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Member of the  
German Biogas  
Association 

aK Components INTL  
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to ISO 9001 

Follow us on:  
    

-  **PLANTS**  
Efficient. Innovative. Sustainable.
-  **COMPONENTS**  
Proven. Robust. Reliable.
-  **UTILISATION**  
CHP. Biomethane. Digestate.
-  **SERVICES**  
Support. Advice. Expertise.



**COMPONENTS**  
Proven. Robust. Reliable.

agrikomp

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**ORIGINALS**  
- SINCE 2002 -

**Our components.**  
Solid and reliable.  
Trust in the originals!

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#### BUILT TO LAST - SINCE 2002

With our experience, we have been developing and manufacturing perfectly integrated components in accordance with international CE and safety standards for over 20 years. Robustness, efficiency and reliability are our claim. Continuous development and innovation guarantee state-of-the-art technology and maximum availability.

Our popular and trusted components are utilized in hundreds of biogas plants worldwide. Continuous research and development, uncompromising quality, numerous options and excellent spare parts supply guarantee the best product experience.

#### VISION AND INNOVATION

The holistic and visionary way of thinking of the company's founders Robert Bugar and Michael Engelhardt still decisively shape the agriKomp components for biogas plants today. The name agriKomp stands not only for efficient technologies, but also for innovation and practicality. Pioneering systems such as the Paddelgigant® agitator or the Biolene® gas storage, which were introduced to the market in 2002, are just a few examples of brilliant engineering achievements from agriKomp research and development.

#### RELIABLE - EVERYTHING FROM ONE SOURCE

The agriKomp group develops and manufactures all essential components of a biogas plant in its own network. This guarantees absolute reliability and consistently excellent quality. Key components such as the Quetschprofi® separator, the Paddelgigant® agitator and the robust Vielfraß® feeding technology have set international standards in terms of stability, reliability and energy efficiency.

#### QUALITY AND DEDICATION

„If you wish to stay ahead you must be innovative, have reliable and efficient products in your portfolio and also provide a secure service. This requires dedicated people and solid engineering“, says Robert Bugar.

## AGITATORS

For demanding substrates.

### OUR AGITATORS

For demanding substrates agitators play a central role in biogas plants. They ensure even mixing and temperature distribution in the digester with a regular supply of raw materials to the bacteria, promoting movement of biogas through the substrate.

### AVAILABLE PRODUCTS

- ✔ PADDELGIGANT®
- ✔ AGRIMIX

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# Paddelgigant®

## For demanding substrates!



### PROVEN AGITATOR FOR DIGESTERS

The Paddelgigant® from agriKomp, which was already introduced to the market in 2002, is one of the most widely used agitators in biogas plants and has proven its high efficiency in numerous applications. The Paddelgigant® is available for a wide variety of tanks, whether in different installation heights or also in different lengths of the agitator shaft.

### FREE SUBSTRATE SELECTION

The Paddelgigant® is a slow-running large agitator that mixes the substrate according to the tank size and the medium in the digester. The bacteria continuously receive new feed and the anaerobic degradation of biomass is optimised. The Paddelgigant® was specially designed for structured substrates and high dry matter contents. This operational capability opens up a wider range of feedstock for biogas plant operators and minimises the need for substrate preparation (shredding, chopping, etc.).

### UNPARALLELED EFFICIENCY

The Paddelgigant® has four angled, low-speed paddles and is therefore very energy-efficient. The paddles cause optimal and biologically friendly mixing in the shortest possible time. Sinking or floating layers are mostly avoided and the gases are stirred out. It is also suitable for use in thermophilic plant operation.

### EASILY MAINTAINED

The low-maintenance drive unit is mounted on the outside of the digester and is therefore accessible at all times. The agitator shaft is equipped with a maintenance-free and durable plain bearing inside the digester.

