



THE BIOGAS PLANT CONSTRUCTION EXPERTS

SERIOUS | INNOVATIVE | EFFICIENT

We are passionate about developing and implementing pioneering concepts for renewable energy generation from agriculture and waste management systems.



Your advantage: **Sprinkled**, not stirred!



biogasSA

BIOGAS IS OUR FOCUS

FOR OVER 20 YEARS WE HAVE BEEN INVOLVED IN THE DEVELOPMENT OF EFFICIENT BIOGAS PLANTS

How can agricultural waste products be utilised profitably? Stefan and Norbert Sauter, managing directors of Sauter Biogas GmbH, were presented with this question from an early age. Their parents – having run a farm successfully – had devoted their attention to biogas utilisation since the late 1980's. This in turn inspired the brothers and the generation of biogas both in theory and in practice which has been a solid part of their lives ever since. The Sauter farm has been operating its own biogas plant since 1992.

Based on their plant experience with stirring systems the brothers set out to achieve a goal: to develop a digester without internal technical components. Driven by this idea numerous experiments followed. At the same time the Sauters developed a vision of being able to process a variety of residues.

Following years of research, the first biogas plant with the groundbreaking and patented, 'Sprinkled, not stirred!' system was set up in 2006. Meanwhile, Sauter Biogas GmbH has built 43 plants from 75kW to 4MW in Europe, America and Africa – 33 of them are in Germany (Nov. 2015).



OUR UNIQUE SYSTEM

SLURRY, MANURE, CLOVER OR GRASS: WE TURN EVERYTHING INTO GAS!

Sprinkled, not stirred!

Controlled by a pump system and jets, liquid substrate is sprinkled onto the substrate surface and then extracted again from the bottom of the digester. This process instead of traditional mixing ensures that different stages of the digestion process take place in different zones within the digester and different sprinkler intensities within the zones ensure a controlled digestion process.

Active and not completely homogenised biomass particles predominantly sit at the top of the digester and the substrate discharged from the lower area is almost completely digested. This enables optimal gas yields to be achieved.

Biomass bunker in the digester

In addition, the Sauter Biogas System provides the basis for a very simple solids input unit using a feeding pit or screw feeder and a hydrolysis and acidogenesis zone that is created around the feeding unit. Consequently, a reservoir of fresh biomass builds up in the digester, which allows for flexible feeding intervals of up to three days.

From this reservoir, organic acids, which have been generated through the sprinkling process, are distributed in the digester eliminating the need for expensive bunker and sprinkler technology.



BIOMASS JET STREAM



FEEDING PIT

OUR SYSTEM'S ADVANTAGES AT A GLANCE:

SPRINKLED, NOT STIRRED!

Component-free digester

- » Optimal safety – low maintenance
- » All system components are located outside the digester for easy access and reduced downtime risks

