

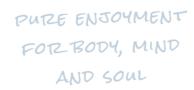
# NATURAL-POO

NATURAL LIFESTYLE SINCE 1985



# BRING PARADISE INTO YOUR GARDEN!





More than thirty years ago, I pioneered a new era of swimming and recreation in Austria with the first BIOTOP Natural Pool. Together with my experienced team and our partner companies, we have since built more than 6,000 facilities in Austria, throughout Europe and—in the meantime—all around the globe, making us the world market leader in this segment. Each one of our Natural Pools is unique and embedded harmoniously into its surroundings.

Our know-how grows with every new facility built. This forms the basis for our offering, which we can confidently call unrivalled—a claim we intend to fulfil in future as well. Professional planning, execution and ongoing customer care, the exclusive use of high-quality system components and our experienced team of specialists guarantee the reliable functioning of our facilities and each customer's lasting enjoyment of their private swimming paradise.

The goal of this catalogue is to provide you with a first impression of the wonderful world of Natural Pools and what it means to swim in natural, completely chemical-free water. Individually planned and perfectly tailored facilities allow our customers to enjoy the highest quality of life—day by day and year-round. We would be delighted to count you among them.

I hope you enjoy discovering our world!



DI Peter Petrich CEO of BIOTOP

DI Peter Petrich

#### CONTENT

- 1 OUR PHILOSOPHY
- 2 THE NATURAL POOL
- 3 DESIGN POSSIBILITIES
- 4 INDIVIDUAL PLANNING
- 5 TECHNOLOGY
- 6 CONVERSION & REFURBISHMENT
- 7 INDIVIDUAL CONFIGURATION
- MAINTENANCE
- 9 QUESTIONS & ANSWERS
  - WHAT OUR CUSTOMERS SAY





# OUR PHILOSOPHY

To dive into pure, clear water completely free of chemical additives, like an alpine lake: Especially on hot days, many people feel a desire for the cool refreshment offered by a pool—preferably in their own garden. But how does one create such a paradise with dreamlike water quality?

It was Leonardo da Vinci who described water as the "blood of the Earth". It is our most valuable commodity, and we need to treat it with care. As world market leader in the segment of Natural Pool construction, our foremost concern is to preserve this vital resource. For more than thirty years, we have been striving to bring clear, living water—like fresh from an alpine lake—into our customers' gardens. Always at the cutting edge of technology, we provide long-lasting, crystal-clear swimming pleasure entirely without chemicals. We believe water should be alive, not deadened by toxic additives. Living water regenerates itself thanks to the BIOTOP's technology, and it has positive effects on the body, mind and soul.

