

PROFILE



2024

COMPANY PROFILE.

Water & Wastewater Technologies



At GI AQUA, we strive to create a better future by providing innovative solutions that provide clean water to everyone and reduce the environmental impact of wastewater.



Water & Wastewater
Technologies

WELCOME



GI AQUA positions itself as a leading innovator in wastewater treatment solutions, committed to advancing sustainable technologies for the betterment of our planet and its diverse populations. Our approach is deeply rooted in human-centric innovation, with our team dedicated to continuously forging new frontiers in technology and service excellence. Committed to the Zero Waste philosophy, we implement a decentralized approach to process and reuse waste at its origin, supporting local and global circular economies.

This commitment drives our pursuit of creating a more sustainable and environmentally responsible future..

Sh. Desouky

Sherif Desouky, Phd
Executive Chairman



COMPANY PROFILE 2024

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Water & Wastewater
Technologie

Our Values

We are committed to the Zero Waste philosophy, focusing on simplicity and flexibility. We implement a decentralized approach to process and reuse waste at its origin, supporting local and global circular economies while reducing the environmental impact.

-  Zero Waste | 100% Recycling
-  Innovation
-  Efficiency
-  Eco Friendly | Net Zero CO²
-  Sustainability
-  Water Security
-  Reduce Carbon Emissions
-  Green & Circular Economy
-  Resources for Generations

Vision

Making a significant leap forward with GI AQUA Products & Solutions by incorporating water and wastewater into the global circular economy.



Innovating for
A Sustainable Tomorrow ...

Mision

At GI AQUA, we strive to create a better future by providing innovative solutions that provide clean water to everyone and reduce the environmental impact of wastewater. Our cutting-edge nanotechnology guarantees the highest quality of water treatment and allows us to meet the most stringent standards. We are committed to providing our customers with the most advanced, cost-effective solutions that help protect the environment and promote economic growth.

GI Aqua Tech is redefining wastewater management with its pioneering use of nanotechnology, setting new standards in the industry. Established with the vision to lead in wastewater treatment technologies. We developed G.Nano technology, a cutting-edge approach that enhances the efficiency and effectiveness of treatment processes. This advanced technology enables zero-total-discharge (ZTD) operations, which represents a significant improvement over traditional methods, offering unparalleled effectiveness in managing wastewater across various sectors including residential, industrial, and specialized areas like oil industries and slaughterhouses.



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The company's comprehensive service offerings extend beyond technology provision to include system design and development, manufacturing, EPC contracting, and operational management. GI Aqua Tech's versatile treatment solutions are designed for both centralized and decentralized systems, ensuring flexibility and scalability. This allows for rapid deployment and high efficiency, capable of addressing a wide range of wastewater challenges. Our mobile and containerized systems also facilitate easy expansion, adapting to increased capacity demands without the need for extensive new infrastructure.

GI Aqua Tech's commitment to sustainability is at the forefront of its operations, with systems that minimize environmental impact, reduce energy consumption, and promote recycling. By integrating nanotechnology into their processes, GI Aqua Tech not only enhances the technical capabilities of wastewater treatment but also contributes to the circular economy, making significant strides towards more sustainable water management practices. This innovative approach has positioned GI Aqua Tech as a leader in the field, continually advancing the capabilities and redefining the standards of wastewater treatment.



Services Offered

✓ Trading

GI Aqua Tech offers multiple products and services to the WWT sector, including mobile units, station units, equipment, and chemicals.

✓ Transportation

GI Aqua Tech has mobile treatment solutions that eliminate transportation issues and address environmental requirements

✓ Collection

GI Aqua Tech offers onsite treatment and reuse solutions.

✓ Treatment/ Recycling

Treatment and Reuse.

WASTEWATER TREATMENT PRODUCTS

With years of experience and continued research and developments keeping in mind circular Economy, sustainability, effectiveness, cost efficiency we were able to develop our own innovative wastewater treatment plants.

