



PAQUES

BIOPAQ[®]UBOX

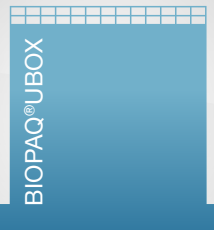
Anaerobic/aerobic sewage treatment

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

revitalizing resources

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 30 years of experience, more than 1000 references in wastewater treatment plants and more than 180 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, > 10 years operational experience
- BIOPAQ® UBOX references worldwide available
- 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

BIOPAQ®UBOX, how it 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

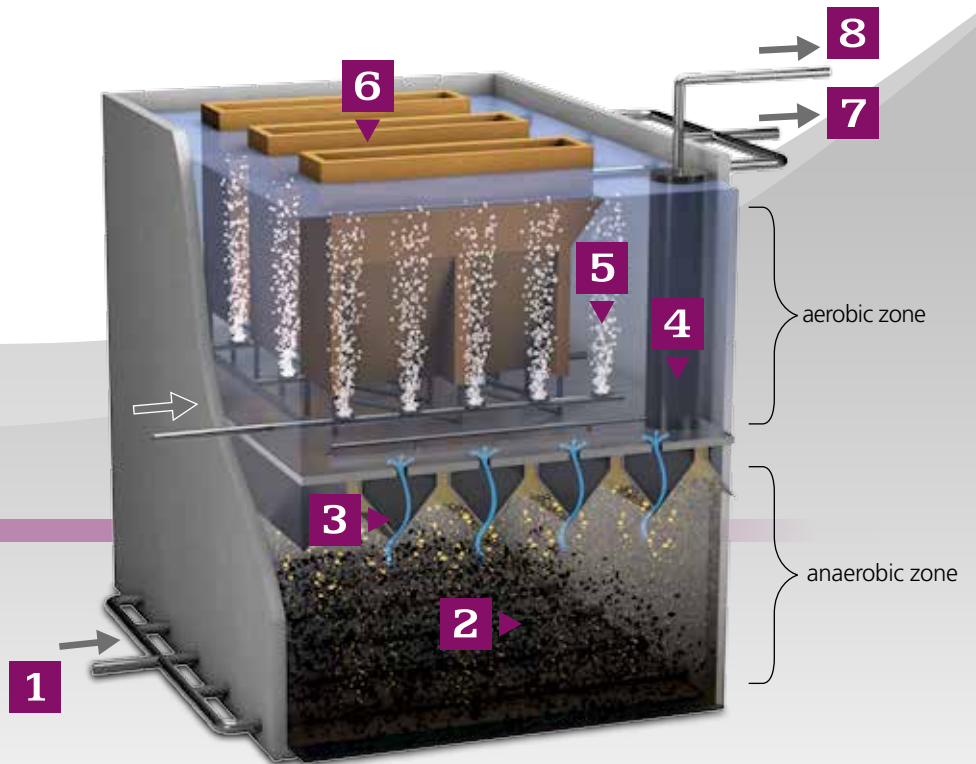
BIOPAQ®UBOX

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

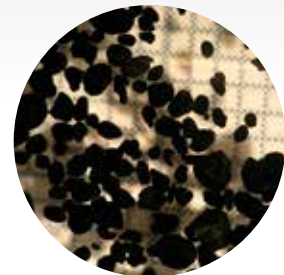
- Modular design for capacities from 5 up to 40 thousand PE
- Combining modules enables to treat larger PE's
- No malodorous emissions
- Suitable for urban areas
- Low energy consumption
- Low sludge generation
- Small footprint
- Energy reuse by biogas production
- High retention of biological sludge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



- Durable design, built with polypropylene plates, with a lifespan of > 50 year
- Industrial manufacturing and quality control.



- Special air nozzles prevent fouling and solids incrustation on equipment surfaces.
- Cleaning is performed automatically, without interruption of the operation.



- Superior biomass retention.

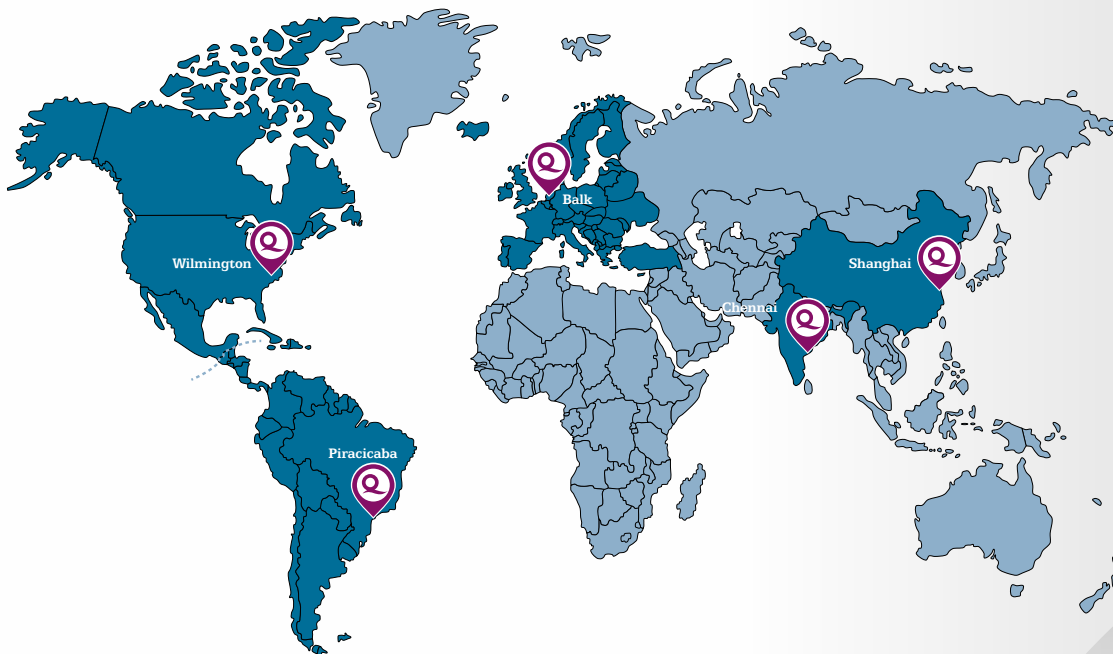


Paques: leading in biological wastewater and gas treatment

Paques has over 30 years experience in helping industries and municipalities to reduce their water and carbon footprints and reclaim valuable resources. The cost-effective effluent purification systems produce energy from wastewater, whilst purifying the water and facilitating water reuse.

Since 1980, Paques realised more than 1800 references worldwide. Besides the headquarters in The Netherlands, Paques has subsidiaries and/ or production locations in China, Brazil, North America and India. In many other countries, the company is represented by licensed partners. This ensures local presence and the best service for clients worldwide.

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