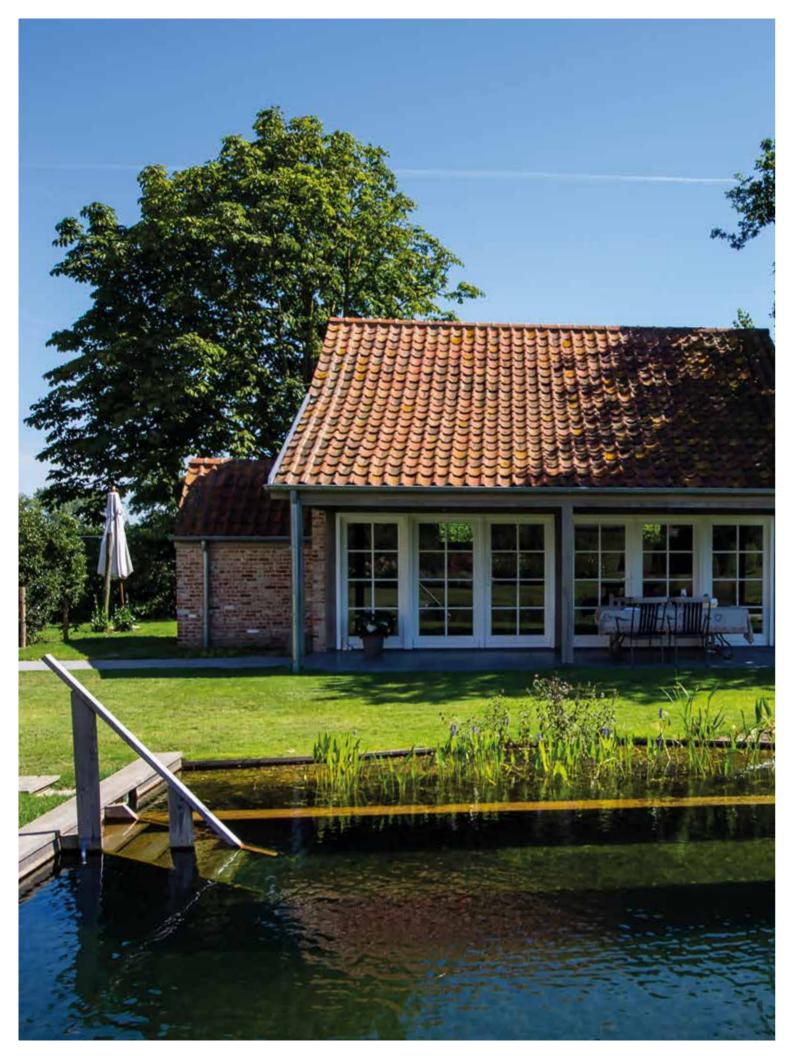
With a Natural Pool, you can create your own carefree paradise and a place for everyday natural swimming enjoyment. Detailed planning and individual adaptation to the existing architecture will integrate your Natural Pool perfectly into your garden and create an oasis of well-being.

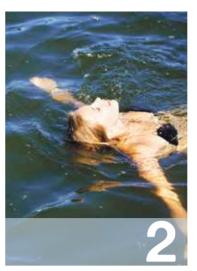
BIOTOP's newest development is the Zero Energy Pool, which covers its entire energy requirements using photovoltaics, i.e. through the power of the sun. Measured over the entire year, the facility's energy balance is neutral, meaning no additional electric power is required to operate the pool.











# THE NATURAL POOL

IN HARMONY WITH NATURE AND THE ENVIRONMENT



#### The desire for equilibrium and tranquillity finds its fulfilment in a BIOTOP Natural Pool

The foremost goal of nature-oriented design is to create the impression that the Natural Pool has always been there. The calm, clear water brings renewed quality of life into your garden and has a relaxing and calming effect. Simple and natural design, gently rounded shapes and graceful and playful peripheral zones characterize every BIOTOP Natural Pool.

A Natural Pool with classic design produces a fascinating effect throughout the year, enhancing the look of your garden even in winter. Flora and fauna engender a wholly new attitude towards life. The Natural Pool underlines the existing architecture and creates space for rest, relaxation and a feeling of peace and security.