Key Facts



Technology Provider and developer



New-Generation WWT technology - GNANO



Equipment Manufacturer



EPC & O&M Capability



16 Patents



9 R&D Pipeline Projects



Product and service range 10



Water as a Service Solutions



Plug-and-Play solutions

INNOVATING FOR
A SUSTAINABLE
TOMORROW ...

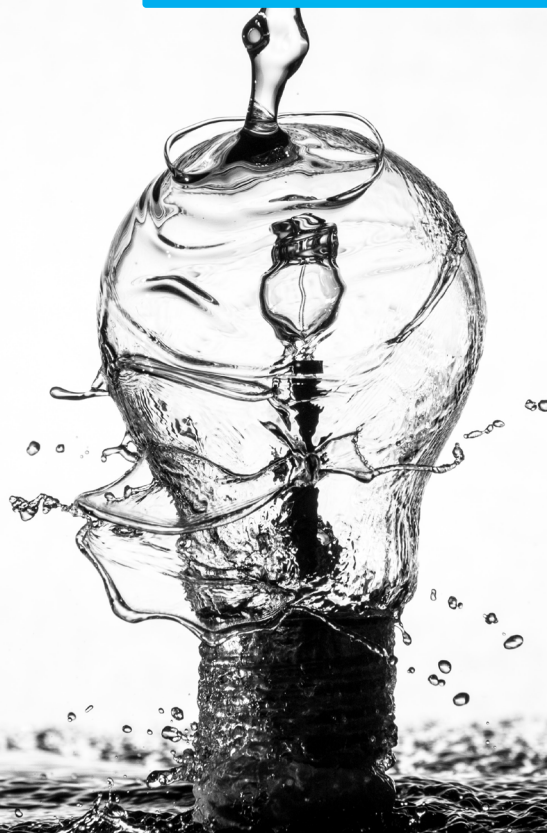


Sectors & Business units

We have managed to address our objectives by building a new generation of wastewater treatment plants in domestic, industrial and sectors and petroleum include the following key features



NEW GENERATION
OF WASTEWATER
TREATMENT PLANTS



R&D



Equipment Manufacturing



Chemicals Manufacturing



Trading



EPC, Operations & Maintenance



Domestic



Slaughterhouse



Poultry farms



Leachate



Construction



Industrial



Special Cases



Oil & Petroleum



Sludge+ (as a sister company)



Nanoparticle
Material

Innovative
Additive

G.NANO
WWT Material

G.NANO Technology
Revolutionizes WWT,
Eliminating the Need
for Biological Systems

WWT MATERIAL

Wastewater treatment is a complex process that involves the removal of various types of pollutants from wastewater before it can be safely discharged into natural water sources or reused. Traditional wastewater treatment methods include physical, chemical, and biological processes, but these methods have many limitations in serving the wastewater treatment market needs.

