FINSTERWALDER
UMWELTTECHNIK

BIOGAS

Energy from organic waste

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WINNER
SOUTH WEST
GREEN
ENERGY
AWARDS
2012

Biogas plant Langage Farm, UK – Plymouth:

12.000 t/y food waste, 3.000 t/y manure

WASTE - A NEW RESOURCE FOR RAW MATERIALS AND RENEWABLE FUEL

Due to environmental and social pressures waste is increasingly seen as a potential source for the recovery and recycling of raw materials worldwide.

Using waste specifically for biogas production, has been a success story for many years:

On the one hand the harmful effects of the fermentable fraction of waste in the environment can be avoided and on the other hand, a renewable fuel source can be obtained.

FINSTERWALDER

Since the construction and commissioning of its own food waste biogas plant in the year 2000 FINSTERWALDER is part of this story.

For more than 20 years we have successfully designed, built and maintained biogas projects for organic waste treatment with our team of engineers and scientists on both the national and international stage.

» For further Information SCAN TO
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PLANNING

AD-PLANTS BY FINSTERWALDER

Currently FINSTERWALDER has designed ad facilities with a range in processing capacities from 10,000 to 100,000 tonnes per year. A FINSTERWALDER system can process a wide variety of organic wastes:

- Food wastes from restaurants
- Food and feed processing residuals
- The organic fraction from MSW
- Brown bin waste

OUR SERVICES IN THE PLANNING PHASE INCLUDE

- Analysis and assessment of waste streams
- Selection and testing of waste appropriate process technologies
- Selection of machinery and system integration
- Energy and mass balances

FINSTERWALDER OFFERS INDUSTRY LEADING ADVANTAGES

To assess the biogas potential of organic wastes, we do not rely on simple tables. With the help of our BIOTIP software we are able to simulate the complete biological process.

We can say from the start of the planning process which waste in combination with a particular technology will enable stable biogas production and a result in a financially viable project.

At key points during ad process engineering, we can offer specific equipment utilized in our biogas plants that have proven reliability and robustness during many years of operation.
Examples include separation technology, systems for the removal of contaminants, pasteurizer systems, measurement and automation technology.

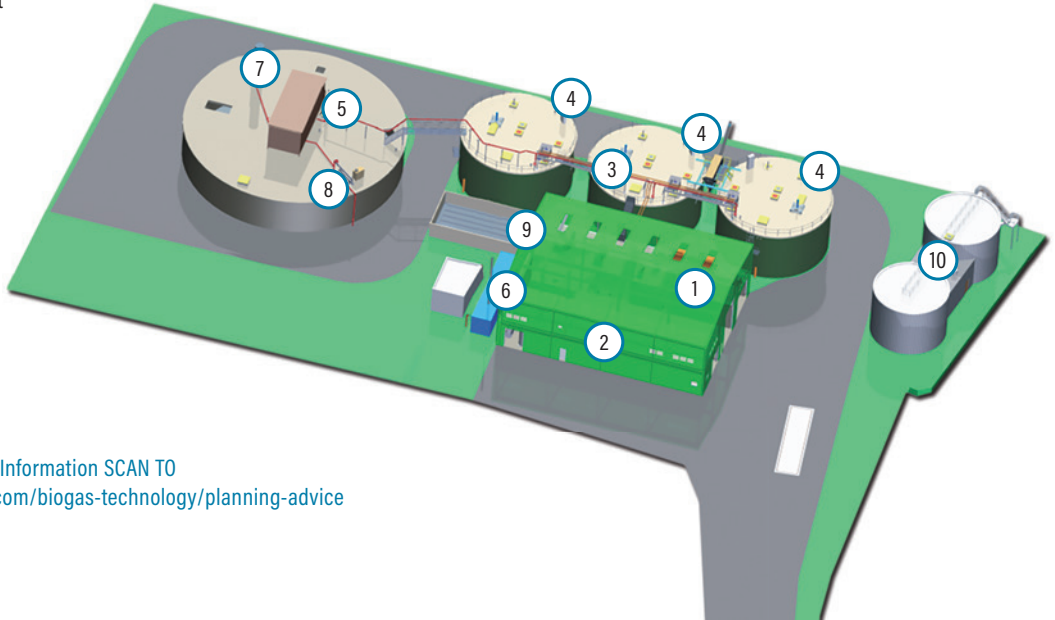
At FINSTERWALDER our goal is to create the conditions for a sustainable and reliable system operation.

