



## Pressemitteilung

Press release · Communiqué de presse

Vechta, March 2024

### Agrar GmbH Reichenbach Relies on Digestate Processing System from WELTEC BIOPOWER

#### First Kumac Plant in Germany Goes Live

In March 2024, Agrar GmbH Reichenbach commissioned its Kumac digestate processing system from WELTEC BIOPOWER. This is the first Kumac plant to go live in Germany, in addition to the 16 that have been built worldwide to date. The agricultural company based in the Vogtland region of Saxony, Germany, specialises in dairy farming and the cultivation of feed crops. In addition to the dairy farm with 1,400 cows and breeding cattle, the farmers have been operating a biogas plant with an electrical output of 845 kW since 2006. The facilities generate up to 72,000 t of liquid manure and digestate a year.

Every day, the biogas plant feeds 12,000 kWh of electricity into the public grid. In addition, the plant supplies up to 500 kW of heat to small consumers and to the site of the former Paracelsus Clinic in Reichenbach via a heating network. The plant's main business consists of the delivery of biogas via a 3.2-km raw biogas pipeline to the heating plant of Stadtwerke Reichenbach for the base load supply of flats and social facilities. The amount of electricity generated each year corresponds to the annual consumption of around 6,000 private households.

#### *Tried-and-Tested, Fine-Tuned Processes*

Within the scope of the Leipzig Biogas Expert Talks, Deutsche Biomasseforschungszentrum gemeinnützige GmbH (DBFZ) had already invited visitors to the Application Day in Reichenbach in December 2023. The numerous professional visitors made use of the opportunity to visit the biogas plant as well as the digestate processing plant of WELTEC BIOPOWER. The introduction of modern technologies and systems such as the Kumac system greatly contributes to the recycling of nutrients and the conversion of liquid manure into compost, fertiliser, animal bedding or biogas substrate. For the conversion, Kumac makes use of tried-and-tested processes that are fine-tuned to each other.

#### *High-Quality Fertiliser for Plant Cultivation*

„In Reichenbach, the output of the Kumac process consists of around 25 percent solid and 20 percent liquid farm manure and 55 percent dischargeable water. The resulting solid matter and the nutrient concentrate are applied as organic, high-quality fertiliser to our own crops. In this way, long transport routes are avoided,“ explains Lars Bittermann, Managing Director of Agrar Reichenbach GmbH. „This closes an efficient material flow cycle, and the individual areas of our portfolio interlock perfectly. From the cultivation of feed crops to dairy farming to the utilisation of the liquid manure in the biogas plant and the processing of digestate into fertiliser and water, all components have their place.“

#### *Dry Matter Content: 30 Percent*

In the first step of the liquid manure and digestate treatment, flocculants are added to the source material. These additives ensure flocculation of even the finest components, facilitating the separation from the water. At the same time, they contribute to the reduction of odour emissions. After the material has been squeezed through a belt press via various rollers against a second, water-permeable belt, the solid material can be used directly as fertiliser, compost, animal bedding or biogas substrate with a dry matter content of up to 30 percent.



## Pressemitteilung

Press release · Communiqué de presse

Organic energy worldwide

### ***One Quarter of the Original Volume***

Subsequently, the liquid phase is passed through a tank in which small particles and suspended solids are separated. Any remaining solid particles are removed by means of a fine filter. In the next step, the filtrate traverses a three-stage reverse osmosis process to remove salts and nutrients. The resulting liquid fertiliser is rich in nitrogen and merely accounts for one quarter of the original volume. Clear water accounts for the greatest share of the treatment products and is currently discharged into the receiving water.

### ***Support from the European Agricultural Fund***

The scalable modular system can be used from an amount of 70,000 t of liquid manure or digestate a year. Should the processing needs increase, several Kumac lines can easily be combined. „The processing here is almost fully automated, which also minimises the amount of personnel required“, says Managing Director Lars Bittermann. „By the way: Operators who decide to set up a system can receive funding from the European Agricultural Fund for Rural Development“, adds Nico Sudbrink, the responsible process engineer at WELTEC BIOPOWER.