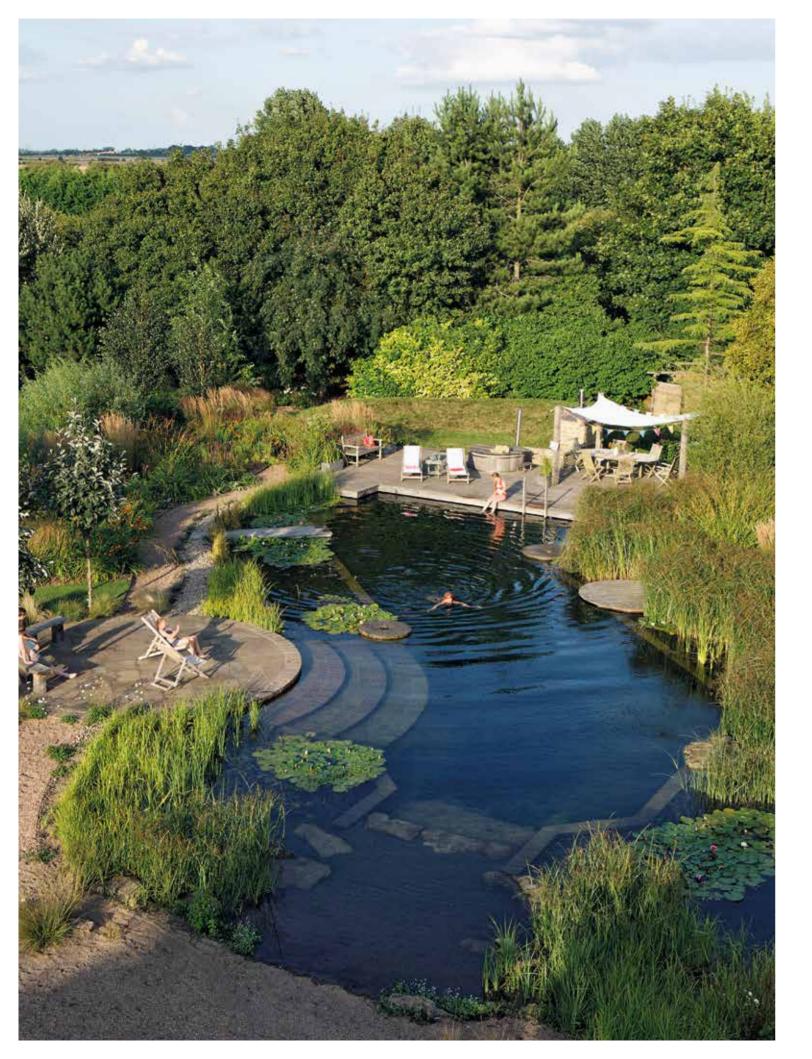
#### **Advantages of a BIOTOP Natural Pool:**

- A feeling beyond compare on the skin thanks to pure, chemical-free water
- Shapes and furnishings individually adapted to your wishes
- Always at the cutting edge of technology
- More than 30 years of satisfied customers
- Perfect swimming pleasure thanks to simple handling
- World market leader in Natural Pool construction
- Tried and tested technical system components
- Nature-oriented design and functionality











# DESIGN 3 POSSIBILITIES

THE
PERFECT POOL
JUST FOR
YOU!

A Natural Pool expands your garden, like a window into a new world. Whether in the classic style or completely given to nature, with clear-cut lines or a playful design, the intrinsic effect of clear and pure water captivates in every implementation. Treat your-self to this special luxury for your home and create an oasis of peace and relaxation with your own Natural Pool.



#### **Natural Pool "Nature"**

The "Nature" variant of the Natural Pool will please clients who enjoy being enveloped by greenery. Plants surround the swimming area and create a unmatched feeling of vitality. This variant is particularly suited for nature-loving clients who want to generate more living space for themselves as well as for flora and fauna and live in harmony with their surroundings.



#### **Natural Pool "Classic"**

Clients who appreciate timeless beauty will likely decide on this classic variant of the Natural Pool. The rectangular swimming area is more or less surrounded by the regeneration zone, elegantly integrated into your garden like an oasis.



#### Natural Pool "Design"

Lovers of design and devotees of bold style will appreciate the "Design" variant of the Natural Pool characterized by extravagant shapes. Different materials harmonize perfectly with each other to create an aesthetic composition featuring that "certain something". Dive into a new dimension of natural clarity.





PLEASUZABLE MOMENTS
IN TUNE
WITH NATUZE

# INDIVIDUAL 4 PLANNING

What better way to reflect the unique character of your garden than an individually designed Natural Pool? Whether classic, modern or completely natural, every Natural Pool facility is individually oriented around the concept of the respective garden, perfecting it into an all-embracing work of art—an unrivalled versatility reflected in around 6,000 facilities constructed all around the globe. The only limit is your own imagination.



## THE PHASES LEADING TO A FINISHED NATURAL POOL



#### **Consultation and planning phase**

Together—and ideally on-site in your garden—we try to concretize your wishes and ideas as precisely as possible so that the Natural Pool meets your expectations and requirements and provides lasting enjoyment.

The following factors play an essential role in this process:

- Usage of the garden
- Circumstances of the site
- Your personal style
- The character of the garden
- Available budget



We take great care—and all the time needed—to collect the necessary data for an initial design and cost estimate. You will be invited to study these documents at your leisure before making changes and discussing the estimate in detail in additional meetings with our planners.