### YOUR ADVANTAGES AT A GLANCE

- ✓ Most utilised paddle agitator in Germany
- ✓ Excellent for the digestion of renewable energy crops and demanding substrates such as long-fibre manure or grass silage
- ✓ High efficiency reduces the power consumption
- ✓ Optimum mixing of demanding sub-strates with high dry matter concentration
- ✓ Slow rotation mixing, therefore gentle to bacteria
- ✓ Durability through robust construction
- ✓ Low maintenance mixing system for maximum reliability
- ✓ Maintenance-free sealing of the digester side wall penetration
- ✓ Paddle shaft with a maintenance-free and durable plain bearing
- ✓ Available in different installation heights above tank base

### TECHNICAL DATA

Agitator weight	Approx. 1,900 kg
Dimensions	Width: 4,300 mm Height (of paddle shaft above tank floor): 4,600/5,420/6,420/7,160 mm
Dry matter content	12 – 15 %
pH-Value	6 – 8
Temperature	Up to 55 °C
Drive type	Electric motor with three-stage planetary gear
Drive power	16.5 kW
Drive Speed	10 rpm
Electrical connection	40/690 V AC, 50 Hz
Operating time	0 – 60 %

### OPTIONS

- ✓ EX-proof Version
- ✓ Control unit
- ✓ Extended version for large digesters

**RELIABLE AND STRONG MIXING PERFORMANCE**

The agriMix submersible agitator was specially developed for agitating and homogenising substrates with lower viscosity. agriMix is particularly suitable for agitating the digestate storage or, in combination with a Paddelgigant®, for use in the main digester.

**DURABLE WITH HIGH SAFETY STANDARDS**

Safety and durability as well as ease of maintenance were at the forefront of the development. This is ensured by the use of high-quality components, robust and proven technology and integrated monitoring systems.

**FOR THE OPTIMAL FLOW**

In the technical design of the agriMix, the focus was on a flow-optimised agitator blade. This results in an optimal and energy-efficient transfer of the stirring energy into the liquid substrate. During operation, the agriMix is submerged in the substrate. The operating height of the agriMix can be adjusted to the fill level of the tank by means of a lifting device with a cable winch. The agitator is equipped with a plug system where the cable runs in a protective tube. For maintenance, only the agitator itself needs to be removed.

**YOUR ADVANTAGES AT A GLANCE**

- ✔ Long service life due to robust, proven technology and use of quality components
- ✔ Strong mixing performance with low energy consumption
- ✔ Height adjustment to suit to the filling level
- ✔ Suitable for varying fill level
- ✔ High safety standard due to integrated motor temperature monitoring
- ✔ Easy servicing due to detachable power cable connection
- ✔ Lower operating costs due to long maintenance intervals

**TECHNICAL DATA**

Drive	Spur gear motor
Drive power	15 kW
Agitator blade rotations	340 rpm
Electrical connection	400/690 V/50 Hz
Blade diameter	810 mm
Total length (incl. console + wings)	approx. 1,380 mm
Width	810 mm
Height	810 mm
Total weight (incl. console)	300 kg



## FEEDING SYSTEM

Straightforward and reliable

### VIELFRAß® – THE RELIABLE FEEDING SYSTEM FOR SOLIDS

The feeding of digesters has a key role in the economic and efficient operation of a biogas plant. A reliable and effective solid feeding system will ensure optimal introduction of biomass to the digester with increased gas yield, lower energy consumption and reduced wear on the agitators and pumps.

To maximise plant performance, it is becoming increasingly important to choose a feeding technique that can also process more difficult to handle materials. With our Vielfraß® portfolio, you have a wide range of feedstock options!

The variety of the Vielfraß® family is unique on the market: basic units from 5 bis 13 m<sup>3</sup>, discharge container of 20, 30 and 40 m<sup>3</sup> allow a multitude of possible combinations up to a discharge capacity of 90 m<sup>3</sup>. The portfolio is rounded off by the Vielfraß® LEF with a capacity of up to 139 m<sup>3</sup>. Der Vielfraß® LEF is equipped with moving floor/walking floor technology and PreMix unit allowing homogeneous liquid feed delivery to the digesters.

