bottom and walls of the pool from dirt, saving time and effort. By choosing a model with programmed modes and high-density filters, you ensure cleanliness and transparency of the water. The optimal choice of a pool vacuum robot depends on the size of the pool and personal needs, but with the right model, you won't have to worry about the cleanliness of your pool.

Exhibition **BASSEYN POOL & SPA**



From February 14th to 16th, the BASSEYN POOL & SPA exhibition took place in Kyiv, impressing with its scale and depth of discussions.

This year, the event became not only a platform for showcasing the latest developments in the field of pools, water parks, saunas, and spas but also an important step towards creating inclusive environments and promoting water rehabilitation for veterans and people with disabilities.

Over the course of three days, the exhibition was visited by over 5,500 unique visitors, including representatives of businesses, activists, public figures, and medical professionals. 125 companies presented their products and services, attracting the attention not only residents of the Kyiv region but also guests from other parts of Ukraine.

Among the main topics of the exhibition were inclusive spaces and water rehabilitation. Special attention was drawn to the conference on «Modernizing Medical and Rehabilitation Facilities.» Representatives of the medical field, architects, and designers discussed the possibilities of creating inclusive environments in pools, promoting physical activity and water rehabilitation for all population groups, especially people with disabilities. They shared experiences and best practices to create spaces accessible to everyone.

It is also worth mentioning the forumworkshop «Reconstruction in Action,» where affected communities shared their experiences and successful cases of region restoration. During this event, the reconstruction of communities affected by Russian aggression was discussed.

However, this year we tried a completely new but very important topic – water rehabilitation. At the conference «Modernization of Medical Facilities,» we thoroughly discussed the requirements for rehabilitation centers, the possibilities of infection control, proper water purification, and also saw the results of water rehabilitation at the Super Humans center.

The aim of this section was to create inclusive environments in pools, promoting physical activity and water rehabilitation for all population groups, including people with disabilities,» commented Maria Serbina, head of the sales department of the Basseyn Pool & SPA exhibition.

This exhibition serves as a great example of how business opportunities can align with modern challenges and support various professional groups. It not only showcased advanced technologies and achievements in the field of pools and spas but also opened the doors to a more inclusive and compassionate world.

Participants exchanged ideas and practical solutions aimed at rebuilding and developing communities.

Overall, visitors highly appreciated this year's exhibition and its representatives, with most participants confirming their participation for the next year.

«BasseynPool&SPA took place for the first time after a full-scale invasion because we see demand from participants and visitors alike. The reality is that the leisure industry is rapidly evolving, and customers want the opportunity to recharge. Therefore, participants who composed the pool exhibition this year achieved significant results and made agreements with hotel managers and owners of country complexes.



- **BACK TO LIFE:** the role of rehabilitation pools
 - One of the proven effective methods of rehabilitation is aquatic procedures. They aim to alleviate pain, improve mobility, and enhance mental well-being.
 - Aquatic procedures help alleviate pain associated with injuries or illnesses.
 - Water exercises allow for the restoration of mobility and muscle strength, which is crucial for soldiers with injuries or limited mobility.
 - Swimming and other activities in water promote relaxation, reduce stress, and improve mood, which is especially important for veterans suffering from post-traumatic stress disorder (PTSD).
 - Rehabilitation pools often create a conducive environment for communication and support among military personnel, helping them feel part of a community and receive support from peers.
 - Rehabilitation pools can provide veterans with skills to manage physical limitations and prepare them for returning to everyday or sporting activities.

Aquatic procedures and exercises are conducted in specially equipped pools under the supervision of qualified specialists. However, many pools located at rehabilitation centers or potentially suitable for this purpose remain non-functional. This happens for several reasons: Financial difficulties: insufficient financial resources to support pool infrastructure, including maintenance, ser-

lex administrative processes required to obtain permits and

inclusive facilities, equipment

3. Technical issues: lack of

vicing, and repairs. 2. Bureaucratic obstacles: comp-

licenses.

War leaves a profound impact on the physical and mental health of our soldiers. Every day, hospitals and rehabilitation centers apply the best global practices to facilitate and accelerate the rehabilitation of veterans. However, sometimes financial and bureaucratic challenges hinder this process.

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Currently, we are reaching out to the management of companies working in the field of water recreation, pool construction, design, installation, and technical maintenance.

You can make a significant contribution to Ukraine's victory, and be assured that your assistance will reach the recipient and carry weight. We not only ask but urge you to take care of at least one rehabilitation pool within your competence and geographic availability.

Each of these pools plays a critical role in supporting and restoring the health of soldiers who have been injured in the struggle for our well-being and security.

We urge you to take responsibility for these important facilities and contribute to their restoration and functioning. Your contribution can help veterans access the necessary rehabilitation support to help them return to active life and support their physical and mental well-being.