#### **Construction phase**

Following a detailed schedule, our experts will perform the excavation work and build your Natural Pool. This includes all fixtures required for the installation of the technical equipment. Immediately after completion of the construction work, the pool is filled with water and the equipment put into operation. To allow you to use your new Natural Pool as quickly as possible, the surrounding area is returned to its original state or refashioned according to the plan.





#### **Swimming phase**

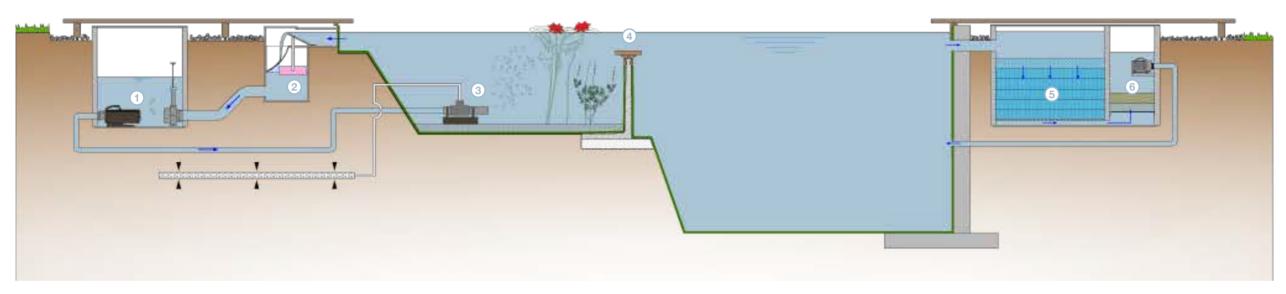
Your Natural Pool is available for swimming without restrictions during the start-up phase, which lasts several weeks and during which the biofilter system slowly reaches its peak efficiency. Following a comprehensive instruction by your Natural Pool expert, you will receive a handbook containing all the information needed to operate and maintain your facility. Naturally, your expert remains available in person as well for any questions arising during the lifetime of your pool.





TAILOR-MADE FOR PURE SWIMMING PLEASURE

### 5 TECHNOLOGY



#### 1 Submersible pump chamber

BIOTOP has developed a special water circulation concept for its Natural Pools. The pump is completely submersed in water in a chamber, allowing water to flow to it simply by the force of gravity instead of being "sucked in" by the pump. Mounted at the bottom of the chamber, the pump conveys the water back into the pool through pressure pipes.

#### **Advantages:**

- Submersed pumps are very quiet, making almost no noise
- Due to the low noise level, the chamber can be installed underneath the wooden deck
- The pump does not need to be uninstalled for winter
- The pipes do not need to be emptied for winter
- Incoming and outgoing pipes can be regulated individually
- The submersed pump is optimally cooled by the water

#### (2) Curved screen skimmer

The purpose of the curved screen skimmer is to remove floating particles from the Natural Pool. The water flows over a curved screen with a mesh width of only 0.3 millimetres that removes even the smallest contaminants. A sophisticated mechanism controls the water flow via a flexible flap so that the correct amount of water always flows over the screen. BIOTOP was granted a European patent for this development.

#### **Advantages:**

- Even the finest floating particles are eliminated from the system
- Nutrients are removed from the water
- The screen is self-cleaning and therefore cannot become clogged

#### 3 Carbonator

The Carbonator provides the water plants with carbon dioxide in a natural manner, thereby regulating the pH value of the water. This unique process was developed and patented by BIOTOP.

#### 4) Angle elements

Angle elements assembled in a modular construction system separate the swimming area from the regeneration zone. This saves time and reduces costs. The elements consist of polyethylene plastic and are UV-resistant; they are made from recycled material and are themselves recyclable.

Two water circuits: Easy to handle

It has always been BIOTOP's intent to make its technical components as simple and easy to understand as possible for the user. The separation into two water circuits allows the pumps to operate economically and with minimal use of space. The first circuit is responsible for cleaning the surface of

The purpose of the second circuit is to eliminate organic compounds and phosphorus from the pool water. Its pump runs continually during the swimming season. Features like rock fountains, waterfalls

the water and removing floating particles. Its pump runs exclusively during the day.

or curtain fountains can be integrated into either or both of the circuits.

