

BIOPAQ®UBOX

Anaerobic/aerobic sewage treatment

Combined anaerobic/aerobic
sewage treatment in a highly
efficient system with low operational
costs and zero odour emission.





Modular design for sewage treatment in urban area

The BIOPAQ®UBOX combines biological sewage treatment and biogas purification in one reactor with high efficiency, low operational cost, small footprint and zero odour emission. The system provides a four step sewage treatment: anaerobic treatment, supplementary aerobic treatment, secondary clarification and biogas purification.

BIOPAQ®UBOX was designed by Paques, the worldwide leader in anaerobic wastewater and biogas treatment. Having over 40 years of experience, more than 1.500 references in wastewater treatment plants and more than 350 references in biogas purification systems, Paques is able to provide every customer with a tailor made sewage treatment system that meets all their requirements.

About BIOPAQ®UBOX

- Proven technology, > 20 years operational experience
- > 30 BIOPAQ®UBOX references worldwide
- Continuous innovation
- Available for all smaller and bigger sewage treatment plants
- Small footprint, also applicable in urban area
- Production of 'green' energy-rich biogas
- Modular system - tailor made solution
- Worldwide availability

Technical description

The BIOPAQ®UBOX modular design is suitable for capacities of 5, 10, 15, 20, 30 and 40 thousand population equivalent (PE). Combining these different modules enables to treat larger PE's. Implementation in progressive steps is possible, avoiding idle capacity and allowing future expansions to ensure long-range projects. The BIOPAQ®UBOX has an exclusive anti-clogging pressurized feeding system, which ensures uniform distribution and an efficient anaerobic treatment of the wastewater, avoiding sludge thickening.

Characteristics of the BIOPAQ®UBOX

- Modular design for capacities from
- 5 up to 40 thousand PE
- Combining modules enables to treat larger PE's
- No malodorous emissions
- Suitable for urban areas
- Low energy consumption
- Low sludge generation
- Small footprint
- Energy reuse by biogas production
- High retention of biological sludge
- Efficiency on BOD removal > 90%
- Automatic cleaning without stopping the operation



BIOPAQ®UBOX Reactor



Efficiency on BOD removal > 90%



How BIOPAQ®UBOX works

1. Sewage enters the feeding/distribution system, in which the sewage is uniformly distributed and stirred in the anaerobic digestion zone
2. Anaerobic modules; without energy consumption, organic components are converted into methane (biogas) in the anaerobic three phase separator
3. Biogas is separated and for further treatment, the treated sewage is brought into the aeration tank by an anti-return passage
4. Biogas is collected in the three phase separators and brought into the gas scrubber for desulphurization without the addition of chemicals
5. Leftover carbonaceous compounds, oxidizing ammonium and dissolved malodorous compounds from the previous anaerobic process are removed in the aerobic stage
6. The final treatment is carried out in the settler with a wide settling surface, in which the water is clarified and the biomass is retained
7. Effluent leaves the reactor
8. H₂S free biogas leaves the reactor

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 customers' 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 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 renovate 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.

Hampton

Balk

Dubai

Chennai

Shanghai

Bangkok

Kuala Lumpur

Piracicaba

Contact one of our branch offices:

EUROPE | Balk, The Netherlands
+31 (0) 51460 8500
info@paquesglobal.com

NORTH AMERICA | Hampton, USA
+1 (781) 362 4636
info.usa@paquesglobal.com

LATIN AMERICA | Piracicaba, Brazil
+55 (19) 3429 0600
info.br@paquesglobal.com

INDIA | Chennai, India
+91 (44) 2827 3781
info.in@paquesglobal.com

CHINA | Shanghai, China
+86 (0) 21 3825 6088
info@paques.com.cn

ASIA PACIFIC | Kuala Lumpur, Malaysia
+60 (3) 9212 9792
info_my@paquesglobal.com

MIDDLE EAST | Dubai, United Arab Emirates
+971 (0) 50 482 6842
paques_middleeast@paquesglobal.com

THAILAND | Bangkok, Thailand
+66 (0) 2 279 2414
info_my@paquesglobal.com

