

COMPACT,
EFFECTIVE AND
ENVIRONMENTALLY
FRIENDLY

WATER TREATMENT

- UV disinfection
- Heavy metal removal
- Filtration technology
- Ozone treatment

OUR SERVICES



Waste water treatment

The unique FlexBio wastewater treatment plants work energy-efficiently and cost-effectively in all areas of application. Whether you want to clean weakly polluted wastewater on a farm or heavily polluted wastewater from industry, the FlexBio portfolio always offers a suitable solution.



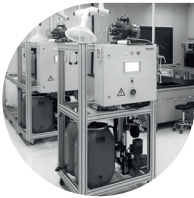
Biogas Technology

The FlexBio biogas process developed by us is suitable both for use in agriculture and in waste management. Our fixed bed technology convinces with very high flexibility - e.g. suitable for on-demand biogas production without large gas storage - as well as with high process stability and efficiency.



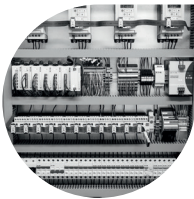
Water treatment

FlexBio Technologie GmbH offers compact and modular water treatment plants as container solutions. The container plants for water treatment are delivered turnkey and ready for use.



Pilot plants

As a plant manufacturer, we offer a wide range of test facilities. In addition to our standardized test facilities, we also provide individual customer solutions. Having your own prototype gives you great flexibility in the development and optimization of your processes.



Control and measuring technology

As a manufacturer of waste water treatment plants, water treatment plants, biogas plants and experimental plants of all sizes, we are very familiar with the production of control systems including development, planning, design and programming.



Service

FlexBio Technologie GmbH is your contact for the first consultation on the planning, construction and commissioning of the unique FlexBio technology systems.

FLEXBIO WATER TREATMENT

When extracting drinking water from near-surface areas, the most common contaminants are heavy metals, arsenic, iron, manganese, nitrate, organic pollutants and germs. FlexBio Technologie GmbH offers compact and modular water treatment plants as container solutions. The container plants for water treatment are delivered turnkey and ready for use. Our water treatment plants usually contain the following treatment steps, which are either modularly combined or offered as standalone solutions:

- UV disinfection
- Ozone treatment
- Adsorption by iron hydroxide and / or activated carbon (heavy metal removal)
- Fine filtration

In many cases, a combination of different water treatment processes makes sense. Depending on the degree of contamination, UV disinfection can be combined with ozone treatment and heavy metal removal. This combination provides 100 % protection against contamination and can also be used for heavily polluted drinking water. Due to the highly oxidative effect of ozone many other reactions occur. Thus, by ozonation also heavy metals can be precipitated, which then sediment or can easily be removed by filtration. The systems can be operated fully automatically and combined with other fully automatic FlexBio systems.

In addition to drinking water treatment, the technology can also be used in areas such as car washes, bacteria removal or as a pre-filter before reverse osmosis. All products can be delivered preassembled in a container and, thus, are also suitable



The technology can be installed in a space-saving and effective way even in the smallest area. All plant components for complete water processing can be accommodated in one container. This transportability allows decentralized use in e.g. work camps.

OUR SERVICES

- Assessment of water quality
- Process design
- 3D modeling
- Construction and delivery
- Commissioning
- Standardized documentation

The following figure shows an exemplary process flow:



WE PROVIDE CLEAN WATER.