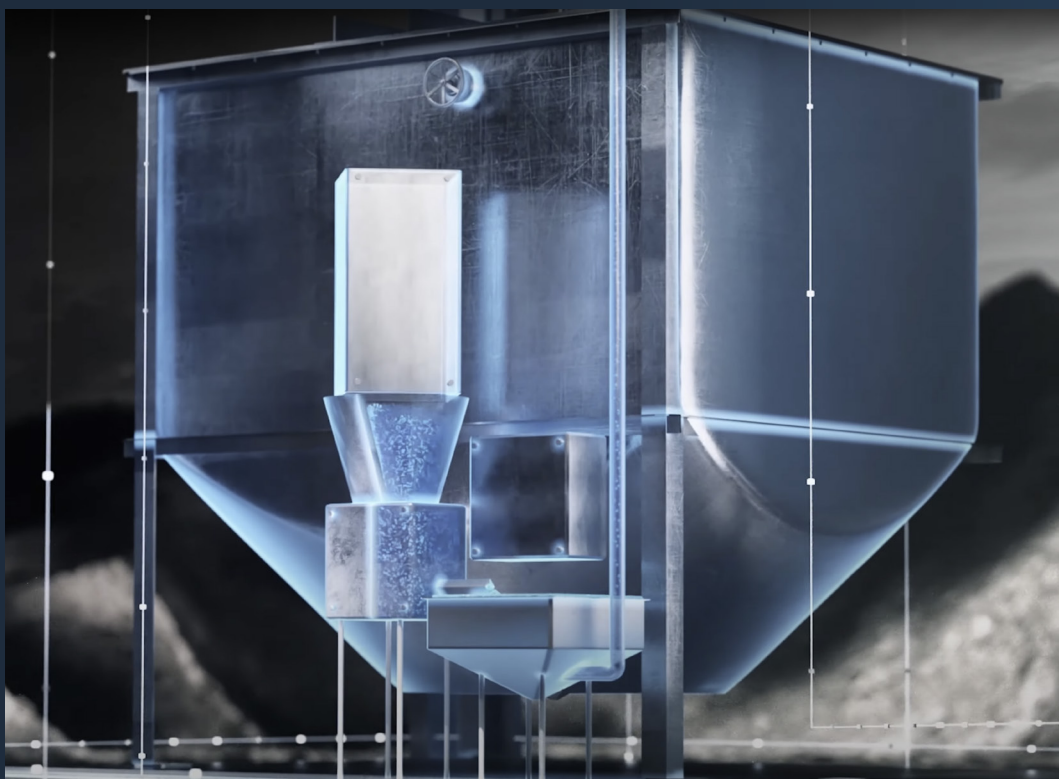
GI AQUA TCH GmbH has explored nanotechnology in wastewater treatment as a potential solution to overcome these limitations. In G.NANO technology development, we succeeded in transferring this technology into commercial solutions.



**Nanoparticle
Material**



**Innovative
Additive**



- 1- PH Buffering & Optimization
- 2- Organic Compounds Oxidation
- 3- Positive Charge Cloud
- 4- Double Layer Formation
- 5- Increase in Particle Size
- 6- Flocculation
- 7- Sludge Formation
- 8- Compact Sludge

G.NANO Mechanism
How G.NANO
Works

Mechanical System



The use of a mechanical system to apply nanoscale materials in wastewater treatment has several advantages. The system is designed to ensure proper mixing and distribution of the nanoscale materials throughout the wastewater, allowing for more effective absorption and removal of pollutants. The mechanical system also includes sensors for real-time monitoring of the process, allowing for adjustments to be made as needed for optimal performance.

Our mechanical system is unique for G-Nano Technology. Each device was designed specially to optimize its efficiency with our material. The outer shape is standard shape for most of the equipment, however, the internal effective parts were redesigned to give maximum productivity.