May this act of charity bring great benefit to those who sacrifice their health for us every day. Let's make the world a better place for our military personnel and veterans together!

Where is the oldest pool in the world located? How did the first hydromassage bath originate? It's so strange: we've been working in this field for years, but we can hardly answer the simplest questions. Let's correct this and deepen our knowledge, as we have prepared 15 facts that will definitely

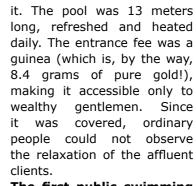
surprise

you!

From ancient baths to modern pools

- The first pool is considered to be the «Great Bath» in Mohenjo-Daro, surrounded by a colonnaded veranda and rooms. It was built in the southeastern part of Pakistan around the 3rd millennium BCE. The structure's walls were made of brick and coated with tar. The pool's dimensions were 12 by 7 meters.
- The true flourishing of pools occurred during 100-300 AD in the Roman Empire. It was then that covered baths, known as **«thermae» or** Roman baths, replaced seasonal outdoor water bodies for the first time. Some of the most famous were the Baths of Caracalla, one of Rome's main wonders.
- It is commonly believed that infinity pools (pools without borders) are a relatively new invention. However, this is not the case. In the early 1400s, the Stag Fountain was built at the Palace of Versailles, which has a similar construction.
- The first covered swimming pool appeared in 1742 in London. Only men could use





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- including to everyone.
- pool builders today.
- **Olympics in Paris.**
- American Michaels engineer

long, refreshed and heated daily. The entrance fee was a guinea (which is, by the way, 8.4 grams of pure gold!), making it accessible only to wealthy gentlemen. Since it was covered, ordinary people could not observe the relaxation of the affluent

The first public swimming

pool was built in 1877 in the German city of Bremen. It laid the foundations for pool design, waterproofing, heating, ventilation, and water purification systems. Initially, swimming was primarily taught to officers of military schools and cadet corps, as well as wealthy gentlemen, but now it has become accessible

The first structure most resembling modern pools was the Goseriede Bathing and Swimming Complex in Hanover. Its construction began in the 1890s and was completed in 1905. The general principles of its arrangement are still used by

 Swimming pools were first included in the program of the 1900 Summer

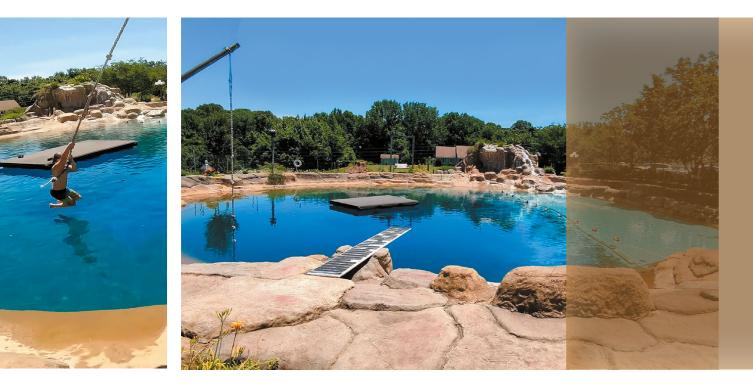
The first cruise ship with **a pool** was the transatlantic liner Adriatic, built in 1907. The ill-fated Titanic (1912) also had an artificial pool.

The first hydro massage bath was created by an named John in 1968. The developed а special nozzle that releases a powerful stream of water and air, creating a massage effect. The first hydro massage bath was named «Jacuzzi,» which became

a popular brand for hydro massage systems.

- Before the use of chlorine, ٠ water disinfection in pools was done using solar radiation and rock salt, but they were less effective compared to modern methods.
- You won't find conventional pools in space, but the International Space Station (ISS) has a **special** swimming training simulator so astronauts can practice in zero gravity.
- The world's longest pool is located in the Mexican resort of Algarrobo. Its length exceeds one kilometer, making it the longest commercial pool on the planet.
- The world's largest swimming pool is located in Egypt, at the Citystars Sharm El Sheikh hotel. It covers over 120,000 square meters and is listed in the Guinness Book of Records. It takes 21 days to fill it.
- The deepest swimming • pool, Deep Dive Dubai, opened in July 2021 in Dubai. Its depth is 60.02 meters. The Guinness World Records recognized it as the deepest pool for underwater diving.
- Bonus: In Switzerland, in the town of Uitikon, the water in the local pool is heated by a data processing center (DPC) built in 2008. This is done using the heat dissipated by the DPC's servers and is an excellent example of using thermal energy.

Wonderful Pools of the World



THORTON'S WONDER: the spectacular backyard pool

In the peaceful town of Covington, near Memphis, Mickey Thornton created one of the largest DIY pools in the world right in his backyard.