### AVAILABLE PRODUCTS

- ✓ VIELFRAß® ECO 5 m<sup>3</sup>
- ✓ VIELFRAß® ECO
- ✓ VIELFRAß® ECO WITH DISCHARGE CONTAINER
- ✓ VIELFRAß® LEF

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**THE BASIC PRINCIPLE OF THE VIELFRASS®**

Trouble-free feeding of the digester is a challenge for technology. For example, renewable energy feedstocks often contain stones and sand, which can increase wear and malfunctions. Feeding solid manure and long-fibre grass silage can also push some technology to its limits.

**Vielfraß® ECO:**

The Vielfraß® ECO solids placement system developed by agriKomp is specially designed to meet these challenges. The basic principle is two counter-rotating screws with knives, also called dissolving screws, which ensure loosening and mixing of the substrate.

This also prevents the so-called „bridging“. The substrates are then fed into the upper section of the digester via the main screw conveyor. This enables a high conveying capacity with reduced effort at the same time. Different control variants enable feeding according to demand.

**Vielfraß® LEF:**

Unlike the Vielfraß® ECO the substrate in the feed hopper is moved in the direction of the cross-feeding and transverse screw. This conveyor technology is particularly suitable for heavier and larger feed volumes (up to

139 m³). Our Vielfraß® LEF can additionally be equipped with either a PreMix unit or a high conveying technology.

**FLEXIBLE FEEDING TECHNOLOGY – MANY OPTIONS**

The Vielfraß® ECO can be individually adapted to the system size by installing extension modules. The Vielfraß® ECO can be expanded with up to 4 extension rings to a capacity of up to 12 m³.

Our variants with a moving wall to convey the feedstock offer even more feed volume. Additional feed options allow adaptation to the most diverse substrate conditions. If, for example, more than 50% solid manure is fed, the Vielfraß® can also be equipped with an additional third disintegrating screw with long teeth. Our Vielfraß® LEF, which works with moving floor / walking floor technology, can also be equipped with a PreMix unit allowing homogeneous liquid feed delivery to the digesters.

The Vielfraß® system includes extremely robust, safe and low-maintenance stainless steel components. All components at risk of corrosion are made of stainless steel (SS304) and are therefore very durable. All screws are optionally available in stainless steel.

**YOUR ADVANTAGES AT A GLANCE**

- ✔ Excellent for demanding substrates such as solid manure and grass silage
- ✔ Maximum resistance to sand and stone inclusions due to large-dimensioned screws
- ✔ Low maintenance due to high-quality stainless steel components
- ✔ Energy-saving and safe feeding of the substrate
- ✔ Robust charging screw for a trouble-free feeding
- ✔ With weighing unit as an option
- ✔ Many options for expanding the feeding capacity

**FOR ALL VARIANTS OF THE VIELFRASS®-FAMILY**

- ✔ Vielfraß® technique developed from many years of experience
- ✔ Minimum energy consumption (proven by long-term studies)
- ✔ Robust construction and convenient maintenance
- ✔ Integration into aK Cockpit; easy recording of feeding regime etc.
- ✔ Feeding according to demand through interval control; feeding via weight or batch feeding
- ✔ Construction in accordance with the regulations of machinery directive 2006/42/EC



VIELFRAB® ECO 5 m³

The robust solid feeder Vielfraß® ECO is specially designed for farm-based small-scale biogas plants and small feed quantities. It is a cost-effective variant for batch feeding without longer storage capacity. Optionally, the capacity can be increased up to 12 m³ with extension rings. Equipping with a disintegrating screw unit or even a third disintegrating screw with long teeth is optional and also possible to retrofit.

VIELFRAB® ECO

The Vielfraß® ECO is available as a basic model with 11 m³ capacity. The two dissolving screws with knives are included in the standard scope of supply; this means you can already feed demanding substrates with the standard version.

Numerous options make the Vielfraß® ECO your individual solids feeding system: You can expand it to 13 m³ capacity with the forth attachment ring and equip it with a scale, platform and additional display. In case of a very high use of manure, it can be retrofitted with a third disintegrating screw with long teeth. All screws are optionally available in stainless steel (SS304).

VIELFRAB® ECO WITH DISCHARGE CONTAINER

The design of the Vielfraß® ECO in combination with a discharge container saves precious working time. Our discharge containers in sizes of 20, 30 or 40 m³ allow additional capacity.