#### **5** Bio compact filter

Water flows through the filter vertically from top to bottom and is biologically cleaned along the way, i.e. impurities causing turbidity and organic compounds are broken down by bacteria. The result is crystal-clear water. To optimize the cleaning performance of the bacteria, water flows through the biofilter permanently. The biologically cleaned water then continues into the PhosTec Upstream filter.

#### **Advantages:**

- Biological cleaning without the need for chemicals
- Requires no electrical power
- The bio compact filter is comparatively small in size and installed under the deck, invisible to the user

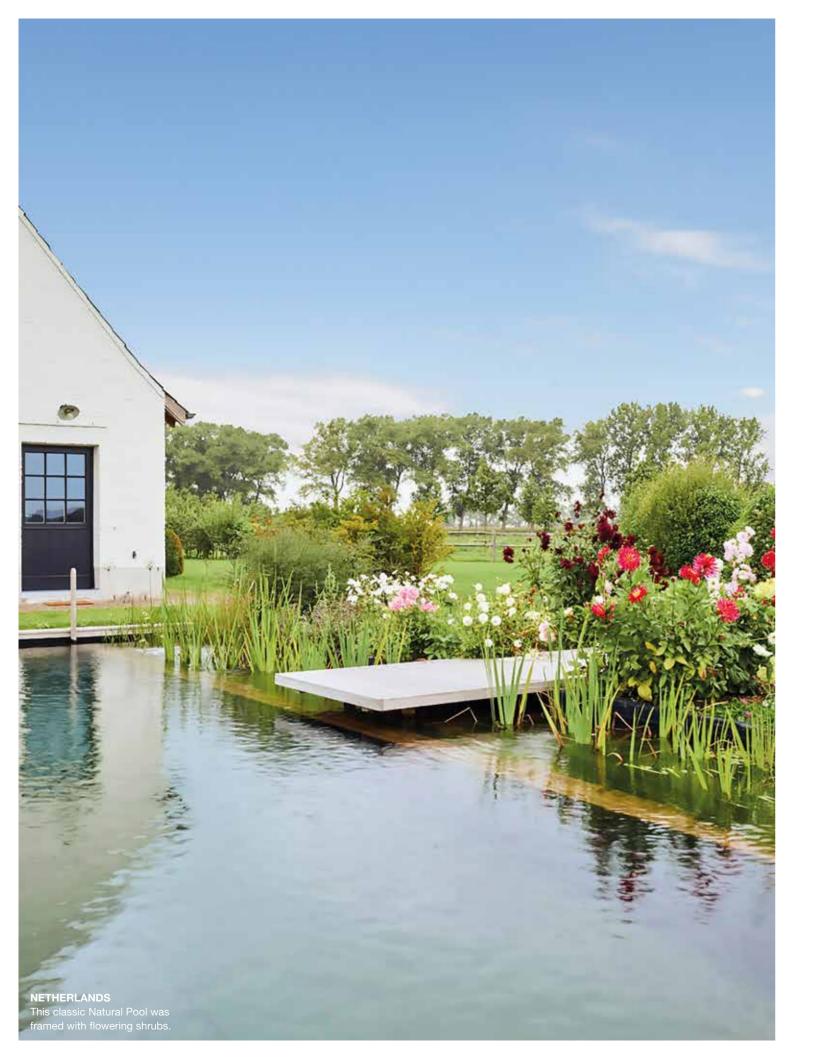
#### 6 "PhosTec-Upstream" phosphate filter

The PhosTec Upstream phosphate filter is an optional addition to a Natural Pool. It binds the phosphorus dissolved in the water—which promotes the growth of algae—efficiently and without the use of chemicals. In this way, the algae are effectively "starved". The water flows through the filter from bottom to top to minimize the risk of clogging the filter, and the nutrient-poor water is then pumped back into the pool by a small pump. BIOTOP was granted a European patent for the combination of the biofilter and PhosTec Upstream filter.

