

THE HERBST BIOGAS PLANT

Design of the plant

The purpose of the Herbst biogas plant is to recycle biowaste from homes, industry and agriculture. The plant can be used to recycle up to 80,000 metric tons of organic waste a year.

Collection of biowaste

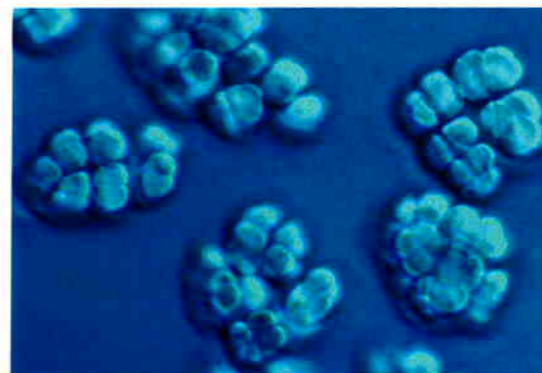
There are three separate collection points for the substrates of the biogas plant. This makes it possible to respond to all the requirements of the substrate market. The treated and homogenised flows of substrate are fed into a 1,300 m buffer vessel. The substrate for the fermentation is taken from this.

Treatment of waste

The process starts with the fully automated separation of interfering substances from the biowaste. As a result, heavy substances such as sand, glass, stones and metals are removed as well as light materials such as leather and plastic. In the solid substance disintegrator, complex substances are reduced to a maximum size of 80 mm. This smaller material is rid of interfering substances in a pulper and is converted into a homogeneous and easily fermentable form. In this way, even waste which contains many interfering substances can be recycled and it is possible to ensure optimal product quality.

Thermophilic fermentation

The key component of the biogas plant is the two 4,000 m³ biogas reactors. In these reactors, thermo-philic, methane-producing bacteria are used to convert biowaste into biogas at a temperature of 55 °C. In this way, up to 500 m³ of biogas can be obtained per hour. As a result, about 1,200 kW of electric biocurrent and about 1,700 kW of bioheat can be obtained every hour. A considerable benefit of thermophilic fermentation is the hygienisation of the two end products, compost and liquid fertiliser. In this way, pathogens can be destroyed and the result is an almost odourless fertiliser which is returned to the natural cycle. This obviates the need for expensive artificial fertilisers which have to be manufactured in an energy-intensive way.



methanosarcina acetivorans

OBTAINING BIOGAS

FROM ORGANIC WASTE



We provide the quality solution

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PROCESS OF OBTAINING BIOGAS