The various discharge containers, which can be docked to the left, right or both sides of the Vielfraß® as a double container, can be freely combined. The Vielfraß® ECO with 40 m³ double container allows a capacity of up to 90 m³.

VIELFRAB® LEF

The Vielfraß® LEF is equipped with push elements respectively walking floor technology, which move the substrate in the feed hopper towards the cross-feeding screw and discharge screw. When developing the solids feeder, deliberate attention was paid to an energy-saving, robust and low-maintenance design. By installing special screws in the solids feeder, manure and less pre-treated substrates can also be fed. The Vielfraß® LEF can be optionally supplemented with a PreMix unit allowing homogeneous liquid feed delivery to the digesters.



TECHNICAL DATA

	ECO 5M³	ECO	LEF
Material	Steel and stainless steel SS304		Floor, walls and thrust elements, screws: stainless steel
Capacity	Basic unit: 5 m³. Opt. with hopper (3 rings): 11 m³ and 4 <sup>th</sup> ring up to 13 m³	Basic unit with funnel: 11 m³. Opt. with 4 <sup>th</sup> ring up to 13 m³	From 58 up to 139 m³
Feeding capacity	from 0.2–0.8 m³/min. (Depending on dry matter content and structure/cut length of the substrate)		
Power consumption	Approx. 0.1 – 0.3 kWh/m³		
Drive & drive power	1 x main screw: 15 kW 2 x dissolving screw: je 1,5 kW		1x discharge screw: 7.5 – 9.2 kW 1x churning screw: 3 kW each 2-3x toothed roller: 3 kW each

DISCHARGE CONTAINER (DC)	FOR VIEFRASS® ECO			FOR VIEFRASS® LEF					
Stock volume	20	30	40	58	73	88	97	113	139
Length	4	6	8	10,3	10,3	11,75	10,3	11,77	11,77
Drive	Hydraulic			Hydraulic					
Drive power	2,2 kW			≤ 88 m³: 4 kW			≥ 97 m³: 5,5 kW		
Material	Stainless Steel SS304			Floor, walls and thrust elements, screws: stainless steel					

OPTIONS

- ✓ Control cabinet incl. control, solo component
- ✓ Main screw feeder, stainless steel
- ✓ Disintegrating screw unit with knives – stainless steel
- ✓ Platform incl. railing
- ✓ 4<sup>th</sup> ring as funnel, vertical (extension to 13 m³)
- ✓ LED additional display for scales without weighing computer
- ✓ Scales



# SEPARATOR

For slurry and digestate

## SEPARATOR

Considerable amounts of substrate are moved during the operation of biogas plants. The solid/liquid separation of the digestate can secure several advantages for the operator in terms of transport, storage and energy consumption.

In the separation technology, the digestate divided into a liquid and a solid phase.

The solid fraction can be stored in a suitable containment or spread on agricultural land in the same way as solid manure. The liquid phase can also be used as a nitrogen-rich fertiliser or fed to a further digestate treatment (e.g. fractional evaporation with agriFer® Plus from agriKomp).

## AVAILABLE PRODUCTS

- ✔ QUETSCHPROFI®
- ✔ QUETSCHPROFI® PLUS

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# Quetschprofi®

## More storage capacity through separation.



### RELIABLE AND ECONOMICAL SEPARATION

With the help of the innovative Quetschprofi® separation technology, digestate can be processed economically up to a desired dry matter content of over 25 percent. Every biogas plant can be optionally equipped with a Quetschprofi®. This enables seamless retrofitting of the plant for value-added utilisation of the digestate.

### HOW THE QUETSCHPROFI® WORKS

The substrate is fed via an eccentric screw pump that pulls in the substrate. A robust press screw drives the substrate through a rigidly mounted, fixed slotted filter screen and presses it against the press cone. As a result, the liquid part of the substrate is drained off via the slotted filter screen. The solid part is conveyed out towards the front against the press cone. The minimal distance between the press screw and the slotted filter screen ensures low wear and a long service life of the screen. The dry matter content of the solid fraction can be adjusted from 15% to over 25% by means of the infinitely variable contact pressure, which can provide up to 15% additional storage capacity. Due to the low connected load of the electric motor, the system works in a very energy-saving way.