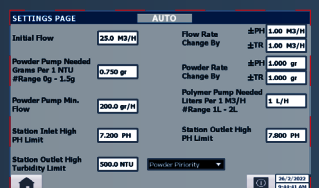
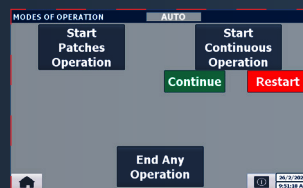
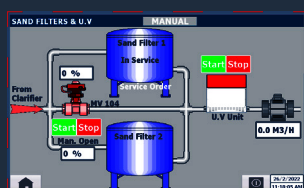
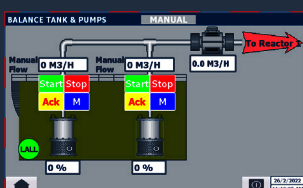
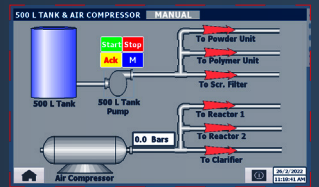
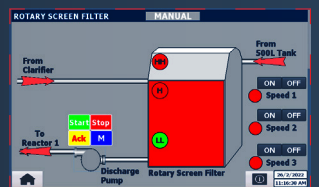
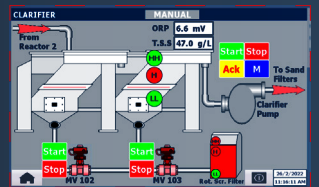
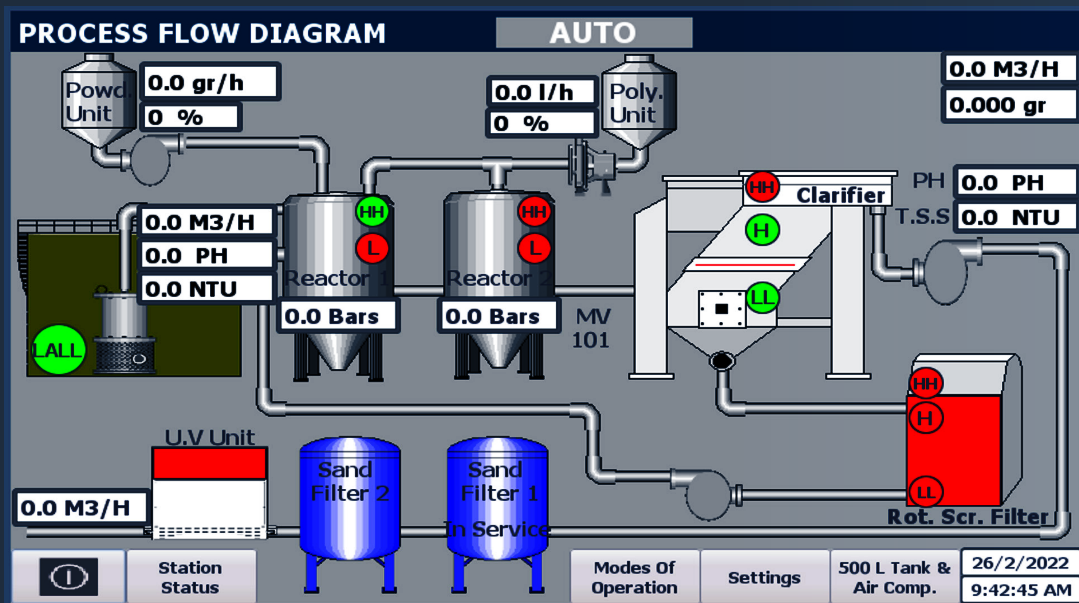
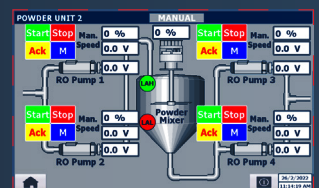
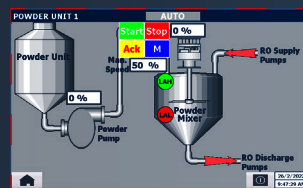
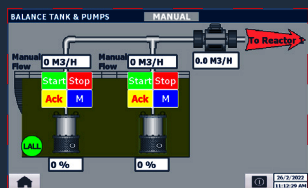
Control System

We provide a wide range of control levels according to customer requirements

- Semi-Automatic control system: it's a reliable and very simple system but requires human supervision all the time to make sure that the process is taking place as designed and to make quality control for outlet water.
- Full-Automatic control system: This will do everything automatically except for quality control. You can remotely monitor and control this system.
- Professional control system: this system will automatically adjust the operation point to match the required outlet quality without any human interference.



GI AQUA TECH
Water & Wastewater Solutions





SEGMENTS

G.NANO Technology Revolutionizes Wastewater Treatment, Eliminating the Need for Biological Systems

Innovative Material
for wastewater treatment



DOMESTIC WASTEWATER

Municipalities & Household Wastewater



POULTRY INDUSTRY

Wastewater generated from poultry farms



GREY WATER

Hotels Wastewater Management



INDUSTRIAL WASTEWATER

Most Wastewater Plants



PETROL & OIL

Wells Wastewater Management



SPECIAL CASES

Epoxy production & Cosmetics



SLAUGHTERHOUSE

Wastewater with Blood & high Protein Content



CEMENT INDUSTRY

Wastewater treatment in the cement industry



LEACHATE LANDFILL

Wastewater is generated within landfill sites

Technical Capabilities

GI Aqua Tech's technical capabilities are driven by innovation and tailored engineering to meet the specific needs of our clients.

