



Anaerobic Digestion (AD) Plant Merzig

Germany

Client	Bioenergie Merzig GmbH
Location	Merzig, Saarland, Germany
Commissioned	2011
Input (feedstock)	Whole crop (rye, cereals) silage, grass silage, maize silage
Total processing capacity	54,000 t/a
Raw biogas production	~ 1,050 m ³ /h or the equivalent of ~ 2.4 MW _{el}
Digester	2 x 3,330 m ³
Post-Digester/Storage	3 x 5,100 m ³
Biomethane	~ 560 Nm ³ /h with an additional 100 kW _{th} heat boiler

High efficiency in Saarland for a major energy provider

A milestone for environmentally friendly energy production in Saarland, Germany: **After just a year's construction** time the AD plant with gas-to-grid injection in Merzig, Germany, was commissioned in June 2011.

The plant was built by Agrafarm whose **specially developed high dry matter digestion process** enables the digestion of energy crops without the addition of slurry or liquids with little energy. Consequently the construction with digesters of smaller volume is possible and so reduces construction costs.

The plant will produce about **560 Nm³/h of biomethane**, which will be injected into the high-pressure gas grid. The plant is located on a **site of just 2 hectares and has a primary energy output of about 5 MW**. That size is equivalent to that of a conventional CHP AD plant, generating about 2.4 MW of electricity.

The distinguishing features of the Agrafarm technology **are a reduced digester volume with, at the same time, a higher energy output**. The digesters used here have a volume of 3,330 m³, are made of concrete, **heated by heating circuits integrated in the walls and base** and are covered with an **airtight concrete flat roof**, supporting the patented vertical agitators for the digestion process at a high dry matter level and at a high load.

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Agraferm GmbH, which is based in Pfaffenhofen, Germany, designs and builds Anaerobic Digestion plants. It is one of the few full service providers of turn-key agricultural and industrial biogas plants in Europe, which operates internationally. Our portfolio includes project planning and construction as well as biological and technical services.

Agraferm biogas plants have the following distinctive features

- High reliability and maximum system availability
- A small footprint, i.e. high biogas production with a minimum of land use
- Use of robust components such as digesters, agitators and pumps, these reliable components prolong the operational life of the AD plant
- Stable digestion process
- Industrial-quality plant construction

The advantages for you

- Minimum operating costs
- Optimum level of substrate flexibility
- Minimal risk of downtime
- Maximum cost-efficiency and minimal power consumption

We are committed to the long-term success of our customers through

- Planning, construction and service from a single source
- Biological and technical support services
- Many years experience with CHP-units and biomethane gas to grid injection

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