

# FimusKraft Biogas Plant (FKBP)

*Electrify your bio-waste!*

**Is the biowaste a cost or income for you?**



**FimusKraft Biogas Plant FKBP turns the biowaste cost-effectively into electricity, heat and nutrient rich bio-fertilizer.**

## Energy

*Cut down your energy bill*

### Energy Production

The soul of the biogas plant is the fermentation. To ensure optimal gas production the biogas will be pre-treated. FKBP combines bio-gas fermentation with an innovative modular boosting unit (MBU). MBU allows to obtain biogas with 30-50% higher energetic efficiency than traditional fermentation method, anaerobic digestion (AD).

The biogas content of cow dung is about 15-25 m<sup>3</sup> / wet weight ton. The methane content of biogas is 60% and up.

Material	Biogas production m <sup>3</sup> / wet weight ton.	Methane content of biogas
Slaughterhouse waste	250	70
Biowaste	150-250	65
Field biomass	50-250	55
Pig manure	25 -35	65
Cow dung	15-25	60

### Electricity and Heat

Each module produces about 30 kW electricity and 60 kW heat .

*Fill in the local wind and waterpower grid with bio electricity.*

Use the electricity for the use of your own farm ,for lighting and usage and charging of machines and devices.

The process produces heat, that will be used in warming the farmhouses and storages.

## Handling of Biowaste

*No transportation  
No gate fee cost  
Less smell  
Efficient Bio fertilizer*



### Transportation of biowaste

Place biogas plant next to place where it is produced and move the biowaste directly to bio-fermenter.

### Less Smell

The fermented biowaste product is environmentally friendly compost, that has remarkably less smell.



### Bio-fertilizer

Fermentation-process is changing the biowaste to nutrient rich fertilizer/compost, high in nitrogen.

*Produce high quality fertilizer to your fields!*

Further processing after fermentation produces high quality bio fertilizer both solid and liquid.

You can use the fertilizer in food production, feed cultivation or cultivation of vegetables and cereals.

## Investment and Operating Cost

### Investment

The investment cost (with FimusKraft's biogas plant) is remarkable (25-40 %) lower than with traditional fermenters based on Anaerobic Digestion (AD).

The payback time of the investment is about 4,5...9 years (depending on the local electricity tariff price)

*Low Investment and fast payback*



### Installation

The biogas plant is designed to a movable size modular package, module. The modular design of FKBP is very compact and can be installed in 2 - 6 weeks (including FKBP testing and users training).

The modular design enables easy and inexpensive scaling up to meet the different needs. Extra modules are fast to add. Each module produces 30kW electricity and 60kW heat, and nutrient-rich fertilizer

*Fast and easy installation*

### The system grows according to needs

The biogas plant requires minimum 4-7 m<sup>3</sup> biowaste daily to work properly. For example, waste from 150/200 cattle is needed for the minimum amount. Different combinations of bio-waste can be used.

### Upgrade existing plants

MBU can be easily integrated in existing biogas plants to upgrade them with FKBP key technology..



As well you can use existing cow dung storages to be easily integrated in existing biogas plants to upgrade them with FKBP key technology.

*Upgrade your existing fermentation process*

## Operation

### Optimizing the bio-gas production

In addition to cow dung different kinds of bio waste can be used in the process. The biowaste is pre-treated to ensure optimal gas production. The energy potential of the biowaste can be tested in laboratory.

FKBP produces 10 % - 20 % more biogas in amount than with traditional fermenters.



*Easy to Use Fully automated*

### Operation

FimusKraft's biogas plant is continuously operated, fully automated, and can be remotely monitored. The process and temperature control are accurate. Automation includes also the automatic on-line gas content analyzer.

### Maintenance

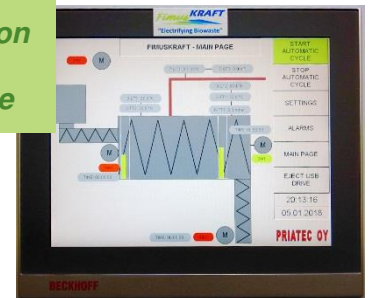
FKBP has unique design. It is based on constant FIFO-treat for the bio-waste.

All maintenance work can be carried out from outside of the reactor -> no production breaks-



*No production breaks for maintenance*

FKBP's daily usage and maintenance require only 30 minutes overall.



## FimusKraft Biogas Plant at Farm

Biogas brings electricity and heat to your

Fermentation produces biogas