EPC

GI Aqua Tech's in-house developed G.NANO technology system offers custom, space-saving solutions tailored to the specific site conditions, client circumstances, and requirements. Our approach emphasizes flexibility and the ability to adapt solutions to be portable, addressing varied operational needs and reducing construction demands.

O&M (Operations and Maintenance)

Our streamlined operations require minimal labor, due to smart, user-friendly, plug & play treatment solutions. We pride ourselves on a distinctive model that extends the lifespan of equipment, ensuring long-term performance and reliability through regular maintenance and updates.

Equipment and Materials Manufacturing

GI Aqua Tech controls its supply chain, manufacturing key wastewater treatment (WWT) unit components, including chemicals, in-house to ensure consistent quality and minimized risks. We are committed to meeting manufacturing requirements in record time, significantly reducing delivery durations to meet urgent demands.

R&D (Research and Development)

GI Aqua Tech's R&D division is committed to advancing our G-NANO technology to meet client-specific needs, ensuring continual improvements in efficiency and performance. Our focus on innovation provides clients with cutting-edge solutions that enhance their competitive edge in sustainable water management.

Value Creation



Small Footprint

Maximizing Efficiency with a Small Footprint: Waste Water Treatment Solutions



Cost-effective

Optimizing Your Wastewater Treatment Process with Low CAPEX & OPEX Solutions



Robustness

Robustness Solutions with GI AQUA: Keep Your Waste Water Treatment Running Strong



Tailor-made

GI AQUA: Tailor-Made Solutions for Your Unique Waste Water Treatment Needs



Hygienic & odorless

Smell-Free Sewage Solutions: A Guide to Hygienic and Odorless WWT



Flexibility

GI AQUA: Flexible Solutions to Meet Your Reuse, Recycle, & Reduce Goals



Sustainable

Smart Sustainable treatment Closed-loop system even with high influent fluctuations



Fast Process

Accelerating Waste Water Treatment Through Fast Process Kinetics

Customized Solution

We have managed to address our objectives by building a new generation of wastewater treatment plants in domestic, industrial and sectors and petroleum include the following key features



Mobile & Portable Wastewater Treatment units.



Stationery Wastewater Treatment stations



Advanced Chemical-mechanical (non-biological) treatment technology



Integrated sludge treatment and recycle



On-site special treatment applications



Upgrading and expanding Old Plants

Mobile Stations



- Unique Products
- It serves more than one human gathering, as it is carried on a car that can be transported from one location to another.
- You only need to connect the pump to the wastewater collection and treatment tank and pump out the clean, treated water.
- A fast operation can serve more than one location in the same day.
- It is suitable for treating wastewater quantities less than 1000 cubic meters/day.

Thus, a health disaster can be transformed into an opportunity. The problem of several small scattered communities can be solved by being protected from diseases resulting from polluted water and enabling the reuse of that water.

It has several features to facilitate operation, such as a predictive alarm system, built-in water testing equipment, automatic control systems, and remote control.

Mobile plants are odorless and hygienic, unlike traditional wastewater treatment plants. In the design process, we focused on optimizing electrical energy consumption.

Portable Stations



- Compact stations are manufactured inside one or more containers, according to the required capacity.
- Transported to the site where you want to set up a sewage treatment plant, and you don't need any construction.
- It is connected to the polluted wastewater collection tank and works as soon as it is connected.
- These products are suitable for places that have wastewater up to 3000 m³ per day



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Stationary & efficiency-increasing stations



The poor efficiency of the old plants and their inability to treat the increasing quantities of wastewater as a result of population increase is among the fatal health problems in developing countries.

Whereas sewage stations were established decades ago to serve a limited number of residents, which have doubled over the years.

With the lack of financial capabilities of these countries, a barrier to establishing new stations or expanding the old stations has been stopped, which means the inability of these stations to treat the increasing quantities of wastewater beyond their design capacity, which makes the impact of the problem on health and the environment greater than if these stations did not exist.