It all started in 1992, with a plan to turn Mickey's childhood dream into reality. He decided to build a family pool that would resemble more a natural pond than a typical pool. With gradual construction and attention to every detail, the pool turned into a real water oasis with a volume of 1900 cubic meters!

Everything about this project was grand. To bring the dream to life, Thornton needed 30 years, 293 meters of shotcrete, and 18 tons of steel reinforcement. Mickey's wife, Jane, also contributed, influencing the location of the pool. She expressed a desire for the water feature not to confine their home but, on the contrary, to provide a sense of openness and space.

So the pool ended up on a slope of a former pasture, and Mickey Thornton had to demonstrate remarkable engineering skills to get everything right. Eventually, the water feature covered an area of 840 square meters with a depth of 6 meters in the center of the pond! But the man didn't limit himself to just colossal dimensions. He developed his own filtration and pumping system to maintain water purity and efficient pool operation. It's not just technical engineering—it's a testament to determination, creativity, and deep love for his craft.

Among other notable features are a cascading waterfall and a huge rope swing cleverly attached directly to a telephone pole.

Mickey Thornton and his wife Jane not only maintain this unique water oasis over the years but also host various events there.

To share their wonderful creation, the family opened the pool to visitors for fixed donations. Eventually, it transformed into a public space where football teams, birthdays, weddings, and even Japan's baseball team gather.

The Thornton's story is one of determination, creativity, and deep love for the water element. Mickey says, «My 1900 cubic meters backyard pool is the coolest thing I've ever created in my life.»





30 DAYS OF ICE BATHS

Ice baths are a popular recovery method among athletes. They involve immersing oneself in a tub filled with cold water, typically with ice or ice packs. This method sparks a lot of debate in society, so let's take a closer look at it.

What do science and medicine say about it?

Cold water helps reduce body temperature. This, in turn, triggers several physiological reactions that help reduce inflammation and muscle pain, speeding up recovery time. Cold water causes blood vessels to constrict and sends more blood to the heart, helping reduce swelling and flush out accumulated lactic acid from the muscles.

In practice?

Rob Carlin, Managing Director of Superior Wellness, recently participated in a 30-day study to assess the benefits of using ice baths in his daily routine. This was reported by the British magazine Swimming Pool News.

Together with Dr. Imran Khan, founder of TransformNow, they conducted a deep analysis of Rob's body before and after the study, including:

- Inflammation levels: C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), and interleukin-6 (IL-6)
- Testosterone levels: Total testosterone test and free testosterone test
- Additional markers: cortisol level, complete blood count (CBC), blood urea nitrogen (BUN), and creatinine, liver function tests, and lipid profile
- Subjective markers: energy level, sleep quality, and mood
- Body fat percentage
- Exhalation lung volume test

Analyzing the results after 30 days, Dr. Khan confirmed the following: «All markers improved by a few percent. The study showed that inflammation decreased from 9.06 to 7.06 mg/L, a 22% reduction. Rob's cortisol level also decreased by 24.9% from 533 to 400 nmol/L, while his testosterone level increased by 16% from 12.20 to 14.20 nmol/L.

Rob had an advantage as he was in excellent physical shape and trained daily. Thus, the results showed only a slight change. If the study had been conducted with a person of a different body stature, the results could have been very different.

Overall, it can be noted that daily use of ice baths may lead to some improvements in the body. Due to the short duration of the study, it cannot be said conclusively, but it is certainly a very good indicator.

Rob says about the experiment: «I really enjoyed it. The first few days were tough, but once I got used to it, I was looking forward to using the ice bath. I noticed a significant difference in my energy levels, and it certainly helped me recover after workouts. I will continue.»

Although ice baths are an effective way to recover from strenuous activity, there are categories of people who should avoid them.

Firstly, people with cardiovascular diseases, as cold baths actively affect blood vessels and can worsen the condition. Secondly, people with type 1 and type 2 diabetes, as it is proven that they have difficulty coping with extremely low temperatures.

Even if you are in excellent physical shape, we emphasize the need to consult a doctor before taking an ice bath. If you decide you're ready to try it, follow all instructions and safety measures.

We wish you good health!



25 - 28January

LES THERMALIES PARIS 2024

31 - 2Jan/Feb

CBS 2024

14 - 16February

FORUM PISCINE

Italy, Bologna

19 - 20March

LES ASSISES PROFESSIONNELLES

13 – 16 August

EXPOLAZER & OUTDOOR LIVING

12 - 14November

POOL SPA PATIO EXPO

USA, Las Vegas

29 - 2Feb/March

CSE SHANGHAI

21 - 24March

POOL + GARDEN TULLN

Austria Tuln-on-Danube

21 - 22August

SPLASH! POOL AND SPA TRADE SHOW

Australia. Oueensland

19 – 22 November

PISCINE GLOBAL EUROPE

France, Lyon