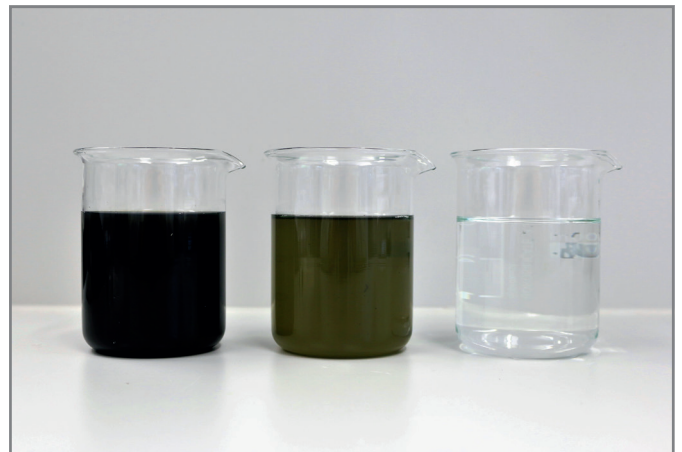
CONTACT US TODAY

ADVANTAGES

- Modern technology
- Maximized operational safety
- Fully automatic operation
- Modular and compact design
- Individual process combination
- Plug & Play principle
- Online process control
- Guaranteed water quality
- Process safety

for fast deployment in remote areas. We are happy to produce individual solutions for your specific needs.

The FlexBio water treatment consists of various modular sub-processes. The multi-stage treatment process ensures that no contaminated water enters the drinking water network. The most important treatment steps are redundant and there is a permanent quality control by means of state-of-the-art measuring technology. Thus, highest reliability can be achieved. During maintenance, the treatment plants can continue to operate without interruption. Further safety is provided by the measuring and monitoring technology.



With our technology you get cloudiness and dissolved dirt from your water. Depending on your needs, the water is purified to the level of process or drinking water to meet your needs.

**ACTIVATED CARBON
FILTER**

UV DISINFECTION

Drinking water



UV DISINFECTION

The disinfection of drinking water is essential. With a disinfection process, process and drinking water can be decontaminated and pathogens can be eliminated effectively. UV disinfection is mainly used in the field of drinking water treatment, as with a strong turbidity of water, 100 % disinfection cannot be guaranteed. With this technique high-energy ultraviolet rays are generated which effectively destroy nucleic acids and proteins, rendering the pathogens harmless. Regarding the process technology, installation of UV disinfection is relatively simple.



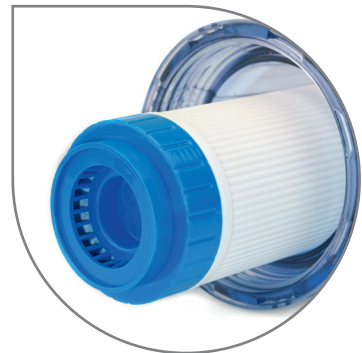
HEAVY METAL REMOVAL

Heavy metals such as arsenic, zinc or lead exhibit a high density. Most heavy metals are toxic for both animals and plants. Therefore it is particularly important to remove them from the water cycle. Otherwise they can accumulate and lead to permanent impairment of humans and nature. Heavy metals can very effectively be bound by chemical reactions and adsorption processes. Therefore, we use a synthetic granulate, which has a particularly high adsorption capacity.



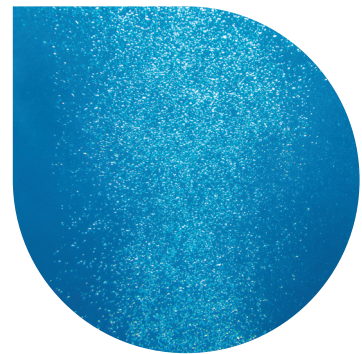
FILTRATION TECHNOLOGY

Our filtration technologies can be used cost-effectively and efficiently in a variety of applications. Our filtration systems can remove large impurities by means of a drum screen and smallest impurities by means of microfiltration. This serves to protect downstream equipment. The systems can be operated fully automatically and combined with other fully automatic FlexBio systems. Of course, every filter can also operate as a stand-alone solution.



OZONE TREATMENT

Ozone treatment is primarily used for disinfection and sterilization. Ozone has a high reactivity and quickly inactivates bacteria and viruses. Due to the high oxidative effect of ozone many other reactions can occur. Ozonation also eliminates heavy metals by precipitation, which then sediment. Compared to the usual chlorine treatment, ozone treatment is more expensive, but much more environmentally sound and less harmful. In drinking water supply, ozone treatment offers the great advantage of taste neutrality.



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 **FLEXBIO**
TECHNOLOGIE