



Organic Waste Treatment

OWT Technology

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(OWT) Technology

The OWT Technology combines the advantages of the known Anaerobic Digestion Technologies with our own innovations, creating an ideal system for the treatment of Organic Waste using Anaerobic Technology.

The OWT Technology guarantees its highest performance by combining the best possible preparation of the organic slurry with a thermophilic operation. The average **Specific Biogas Production is 200 to 220m³ per ton feeding** material which is one of the highest in the world.

The OWT Technology can treat different types of Organic Waste



Kitchen residues from private households



Disposals from large kitchens



Expired or spoiled food from retailers



Production waste and mis-productions from the food industry

Discover our advanced technical capabilities



We provide full Biogas Plants, starting from the waste delivery to the generation of the requested products but also convert Existing Biogas Plants treating agricultural products to treatment plants for organic waste.



The OWT Technology is very flexible – Waste input amounts and quality, throughput, and products generated can be adapted according to our Customer's needs.



We support our Customers doing the following services:

- Studies, Consulting and Design
- Supply, Installation and Commissioning
- Training of Operational staff
- Operation Monitoring
- Inspection and Optimisation of Existing Plants and Operations

We have developed our own machinery for the ideal **Pretreatment of the Organic Waste** before fermentation. The combination of OWT Fill, OWT Mill and OWT Tank produces an organic slurry containing 99,2% organics in dry substance, with a high specific surface area. This will allow the bacteria to start working immediately once the slurry reaches the digesters.



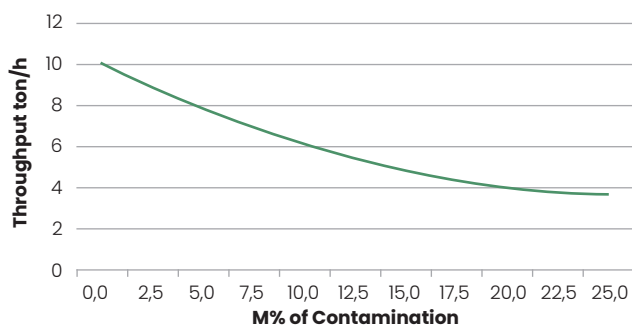
OWT Fill

- receives the Organic Waste delivered by waste collection trucks and collection bins
- is located on a lower level inside the pre-treatment hall of the Biogas Plant
- is watertight and made of stainless steel
- can be tipped so that the Organic Waste material is lead to the discharging point
- is equipped with an screw conveyor for discharging the material to the OWT Mill
- is equipped with covers and waste air suction system to minimize smell
- is available in two different sizes, 25m³ or 50m³



OWT Mill

- is a horizontal running Hammer Mill which allows the separation of plastic and other impurities from the feedstock
- regulates the material's water content by adding liquid if necessary
- opens the organic structure for a more efficient fermentation
- its throughput depends on the quality of the incoming material, the more contamination, the lower the throughput
- the maximum particle size of the slurry is 12mm
- the residual material can be used in an incineration plant as RDF



OWT Tank

- is working with the Swim – Sink – Principle; it separates floating particles like textile fibre, lignin or small plastic particles and the inert and heavy fractions
- ensure an Optimal Homogenisation of the digester input
- is a Horizontal Tank completely made of stainless steel
- is equipped with a scraper system driven by chains which transports the sediment fraction to a discharge at one side
- the floating layer is pumped to a drum screen which separates the particles from the liquid. The liquid then is reused in the OWT Tank, and the remaining floating layer is collected a reject container
- the clean digestate slurry is pumped to the next treatment step
- is available in two different sizes, 20m³ or 30m³. The OWT Tank 20 can serve one OWT Mill, the OWT Tank 30 two OWT Mills

OWT Digester

The OWT Digester is a cylindric tank without any internal equipment. The slurry's mixing and temperature control is done by externally located circulation pumps and heat exchangers. The slurry's operation temperature is 52°C, the process runs thermophilic.

About VIA Solutions GmbH

VIA Solutions GmbH (VIAS) was established in January 2022, by people with decades of experience in Waste Management and plant design, construction and operation.

Originally formed as a Joint Venture between the former Owners of the Czech biogas plant APBB Cayan Holding and "the Goeschl Family". VIAS owns the Know How and Intellectual Property of the highly efficient treatment technology for Organic Waste OWT which has been in successful operation since 2008. Further, they have the long experience in sufficient Solid Waste Treatment and the mining of old landfills.

In the recent years VIA Solutions developed the technology to covert Biogas to other green products such as Green Hydrogen and is presently engaged to establish the first project worldwide using this innovative technology.

The OWT Technology was developed by:

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