

PowerTower

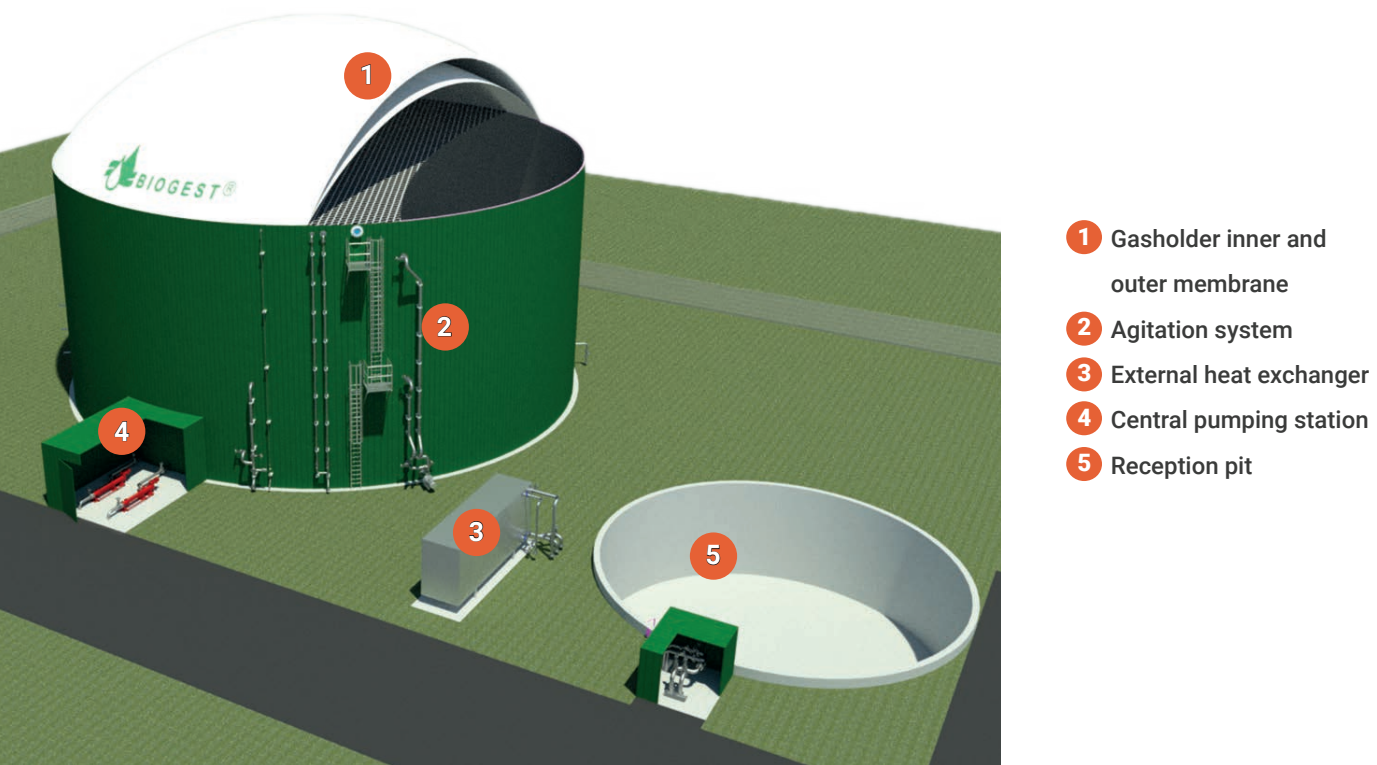
Technical Data Sheet

The economical large tank solution

Advantages

- Cost-effective one-tank solution for large dairies
- Concrete or steel tank options
- Outstanding accessibility for maintenance - all technical components are placed outside of the tank
- High full-load hours
- Scalability

Designed to meet the specific needs of large dairies, the PowerTower offers a cost-effective and efficient solution. With options for concrete or steel construction, its high full-load hours guarantee optimal performance and productivity.



- 1 Gasholder inner and outer membrane
- 2 Agitation system
- 3 External heat exchanger
- 4 Central pumping station
- 5 Reception pit

Technology highlights

The PowerTower consists of a stainless or carbon steel tank with a gasholder on top to guarantee a space saving and compact design. Due to our pump mixers, a good homogenization of the feedstock can be achieved, fostering biomass degradation. Moreover, the PowerTower offers optional features such as access doors, an automated cleaning device, and a digestate/slurry heat recovery system, effectively reducing thermal heat consumption to a minimum. Additionally, it includes an improved biological desulphurization solution that significantly decreases the H₂S content, thereby minimizing the amount of active carbon required for downstream gas cleaning.

Modular design

Due to its flexible design in diameter and height, it is almost always possible to design a one-tank solution with more than 3.5 Mgal useable volumes. Compared to a plant design with several digesters in parallel, this is a cost-saving option in combination with our carbon or stainless-steel digester walls without losing functionality. The PowerTower can work with a CHP, a gas upgrading unit, or a boiler as downstream processing equipment without complicated interfaces or gas losses. In our plants, we reach average full-load hours of more than 94%. The equipment of the plant can be either placed in an operational building or be delivered in practical 20-foot containers to be placed on site – a time-saving option!

High reliability and easy maintenance

Only reliable plant components from reputable suppliers have been chosen for this plant. The PowerTower has been designed to optimize availability and maintenance. All components are placed on the outside of the tank, from the pump mixing system to the heating system through the external heat exchanger, making the maintenance effortless.

Top components, best-of-class technology consumption

BIOGEST uses plant components that have been optimized to process all types of waste and by-products in addition to agricultural feedstock. BIOGEST operates as a manufacturer, design and construction contractor, biogas plant owner and operator, and uses its experience to provide only proven technology that assures the robust durability of the equipment and low maintenance costs on a long-term basis.

Covering the entire value chain

Our cost-effective and resource-saving solutions, based on technically advanced designs, contribute to an environmentally friendly future by providing green and sustainable energy. The scope of BIOGEST services range from project feasibility studies, design development and business planning to turnkey construction and commissioning of plants.

Service and maintenance

Our clients also trust our expertise when it comes to operation and maintenance, for which we offer tailor-made service agreements. Our technical and biological service provides support after the construction and commissioning of your biogas plant are completed to help you achieve excellent performance over the long term. Our service package also includes regular plant inspections by our specialists, and training customer employees on operating their plants. Moreover, our eShop offers wear and tear parts needed for your daily operation that you can order directly from your computer or from the mobile phone app we have developed.

Our experience

BIOGEST has completed more than 180 projects on 3 continents and is able to provide tailored service due to its highly qualified international team. With more than 30 years of experience in the AD sector, we have optimized the process design of our plants to guarantee simple operation while achieving high reliability.

Headquarters

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