### PERFECTLY MATCHED ACCESSORIES

Optionally, the Quetschprofi® can be equipped with various components as attachments. All components can be seamlessly integrated into the existing system technology and control. Whether equalisation tanks for higher and optimal utilisation, slotted filter screens or platform solutions - here you can choose from different variants depending on your needs.

### HIGH DURABILITY WITH MINIMAL MAINTENANCE

Only robust technology and high-quality materials are used for the Quetschprofi®. This guarantees maximum reliability and longevity, which is particularly important with high-fibre digestates. In addition, permanent oil lubrication of the press screw bearing unit and a permanently sealed mechanical seal between the bearing unit and the substrate ensure minimal maintenance.

### YOUR ADVANTAGES AT A GLANCE

- ✔ Separation of high-quality nitrogen and phosphate fertiliser
- ✔ Optimisation of storage capacities
- ✔ Lower investment costs for digestate storage
- ✔ Reduction of transport and application costs for digestates
- ✔ Commercialisation possibilities for the digestate
- ✔ Savings in electricity consumption

### TECHNICAL DATA

Main drive	Spur gear motor
Drive power	2.2 kW (optional 3,0 kW)
Drive speed	24 rpm (optional 37 rpm)
Electrical connection	400 V AC, 50 Hz
Oil quantity in the gear motor	3.0 l
Screw press	Stainless steel (SS304), 8mm thick, carbide coated, with mechanical seal
Slotted filter screen drum	Stainless steel (SS304) with 0.5mm screen gap width
Optional	Stainless steel (SS304) with 0.25; 0.75 or 1.00 mm screen gap width
Output regulator	Pneumatic cylinder, infinitely adjustable (optional flap system)

# Quetschprofi® Plus

## Highest throughput & separation efficiency

### OUR HIGH PERFORMER

The Quetschprofi® Plus is the ideal choice for areas where high performance and reliability are required.

It is the high performer among the separators and was specially developed for applications where high performance in terms of throughput and separation efficiency is absolutely essential. For example, for larger biogas-, biowaste- and industrial plants as well as in sewage treatment plants.

With the innovative Quetschprofi® Plus, digestate can be processed economically up to a desired dry matter content of up to 30%. The stainless steel housing guarantees the best stability. The enlargement of the housing, the sieve and the press screw by 100 mm enables a significantly higher throughput capacity of 10% - 15% compared to our Quetschprofi®.

Due to the precise and low tolerance between the screen and the high-performance screw, the new Quetschprofi® Plus achieves a higher separation efficiency.

The pneumatic unit can also be optionally equipped with a frequency converter. This allows the dry matter and nutrient content to be adjusted even more finely. The screw is even more robust due to the hard metal reinforcement (equipped with carbide plates) and thus guarantees the longest service life.

A level monitor in the oil reservoir for the central lubrication of the mechanical seal provides best protection and monitoring of the mechanical seal.

### YOUR ADVANTAGES AT A GLANCE

- ✔ Higher throughput (10–25 %) and higher separation efficiency of dry matter and nutrients
- ✔ For applications where high performance is required
- ✔ Housing made of V2A stainless steel aus V2A-Edelstahl – thus longer service life is possible
- ✔ High-performance screw (with carbide tip)
- ✔ Dry matter and nutrient content finely adjustable through frequency converter
- ✔ High ease of maintenance due to optimised design
- ✔ Better monitoring possibility and protection of the mechanical seal due to the level monitor

### TECHNICAL DATA

Main drive	Spur gear motor
Drive power	3.0 kW, FC controlled
Drive speed	24.0 – 37.0 rpm
Electrical connection	400 V AC, 50 Hz
Oil quantity in the gear motor	3.0 l
Screw press	Equipped with carbide tips
Slotted filter screed drum	Stainless steel with 0.5 mm screen gap width, optional: 0.25; 0.75 or 1.00 mm
Output regulator	Pneumatic cylinder, infinitely adjustable
Throughput	8 – 15 m³/h
Optional	Expansion tank 400 l (stainless or galvanised steel) Frequency converter.