PLANNING

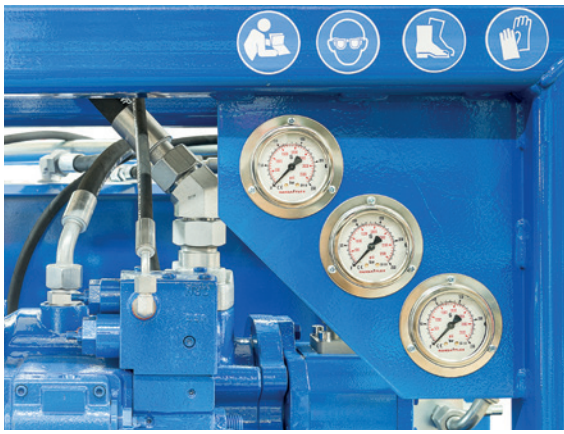
Based on detailed feedstock data, we design the ad-facility according to your needs. Wet anaerobic digestion plants by FINSTERWALDER typically consists of the following optimized and matching components:

1. Receiving and pretreatment hall
2. Administrative and visitor area
3. Feeding via pasteurizer system
4. Digesters
5. Gas storage
6. CHP unit and transformer station
7. Emergency flare
8. Digestate storage
9. Biofilter for the hall exhaust air
10. Process water treatment plant (SBR) (option)

At FINSTERWALDER we can also design subsystems and plant expansions.



» For further Information SCAN TO
www.fitec.com/biogas-technology/planning-advice



OUR BUILDING SERVICES

- Project management, construction supervision
- Provision and installation of system components
- Provision of individually designed automation technology
- Support during commissioning
- Process (remote) monitoring
- Service and maintenance

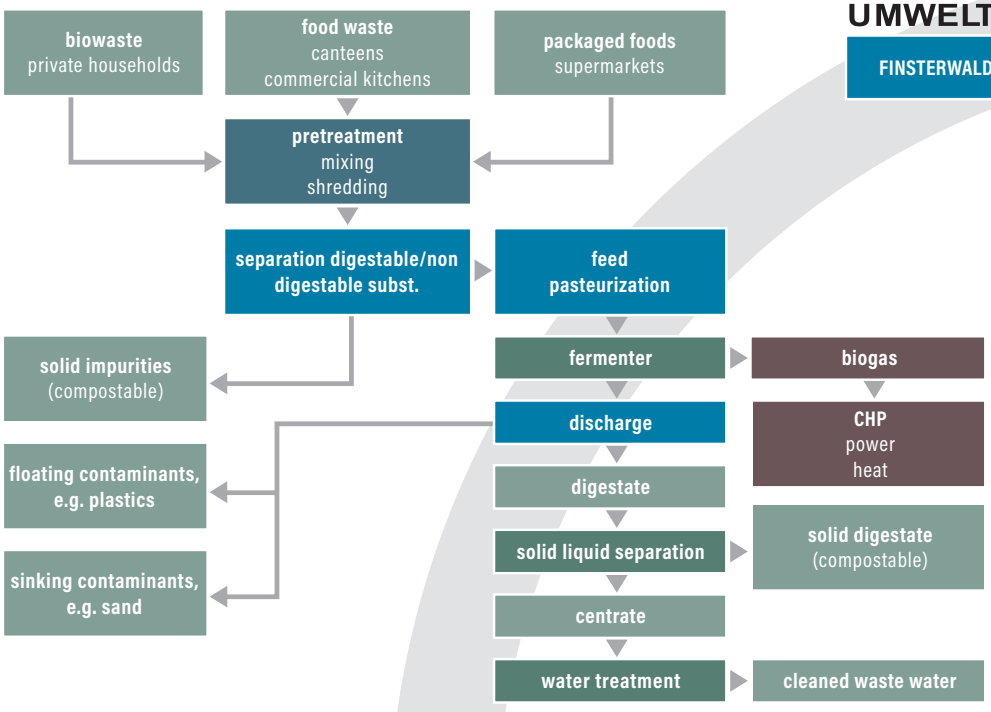
DEVELOPMENT

A FOCUS ON RELIABILITY

In all FINSTERWALDER plants the components that are of critical importance for the reliability of plant operation and thus for the later economic success, are at the center of attention and thus for the long term economic success area at the center of our attention.

A key factor for success is efficient separation of the non-fermentable fractions of the waste both in the pretreatment as well as in the process.

THE PRETREATMENT AND DIGESTION OF ORGANIC WASTE IN THE FINSTERWALDER PROCESS



FINSTERWALDER UMWELTTECHNIK

FINSTERWALDER components

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DEVELOPMENT

FINSTERWALDER SPECIAL COMPONENTS

SEPARATION INTO DIGESTABLE AND NON-DIGESTABLE FRACTIONS

To separate waste into a digestable and a non-digestable fraction, the hydraulic separation press of FINSTERWALDER Environmental Technologies is used.

» For more information, see our brochure FINSTERWALDER WASTE PRETREATMENT

PASTEURIZATION / DIGESTER FEEDING

The pasteurization module of FINSTERWALDER Environmental Technologies typically consists of a double-tube heat exchanger, storage tanks and different piston pumps.