We provide a technology capable of solving this problem by supplying units to raise the efficiency and increase the capacity of these stations up to four times without the need for new land areas, which means stopping the destructive effects of these stations on human health for generations to come.

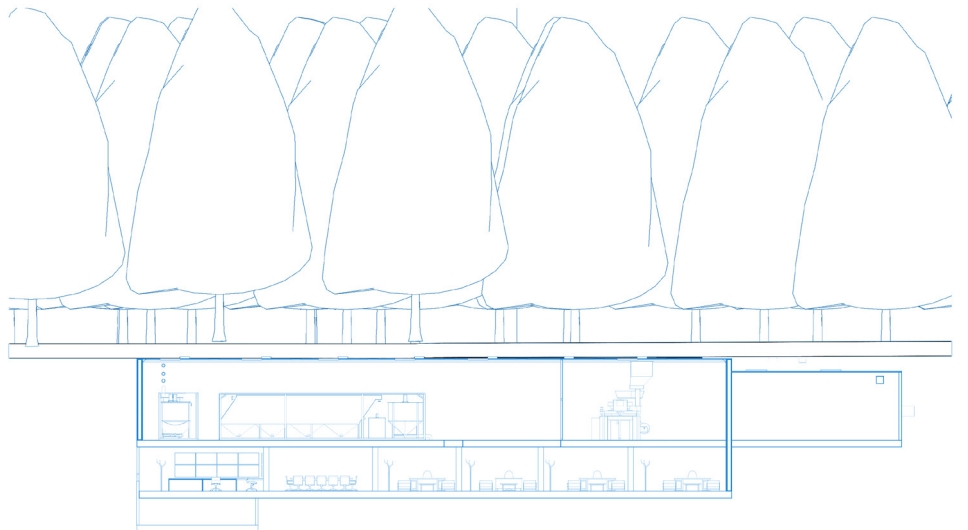


Medium & large Wastewater Treatment Plants



For higher capacities, we have flexible arrangements to achieve maximum power and chemical usage savings with undoubted efficiency. A closed-loop feedback system is introduced to control G-Nano dosages.

The plants occupy 80% less land than other plants. They are odorless, have much less excavation and installation time, savings in accessories, equipment savings (piping, fittings, hoist crane, etc.), and fewer operating costs and fewer human resources needed.



KEY FEATURES

We have managed to address our objectives by building a new generation of wastewater treatment plants in domestic, industrial and sectors and petroleum include the following key features



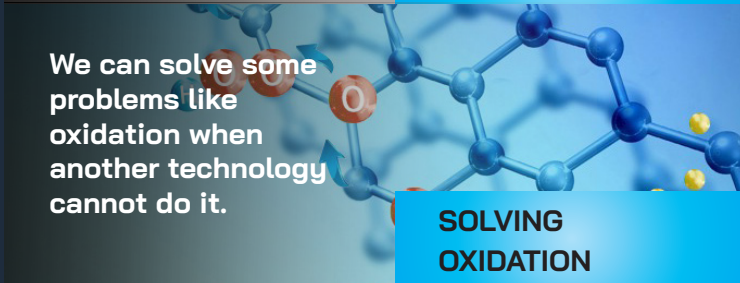
The highest international standards and quality of WWT to ensure sufficient water reuse.

HIGHEST STANDARDS



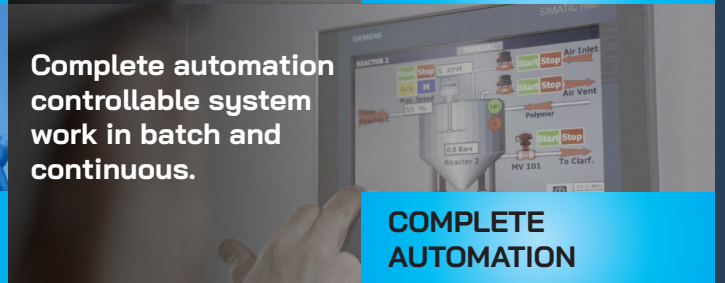
Capability to make complete treatment in one step with high efficiency.