# TANK CONSTRUCTION SYSTEM

For the highest demands

## TANK CONSTRUCTION SYSTEM: FORMPROTECT®

Save yourself time and effort with the formwork system exclusively available from us for a wide variety of concrete structures! With the new system, tanks up to a diameter of 40 metres and with wall thicknesses of approx. 5–30 cm can be constructed without the need for costly temporary formwork.

### PATENTED SYSTEM

Formprotect® is a new, patented system of lost formwork made of rigid PVC elements which are interconnected to form a durable protective shell. After concreting, the plastic formwork becomes an integral part of the structure. From a functional point of view, the resulting reinforced concrete composite structure consists of three layers in one wall: the plastic shell on the inside, the reinforced concrete wall with or without insulation as the core, and the plastic shell on the outside.

### AVAILABLE PRODUCTS

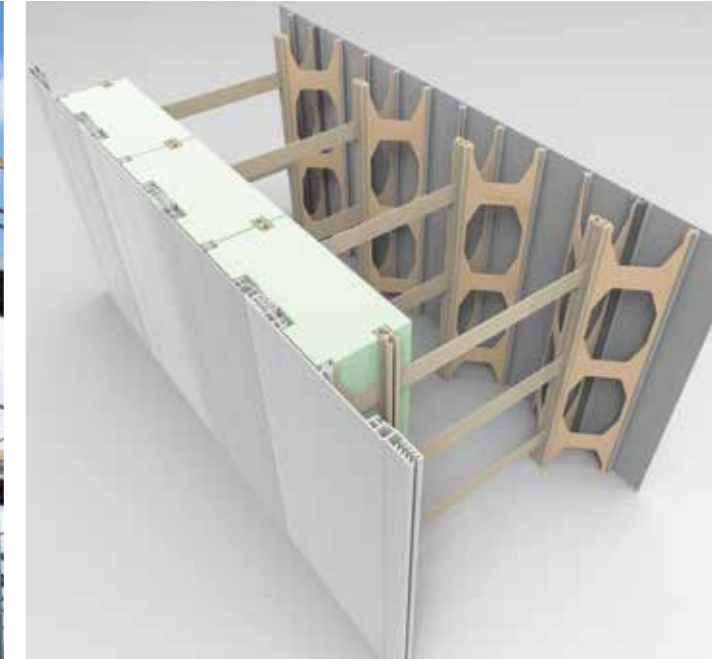
✔ FORMPROTECT®

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# Formprotect®

## The modular tank construction system.



### INNOVATIVE SYSTEM BRINGS ADVANTAGES

Additional coating, insulation and impregnation, is not necessary as all elements are already integrated. The system is absolutely gas- and water-tight as well as being resistant to hydrogen sulfide and acid corrosion. The exterior wall does not need to be insulated, painted or receive any cladding.

### MULTIFUNCTIONAL USE

Formprotect® is particularly suitable for reinforced concrete round tank construction in the biogas sector and in agriculture. Special areas of application are tanks in water and wastewater supply. But other structures such as halls for plant systems, machine housings, stables or basement buildings are also built with it.

### REVISION SYSTEM FOR THE SIMPLE REFURBISHMENT OF TANKS

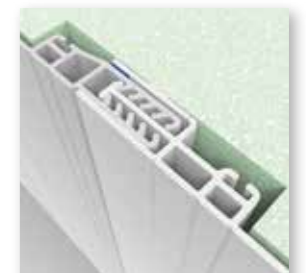
Formprotect® is also available as a remedial repair system, e.g. for the renovation of existing tanks. During refurbishment, profile rails are placed at specific intervals over the entire surface of the concrete wall. Then the formwork structure is built up from special brackets and formwork panels. The cavity between the concrete wall and the formwork is filled with lightweight concrete, resulting in a strong and stable bond.