» For more information, see our brochure FINSTERWALDER PASTEURIZATION SYSTEM

SELF CLEANING DIGESTER

After pretreatment the substrate still carries substances that settle and surface in the digester (e.g. stones, sand, bone fragments, pieces of glass, plastic, fibrous materials, …). In order for the digester to operate continuously the sediments and floating contaminants must be removed regularly.

The sediment removal system developed by FINSTERWALDER is composed of an internal floor scraper and an external sediment separator. The floating contaminants removal system consists of a patented skimmer and a standard screw press. These systems are a reliable long term solution that maximizes digester performance.

» For more information, see our brochures FINSTERWALDER SELF CLEANING DIGESTER

» For further Information SCAN TO
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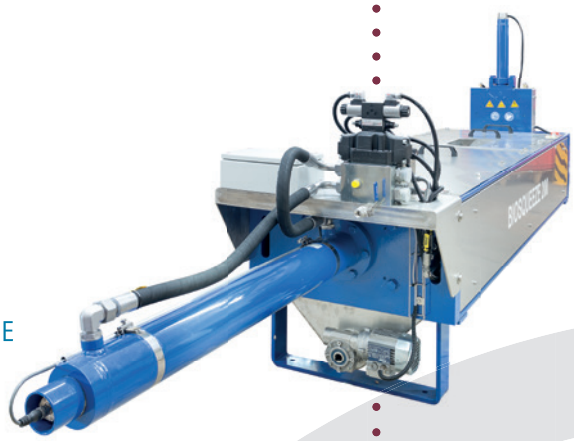
» Double-tube heat exchanger

» Floor scraper

» Separation press



SUPPORT

WE STAY IN CONTACT

Even after completion of your plant, we remain your partner.

OUR SERVICES FOR ONGOING SUPPORT

- Biological process consulting
- Waste auditing
- Spare and wear parts supply
- Expansion and planning
- Remote process monitoring
- Service and maintenance

FINSTERWALDER IS YOUR AD PARTNER OF CHOICE

- Over 20 years of experience in both national and international project development
- Customized project planning
- Numerous reference projects demonstrate the high performance of the FINSTERWALDER process and of FINSTERWALDER components
- Enormous flexibility in the components creates investment security with variable inputs
- Modeling and process simulation - optimum plant dimensioning
- Own (test) plant on the site of FINSTERWALDER
- Own manufacture of special components

FINSTERWALDER UMWELTTECHNIK

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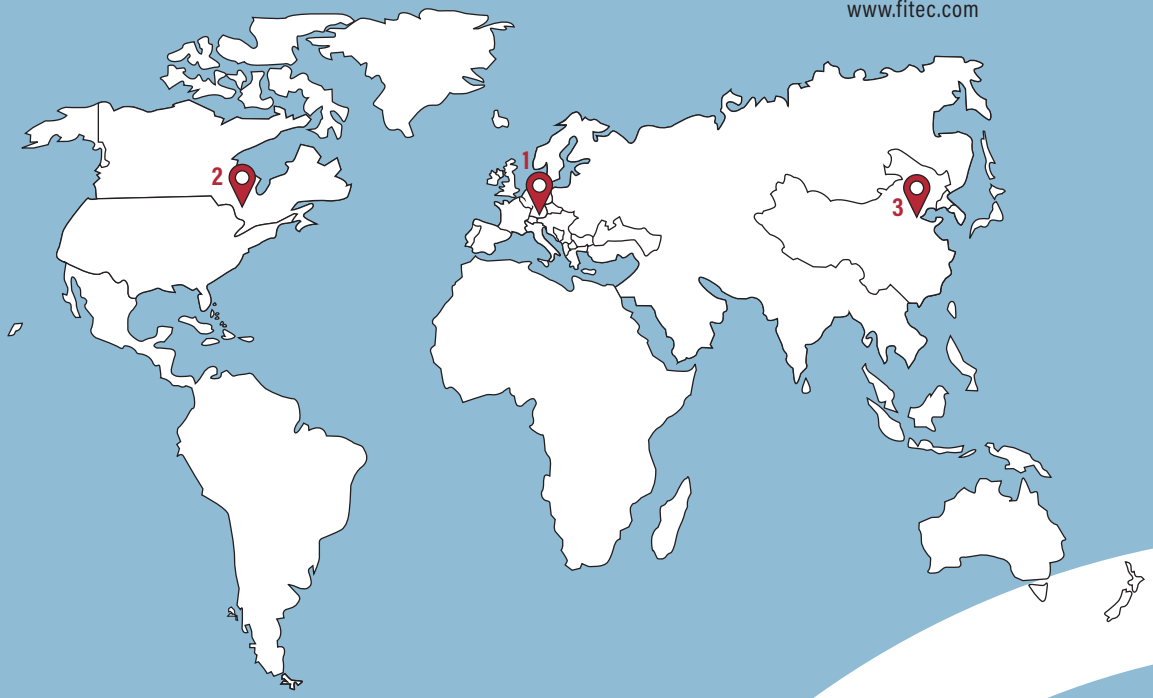

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