Entwicklungsprogramm  
für den ländlichen Raum  
im Freistaat Sachsen  
2014 - 2020

Europäischer Landwirtschaftsfonds für die Entwicklung des  
ländlichen Raums: Hier investiert Europa in die ländlichen Gebiete

**Next Page: Photos**



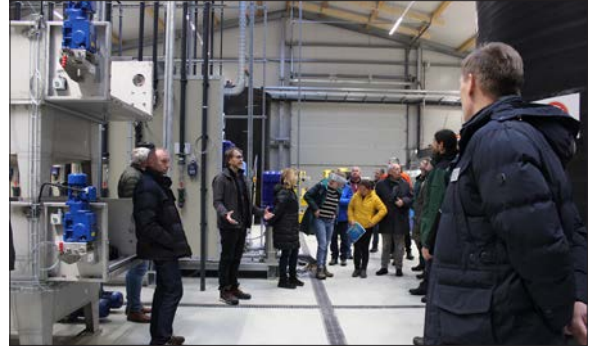
## Pressemitteilung

Press release · Communiqué de presse

### Photos



*In March 2024, Agrar GmbH Reichenbach commissioned its Kumac digestate processing system from WELTEC BIOPOWER. The agricultural company based in the Vogtland region of Saxony, Germany, specialises in dairy farming and the cultivation of feed crops. In addition to the dairy farm with 1,400 cows and breeding cattle, the farmers have been operating a biogas plant with an electrical output of 845 kW since 2006.*



*DBFZ Practitioners' Day at the WELTEC Kumac plant: Within the scope of the Leipzig Biogas Expert Talks, Deutsche Biomasseforschungszentrum gemeinnützige GmbH (DBFZ) had already invited visitors to the Application Day in Reichenbach, Vogtland, in December 2023. The numerous professional visitors made use of the opportunity to visit the biogas plant of Agrar GmbH Reichenbach as well as the Kumac digestate processing plant of WELTEC BIOPOWER.*



*The remaining liquid phase is first aerated in a stainless steel flotation tank. In this way, small particles and suspended matter react and settle to the bottom of the tank. This sludge is then re-transferred to the treatment process. The other solid components of the liquid phase are separated by a filter.*



*The final process step comprises the application of a three-stage reverse osmosis procedure. The remaining liquid phase has already reached a very clean state. The semipermeable membranes in the three-stage reverse osmosis procedure can separate 95 to 99 percent of the dissolved salts and nutrients. The separated nutrient concentrate can be used as liquid fertiliser that is easy to transport.*

### Next Page: Company Portrait



## Pressemitteilung

Press release · Communiqué de presse

Organic energy worldwide

### Company Portrait

Since its foundation in 2001, the **WELTEC** group of companies from Vechta in Lower Saxony has developed into one of the world's leading specialists for the construction and operation of biogas and biomethane plants. The Group covers the entire biogas value chain with the design, planning, and construction of energy plants, permanent and temporary plant operation, 24/7 service, and sustainable utilization concepts for output streams.

One of **WELTEC BIOPOWER's** strengths is the construction of individual, technically sophisticated solutions up to a plant size of ten megawatts. A central element here is the high proportion of components developed in-house. Stainless steel technologies also ensure flexible substrate use, fast assembly with low effort, and a consistently high-quality standard regardless of location. After commissioning, **WELTEC's** mechanical and biological service significantly ensures economic efficiency.

The company has just as much experience in the field of biogas production and utilization. At ten of its sites the plants produce biogas. Some of this is processed into biomethane and made available to energy suppliers and filling station operators throughout Germany via the public gas network. Furthermore, at 16 locations, municipalities and companies, such as those in the gardening, housing, and healthcare sectors, are supplied with decentralized heat as part of **WELTEC's** energy contracting.

Proximity to customers and investors is an important concern for the biogas specialist, which is why the Group is represented worldwide with its sales and service network. Customers include companies from the waste and food industries, agriculture, and the wastewater sector. The **WELTEC** Group and its 164 employees have implemented over 350 energy plants in more than 25 countries on five continents. The biogas specialist thus ensures annual savings of around 600,000 tons of CO<sub>2eq</sub>.

### If you publish the press release please forward a copy to us:

Lena Harms  
Marketing  
WELTEC BIOPOWER GmbH  
Phone: +49 4441/99978-220  
Email: [presse@weltec-biopower.de](mailto:presse@weltec-biopower.de)

### Social Media:

You can also find us on the following social media platforms:



[www.twitter.com/WELTECGermany](https://www.twitter.com/WELTECGermany)



[www.linkedin.com/company/weltec-biopower-gmbh/](https://www.linkedin.com/company/weltec-biopower-gmbh/)



[www.youtube.com/user/WELTECBIOPOWER](https://www.youtube.com/user/WELTECBIOPOWER)