

# Technology

At Biotop, we strive to make our technology as simple as possible and easy to understand for the user.

**1** For the water circulation in Swimming Ponds Biotop has developed a special system. The pump is fitted in the so called **Submersible Pump Chamber** where it is completely submersed in water, 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 pond through pressure pipes.

- Advantages**
- » Submersed pumps are quiet, creating almost no noise
  - » The low noise level means 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 pump is cooled by the water around it

**2** The purpose of the **Curved Sieve Skimmer** is to remove floating particles from the Swimming Pond. The water flows over a curved screen with a mesh of only 0.3 millimetres that removes even the smallest particles. 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 innovation.

- Advantages**
- » Even the finest particles are eliminated from the system
  - » The screen is self-cleaning
  - » Nutrients are removed from the water

**3** The **Carbonator** provides the water plants with carbon dioxide, thereby helping to regulate the pH value of the water. This unique process was developed and patented by Biotop.

**4** A **separation** between the swimming zone and the regeneration zone can be created by fitting special wall units, as shown in the illustration above. You can find further methods on the next pages.


### Two water circuits: Easy to operate

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 water and removing floating particles. Its pump runs throughout the day.

The purpose of the second circuit is to eliminate organic compounds. Its pump runs continually during the swimming season. Features like rock fountains, waterfalls or curtain fountains can be integrated into either or both of the circuits.

**5** Water flows vertically through the **Bio Compact Filter** from top to bottom and is biologically cleaned along the way. Organic compounds and impurities that could cause cloudy water are broken down by microorganisms. The result is crystal-clear water. In order to optimise the microorganisms’ cleaning performance, water flows through the bio filter permanently. The biologically cleaned water then flows back into the pond.

- Advantages**
- » Biological cleaning with no need for chemicals
  - » The Bio Compact Filter is comparatively small in size and is installed under the deck, invisible to the user
  - » Takes up less space than common filter systems

 The components 1 and 5 can be installed in a single unit, the **Combi-Box**, to save space.