### YOUR ADVANTAGES AT A GLANCE

- ✓ In contrast to conventional tank construction, the easy-to-clean formwork remains as the inner and outer cladding
- ✓ The exterior wall does not need to be insulated, painted or cladded
- ✓ Chemical-resistant PVC elements: absolutely gas- and water-tight as well as acid-resistant
- ✓ Concrete and weather protection already integrated, no concrete curing required
- ✓ Easy to clean
- ✓ Tanks are equipped with leakage detection as standard
- ✓ Easy installation of insulation: simply slides between concrete and external formwork
- ✓ Weather-independent assembly of the formwork
- ✓ The closed construction reliably prevents the penetration of rodents into the insulation
- ✓ The appearance impresses with its modern design and colour (RAL 1013 pearl white).
- ✓ Complete and ready – from day one; without any subsequent work



Also for the construction of buildings and machine housings



Water-proof and gas-tight sealing

# GAS STORAGE

Flexible and resistant

## GAS STORAGE

Flexible and efficient biogas plant operation is closely related to the storage of biogas. The biogas production in the digester is subject to fluctuations, especially if the biogas plant is operated in a flexible or demand-oriented mode. This makes a reliable biogas storage facility absolutely necessary. It compensates for peaks and serves as an optimised reserve for the CHP or the gas processing plant. A suitable gas storage system must be gas-tight, pressure-resistant, UV-resistant, temperature-resistant and weather-resistant to ensure safety during operation.

### WE OFFER YOU A WIDE RANGE OF MEMBRANE STORAGE UNITS:

Single membrane roofs made of ethylene-propylene-diene monomer (EPDM) and double-membrane roofs in various designs, shapes, sizes and colours. You will find the ideal solution for your tanks - whether for storage tanks, digesters, secondary digesters or for covering the digestate storage.

### AVAILABLE PRODUCTS

- ✔ BIOLENE®
- ✔ DOUBLE MEMBRANE ROOF

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# Biolene®

## The flexible gas storage!



### SAFE AND ECONOMICAL

Our single-shell Biolene® biogas storage membrane, proven thousands of times in practice, is an economical solution for your biogas plant. Biolene® is a gas storage tank and tank cover in one and thus offers a highly efficient solution for small agricultural and industrial biogas plants.

Due to weather influences, high demands are placed on the outer skin of the digester roof. Our Biolene® meets these high demands: it is made of high-quality EPDM rubber. The material impresses with its UV, ozone and temperature stability, is highly elastic and durable.

### COMPENSATES FOR FLUCTUATIONS

Depending on the biogas production, the operating mode of the CHP unit or due to maintenance, the stored gas volume changes constantly. The flexible outer skin rises and falls depending on the filling quantity and the filling level is always immediately visible. In addition, it is possible to precisely determine and evaluate the fill level with the help of an electronic fill level measurement.

A wooden beam ceiling serves as a substructure. The laid planks and the ceiling are a very large colonisation area where sulphur bacteria can settle. The biogas produced is thus cheaply and reliably pre-desulphurised.