#### **Advantages:**

- Phosphorus is removed from the water efficiently and reliably
- Small size saves space
- Easy handling
- Simple replacement of the filter material
- Long life span

Optional: The components 1, 5 and 6 can be united within a single unit, the "Combi-Box", to save space.



## CONSTRUCTION METHODS FOR NATURAL POOLS



Durch die Abtrennung der Regenerationszone vom Badebereich wird verhindert, dass die Vegetation sich über den gesamten Schwimmbereich ausbreitet. Außerdem ist damit die Entleerung beider Bereiche für Reinigungs- und Wartungsarbeiten, unabhängig voneinander möglich.



#### Angle element method

With this modular building method, the divider between the swimming area and regeneration zone is created using angle elements. The elements are recyclable and thus environment-friendly, and their variable connection system allows the swimming area to be shaped as desired. The pre-fab elements used in this system save time and provide great flexibility in terms of design.



#### Wall method

The wall construction method is a high-stability technique that makes the greatest possible amount of space available for the swimming area. The smoothly and precisely applied liner also provides the possibility of using a pool robot for automatic cleaning. Separate emptying of the swimming area and regeneration zone is also possible with this construction method.



#### Earth-wall method

In this comparatively inexpensive variant, which is also flexible in terms of shape, the swimming area is separated from the regeneration zone by a simple earthen embankment. The wide dam-like shape requires more space as well as a stable natural foundation.







# CONVERSION & REFURBISHMENT

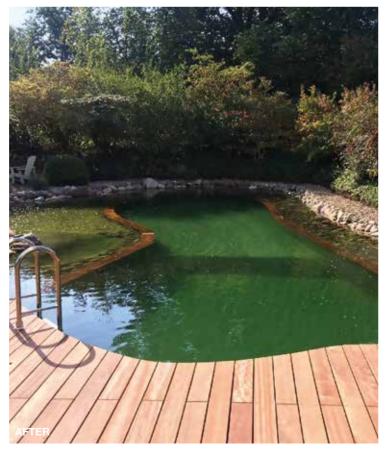
SIMPLE AND INGENIOUS:

#### **Retrofitting and renovation of Natural Pools**

Should you have a Natural Pool that no longer functions properly or appeals to you optically, BIOTOP has a solution for you. Our experienced experts will use their know-how to transform your garden into an oasis of well-being once more. Our Converter system is especially suitable for swimming ponds not equipped with technical apparatus, as well as for facilities with insufficient water quality or excessive algae growth. Prior to conversion, the existing equipment of your pool will be tested to see whether it can be reused.









#### Upgrade— the easiest way of retrofitting to a Natural Pool

Depending on the circumstances on site and the available space, we will discuss options for retrofitting your pond into a Natural Pool and select the best possible variant. We always use cutting-edge technology to make your Natural Pool as user-friendly as possible and minimize required maintenance. In most cases, a curved screen skimmer, a submersible pump chamber, and the biofilter circuit with a phosphate filter will be installed. Let the modern technology of the BIOTOP Natural Pool work for you and enjoy a new quality of life in your personal water landscape.

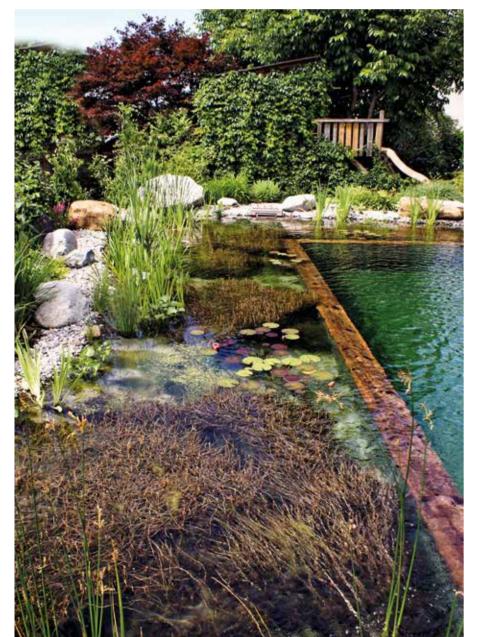
#### **Refurbishment of older facilities**