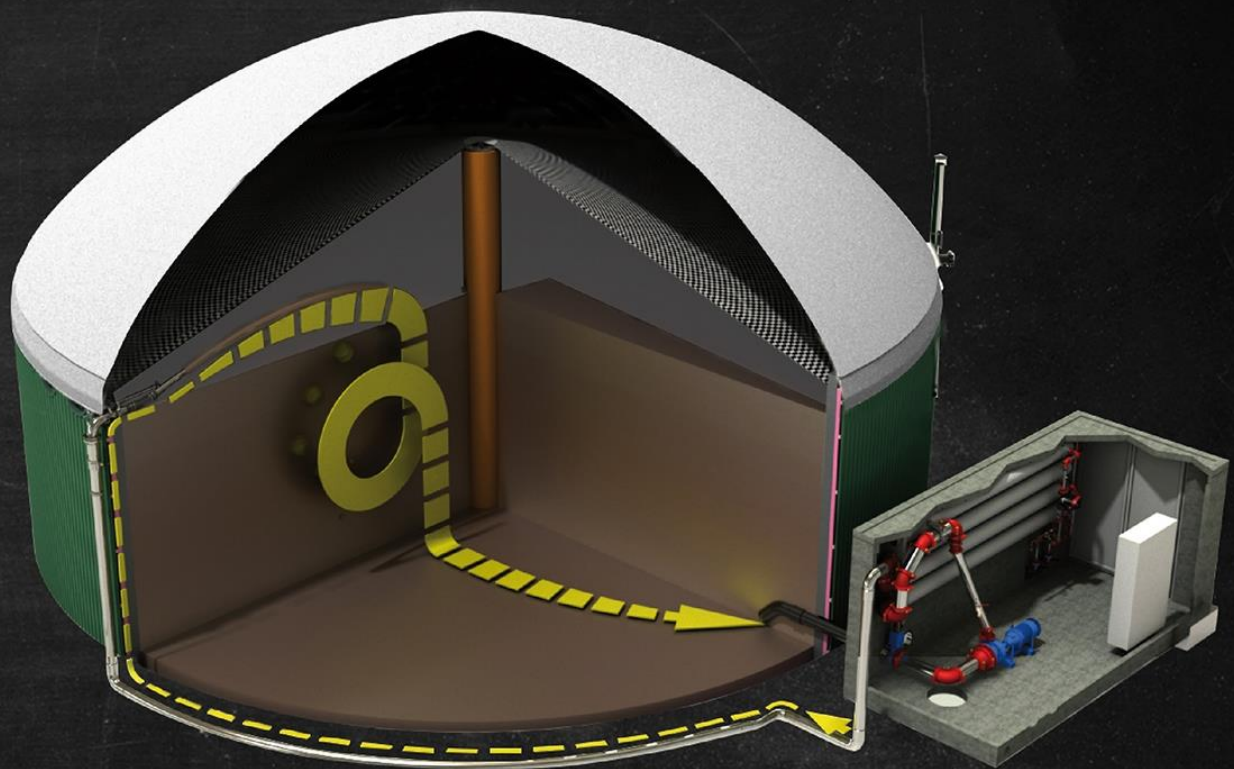
All substrates are usable

- » From slurry to 100% manure or even forage
- » No biomass bunker is required!

Low energy consumption

- » Our irrigation system requires less energy than agitation systems or agitation jets





THE SAUTER BIOGAS SYSTEM – THE FUTURE OF BIOGAS PRODUCTION

OUR PLANT TYPES

NO MATTER WHAT TYPE OF SYSTEM YOU CHOOSE,
THE BASIC PRINCIPLE REMAINS THE SAME!

The Pump System – the heart of our biogas plants

At the very heart of our biogas plant is the pump system which is located in the plant room between the digester and the secondary fermenter or digestion storage tank. It houses all necessary components including substrate pumps, substrate dispenser, heat exchanger, electrical and mechanical control systems.

Concrete Plant Room Module (CPRM)

This pre-fabricated concrete building is fitted out with equipment at the factory and delivered to the construction site. Alternatively, we can install the equipment in a building on your site.

Plant Container (PC)

This steel shipping container features the same equipment as the CPRM and is designed to be shipped by sea. We provide this option in case road transport is not possible and it also provides the ideal solution covering all parts of the world with biogas technology made in Germany!

Sauter Biogas Plants

SB Mini "LEA" – Our 'most compact system' with the latest technology for all types of biomass, suitable for all farms capable of generating up to 75kW

- » LEApur: Pure slurry with a small proportion of manure and feed residue, pumpable biomass
- » LEAmix: For biomass such as solid manure, feed residues, across a wide spectrum of input materials and a proportion of slurry
- » LEAspezial: The plant for up to 100% solid manure

SB Midi – The reliable midrange model

- » Power output: 150 kW to 800 kW

SB Maxi – The upper middle class with a spacious layout

- » Power output: 500 kW to 1.5 MW

SB Mega – The upper class model for the sophisticated

- » For power outputs above 1 MW, our system offers specific advantages including individual design at very low construction costs!

SERVICE PORTFOLIO

FROM PLANNING THROUGH TO CONSTRUCTION AND MAINTENANCE –
YOU RECEIVE EVERYTHING FROM A SINGLE SOURCE

Consultation

Our knowledge and experience in agriculture enable us to advise you in all aspects relating to biogas production. We have been involved in biogas generation since the late 1980's. With a focus on creating a harmonious system we develop the right concept, individually tailored to your operation.

Planning and authorisation

We plan your biogas plant, starting with economic feasibility calculations all the way through to plant design. Preparing authorisation applications in relation to building and emissions regulations is also part of our service portfolio. Our aim is to set up your biogas plant quickly and cost-effectively, ensuring high long-term returns.



Plant construction

After planning and authorisation is completed, we build your biogas plant utilising the 'Sauter Biogas System' and if chosen can hand it over to you as a turnkey solution. As an experienced provider of complete solutions we are always available to answer all questions relating to your plant. We also supervise construction and carry out all installation work employing our own experienced teams.

Service

After the plant has been commissioned we will continue to provide you with support. Accompanying you throughout the crucial first year of operation is a solid part of our service and regular online monitoring helps us check and compare plant data to ensure your plant is operating optimally.



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