Energy plants for the agricultural sector

Biogas production and utilisation process

- Liquid and solid manure
- Renewable raw materials
- Organic waste
- Dosing feeder
- Stainless steel digester
- Gas processing to biomethane
- Gas filling station
- Feed-in into the public natural gas grid
- ChP
- Sale & internal use of power
- Storage tank
- Water
- Fertiliser
- Drying
- Heat
- Nitrification Pasteurisation Separation
- Sale of heat
- Internal use in operational and private buildings
- Heat for sale
- Agricultural use
- Fertiliser or fuel
- Stable facilities

Organic energy worldwide
Flexible stainless-steel energy plants:
As individual as you!

The digesters of WELTEC BIOPOWER are made of stainless steel. This high-quality material ensures a long plant life. At the same time, the building costs are minimised by means of the smart modular setting. This quality standard also applies to the production. Most of the plant and control modules are self-developed and tuned to each other.

Upon completion of the plant, the biological and mechanical service team of WELTEC BIOPOWER continues to provide the customer with competent support. This is a key factor that ensures the profitability of the energy plant.

Every WELTEC plant is as individual as the operator. But in one area, all plants are equal: Day by day, they deliver top performance!
Structure of a WELTEC energy plant

Input technology

Agricultural plants from WELTEC BIOPOWER run on numerous substrates: liquid and solid manure, dry chicken manure as well as renewable raw materials like grass, beet, whole plant silage, maize or straw.

In this context, use of the right input technology is important with regard to the substrate availability for the bacteria in the digester. For this reason, WELTEC offers different systems, such as the MULTImix, which ensures optimum shredding and mixing of long-fibre material.

Tank technology

Special attention is paid to the material from which the tanks are made. The biogas that develops in the digester contains aggressive hydrogen sulphide and ammonia compounds. Therefore, WELTEC BIOPOWER uses high-quality stainless steel for the digester and other components.

As every plant and every customer has different needs, WELTEC biogas plants are characterised by a modular structure. This enables individual and flexible solutions and short building time.
Process flows

In WELTEC plants, the transport of the substrates takes place via a central pump. Moreover, a bundled, custom-developed control system ensures smooth communication between the individual components.

The biogas can be converted to heat and power in a combined heat and power (CHP) unit or be refined to the natural gas equivalent biomethane with the help of various processing methods.

Digestate processing

WELTEC BIOPOWER offers various solutions for the utilisation of the digestate. Thanks to its high nutrient content, the digestate can even be used as high-quality agricultural fertiliser without any processing.

If processing is required, WELTEC can install suitable technology under consideration of the respective needs: a separation, a digestate dryer, a pasteurisation or a solution for processing the liquid stage.