The first BIOTOP Natural Pools were built more than 30 years ago. While most of them are still beautiful to look at, some may require a technical overhaul. Over the years, abundant plant growth can reduce the water area available for swimming. Highly branched root networks make it difficult to vacuum up sediment; it cannot be removed completely, and the nutrients bound within it can re-enter the water. The effects of this natural process known as siltation can be reversed with a full refurbishment during which the regeneration zone is emptied out and completely cleaned, the substrate layer is renewed, and new water plants are planted. We will be happy to plan an individual package of suitable measures to optimize your swimming facility.



# INDIVIDUAL CONFIGURATION

FOR EVERY LIFESTYLE & ADAPTION TO YOUR HOUSE AND GARDEN



#### In harmony with the vegetation

Underwater plants absorb the nutrients they need to grow directly from the pool water, and thus represent immediate nutrition competition for the algae. They also create an optimal habitat for zooplankton that feeds on single-celled algae. In addition, the photosynthesis performed by the plants releases oxygen directly into the pool water during the day. Watermilfoil and various species of pondweed are particularly suitable for this purpose.



The nature-oriented design of a Natural Pool supports its self-cleaning properties ideally: Impurities are absorbed by the plants as nutrients, and harmful bacteria are eliminated by natural water organisms, maintaining perfect water quality in your Natural Pool.