HIGHEST EFFICIENCY



We can solve some problems like oxidation when another technology cannot do it.

SOLVING OXIDATION



Complete automation controllable system work in batch and continuous.

COMPLETE AUTOMATION



Cost efficiency, lower energy consumption, and minimum space.

COST EFFICIENCY



Environmental-friendly production and no emissions of odors or bad smells from the plants.

ENVIRONMENTAL FRIENDLY

The ability to integrate with the circular economy process.

circular economy



CIRCULAR ECONOMY

Compat technology that can reduce the footprint & area to less than half of the areas used by the existing traditional plants.



90% Less Footprint

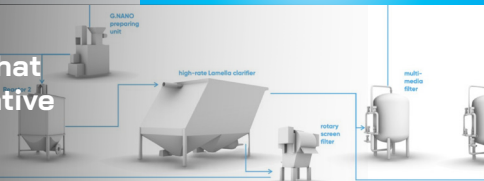
COMPAT TECHNOLOGY

The plug and play solutions saves time and the hassle of contracting and construction operations.

Containerized

PLUG & PLAY

WWT plants that use an innovative treatment process and nanotechnology.



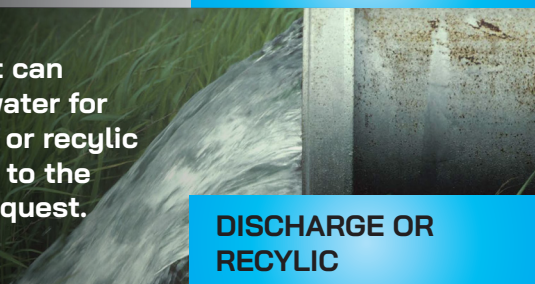
INNOVATIVE PROCESS

Flexible capacities from 50 to 100k m³/day WWT and the ability to cover different market segments.



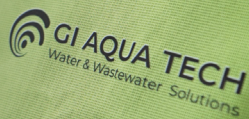
FLEXIBLE CAPACITIES

The outlet can produce water for discharge or recylic according to the input's request.



DISCHARGE OR RECYLIC

Minimal labor required for the plant operation reducing health and safety risks.



MINIMAL LABOR

Unlike traditional wastewater treatment plants, our plants are isolated, odorless, hygienic



ODORLESS & HYGIENIC

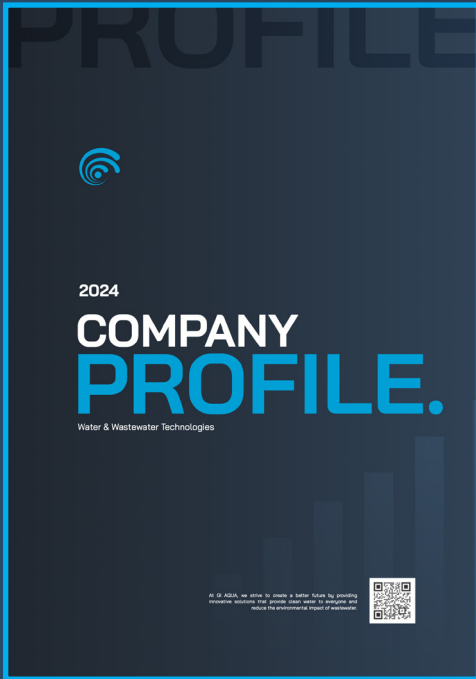
2024 Global Water Awards



GI AQUA TECH
Water & Wastewater Solutions

WINNER

Industrial Project of the Year
Slaughterhouse WWT, Saudi Arabia



Visit Online

GI AQUA TECH GmbH
Münchener Straße 18-22, 64521
Groß-Gerau

Phone +49 65452 977 38 40
Email info@giaquatech.de

giaquatech.de



Water & Wastewater
Technologies
Innovating for
A Sustainable Tomorrow

made
 in
 Germany

