

BIOPAQ®ICX

Advanced anaerobic industrial effluent treatment

Flexible anaerobic wastewater treatment based on BIOPAQ®IC technology and implementable in new and existing assets.





Flexible anaerobic solution

BIOPAQ®ICX combines the excellent properties of the BIOPAQ®IC reactor with a high flexibility with regard to tank design. The compact system is even implementable in existing tanks.

Due to high overall biomass levels and concentration, the system can deal with high volumetric loading rates. The 2-stage biomass retention prevents wash-out of biomass, while high liquid velocities provide excellent mixing properties enabling its application for a wide range of industrial wastewater.

The BIOPAQ®IC technology is proven technology which is worldwide recognised as the most efficient way to clean industrial wastewater and produce biogas at the same time. BIOPAQ®ICX, a recent development in the BIOPAQ® product line, was designed by Paques in order to meet today's customer's requirements. Having over 40 years of experience, more than 1500 anaerobic references in wastewater treatment plants and more than 350 references in biogas purification systems, Paques is able to provide every industry/ municipality with a tailor made wastewater treatment system that meets the customer's requirements.

About BIOPAQ®ICX

- Based on proven BIOPAQ® technology with >40 years operational experience
- Full scale experience since 2015 with >190 references in different industries.
- Available for lower as well as high volumetric loading rates
- Upgrade of existing systems in wastewater treatment plants
- An economical option in case of expansion or upgrading current system
- Small footprint, suitable for urban area
- Production of 'green' energy-rich biogas
- Modular system – tailor made solution
- Worldwide availability and services

The BIOPAQ®ICX is an excellent solution for your wastewater treatment system (new or existing) as it was developed to tackle frequent operational issues like high energy consumption, unstable performance, loss of biomass and accumulation of calcified biomass. In addition to new-built installations, the modular design of the BIOPAQ®ICX reactor enables the reuse of existing assets like tanks and peripheral equipment, ensuring savings on investment costs.

Characteristics of BIOPAQ®ICX

- Modular design which fits in a wide range of tank sizes, including rebuilds of existing assets.
- High volumetric loading rates are possible due to high overall biomass concentration and biomass level in the reactor
- Due to completely closed design no odour emissions: suitable for urban areas
- Excellent 2-stage biomass retention, so no wash-out of biomass
- Cleaning nozzles in the settling unit (CIP): low maintenance requirements and no clogging risk
- Capable of handling high calcium levels due to proper mixing conditions in the reactor



BIOPAQ®ICX Reactor



How BIOPAQ®ICX works

- 01 Wastewater enters the anaerobic digestion zone through the feeding/distribution system
- 02 Organic components are converted into methane (biogas), which is collected from the reactor via the top of the reactor (6)
- 03 After the biological process is completed, the treated wastewater enters the degassing unit
- 04 In the lower unit the granular biomass is separated from the treated wastewater
- 05 Effluent leaves the reactor
- 06 Biogas is collected from the bioreactor



- Proven design influent distribution system
- Ideal for mixing of the granular biomass bed and harvesting of the surplus biomass

- High quality reactor internals
- In-house manufacturing and quality control

- Superior biomass retention
- 2-stage separator design

Together, we're leading the biotech revolution in wastewater and biogas

We are a leading force in biotech wastewater and biogas, driven by a community of scientists, problem solvers, application specialists and exceptional people who all believe in one thing: That protecting the world's water and resources is vital if we are to preserve our planet for generations to come.

Since we founded our company, we've pioneered and developed biotech solutions proven to help our customer effectively and sustainably treat wastewater and generate biofuel to power their operations.

It's safe to say we've grown from our humble beginnings in Balk—to an international powerhouse with more than 3,300 installs in over 60 countries. Our expertise and technologies are trusted by many of the world's most trusted companies.

Whether in brewing, pulp & paper, chemicals or food—we create partnerships that help businesses maximise their resources while reducing their impact.

Our unique blend of expertise, trusted technologies, and global network enables us to guide and empower our customers with solutions proven to help them meet their sustainability goals. By continuing to reinvent, refine, and innovate our technologies we can help protect the planet, communities and best serve our customers.

The world's resources are finite—but our potential is limitless. By working together—we can create a cleaner, more circular future that works for everyone.



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