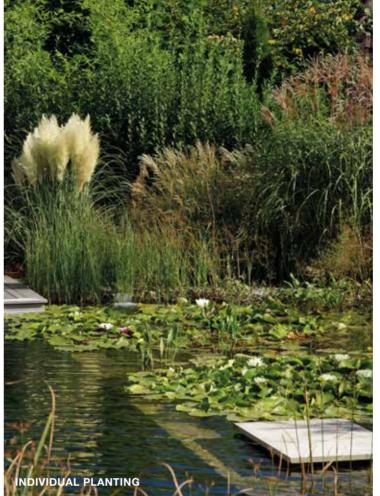












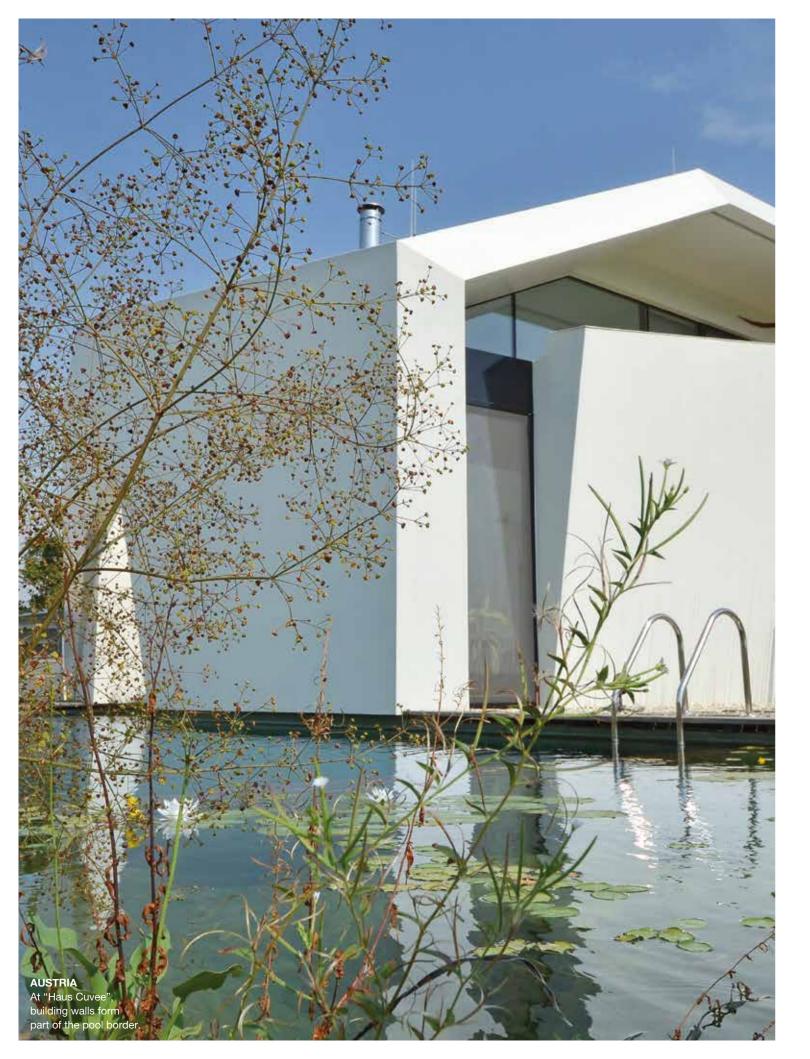


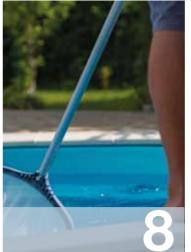












# 8 MAINTENANCE

Appropriate maintenance is essential to maintain ideal water quality in a Natural Pool. Your BIOTOP Partner will be happy to perform the regular cleaning and maintenance activities for you.

We offer the "small service" that should be performed every year: It includes vacuuming of the bottom of the swimming area to remove sediment. The pool water pumped out of the pool in this process is fed into a drain or spread across your garden as fertilizer.

We can also perform the "large service" for you. This should be done every three to five years, and is necessary due to the sedimentation processes that occur in the regeneration zone of your Natural Pool and lead to an accumulation of silt over the years. The best time for a large service is late summer to autumn.





# QUESTIONS & 9 ANSWERS

PLANTS, MICTZOOTZGANISMS

AND INTELLIGENT TECHNOLOGY

MODELLED ON NATUTZE

ENSUTZE CTZYSTAL—CLEATZ WATETZ

#### How much space do I need for a BIOTOP Natural Pool?

Thanks to our modern technology, there are nowadays no limits—upper or lower—to the size of a Natural Pool. Ideally, you should have a level (or gradable) area of at least 40 to 50 m². Whether it is in the sun or shaded is immaterial; please be aware, however, that the amount of sunlight affects the water temperature, entailing both advantages and disadvantages. Each facility is individually planned and adapted to the circumstances of its site.

#### Can you ice-skate on a Natural Pool in winter?

If the ice is thick enough, your Natural Pool is perfect for ice skating.

#### Can a Natural Pool be heated?

In general, the sun heats the shallow water in a Natural Pool, which then transfers the energy to the deeper swimming areas. The water can be heated up to 28 degrees Celsius by additional means, however.

#### Can I rely on the water cleaning itself?

If the dimensions and design of the regeneration zone are correct and the right underwater plants were chosen, a Natural Pool will "work" properly. In addition, zooplankton like water fleas, rotifers and paramecia are added to the water. These tiny organisms play an important role in the cleaning process. The only thing you need to do is have a little patience until your Natural Pool finds its equilibrium

#### How much care and maintenance is required?

After every winter, your Natural Pool will require a "spring cleaning": Sediment at the bottom of the swimming area needs to be vacuumed away, and the walls may need to be brushed. The underwater plants are cut back in summer, and autumn maintenance includes activities from further cutting to the mounting of a leaf-protection net. Every three to five years, the water in the regeneration zone will need to be pumped out and the entire area rinsed and vacuumed.

#### Will there be gnats/mosquitoes around my Natural Pool?

The gnats are eaten by their natural enemies like water striders and dragonfly larvae in the shallow water areas—we guarantee it!



# WHAT OUR 10 CUSTOMERS SAY



"The Natural Pool convinced me immediately. Suddenly, all my nearly forgotten childhood memories of freedom, freshness and swimming in lakes and rivers came back."

"Marvellous—I can be active and swim here during the day and enjoy the beautiful lighting design during the evening"





"There's no better way to start a long day of work in the busy London city centre than a refreshing swim in my Natural Pool."