### YOUR ADVANTAGES AT A GLANCE

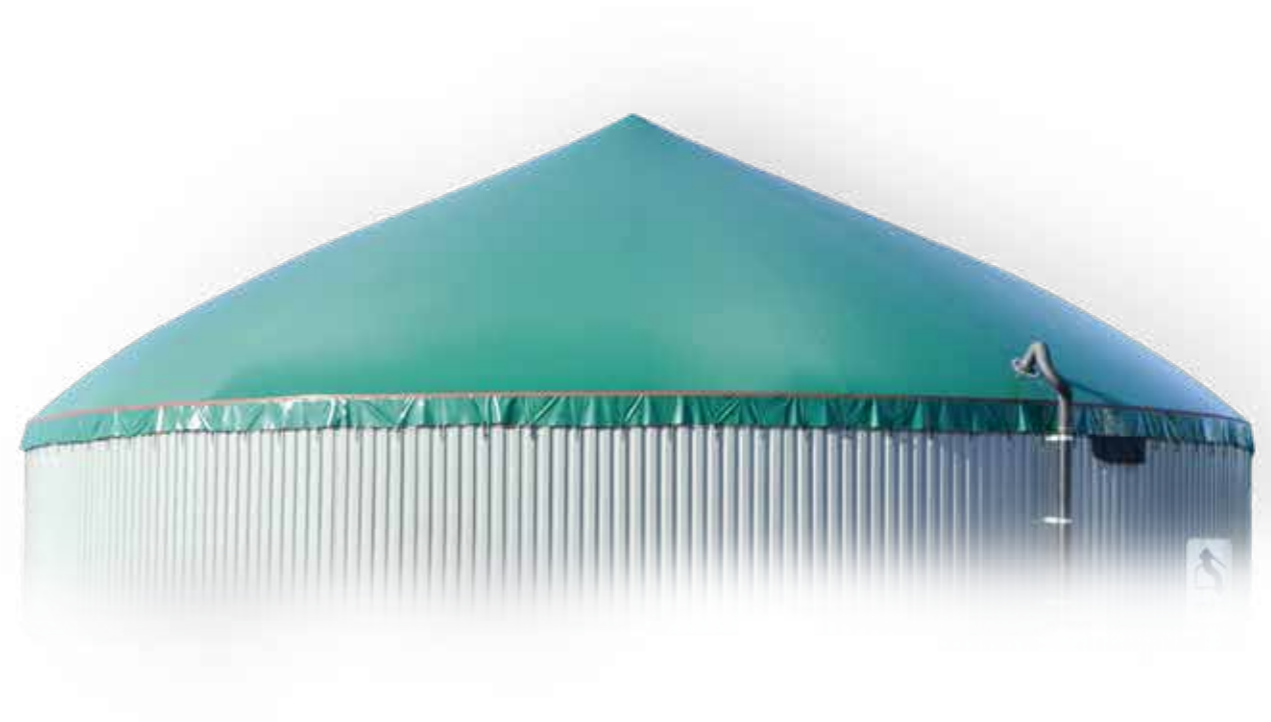
- ✔ To date, Biolene® is one of the most widely used biogas storage membranes in Germany
- ✔ Supports a high CHP utilisation by providing a large gas storage capacity
- ✔ Allows a fill level check at a glance
- ✔ Economic gas storage
- ✔ Provides maximum safety through a reliable profile closure tank seal and pressure monitoring
- ✔ High wind load: also approved in wind load zone 4
- ✔ Precise height measurement for e.g. balancing power
- ✔ Simple and cost-effective to assemble

### TECHNICAL DATA

Polymer	EPDM
Thickness DIN 23529	2.0 mm
Density DIN EN ISO 1183-1 and -2	1.22 kg/l
Hardness ISO 48-4	66° Shore A
Tear resistance DIN 53504	9.3 MPa
Elongation at break DIN 53504	540 %
Tear propagation resistance DIN ISO 34-1	13.5 N/mm
Temperature resistance	-40 to +100 °C
Ozone resistance 200 PPHM 40°C/20%/7d, DIN ISO 1431	no cracking
Methane permeability cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	< 500

# Double membrane roofs

## The resistant gas storage tank.



### HIGH QUALITY AND DURABLE.

Our high-quality and durable double membrane roofs are the ideal solution for flexible storage of biogas. The outer cover is a weather protection cover that protects the inner gas membrane from external influences. Our weather protection membranes made of PVC-coated polyester fabric are specially designed to withstand high temperatures and thus guarantee the longest possible service life. The gas storage membrane underneath also has a high temperature stability, is highly elastic and also extremely durable.

### YOU HAVE THE CHOICE

You can configure your own double membrane roof to your needs: volume, diameter, dome or conical roof, moss green or light grey. For the gas storage membrane, you can choose between our proven Biolene® or a membrane made of PE. We offer the PE/PVC weather protection film in 2 membrane thicknesses.

### SAFE AND STABLE

Several supporting air blowers keep the outer membrane tight and stable. This makes the weather protection membrane resistant to both high winds and large temperature fluctuations. The number and size of the supporting air blowers are individually designed based on various parameters and operating conditions.

The air space between the gas storage and weather protection membrane also serves as insulation. The temperature gradient between the outside and inner biogas temperature is kept as low as possible.

Our Bioguard overpressure and underpressure protection probably has the flattest characteristic curve on the market. Only low pressure peaks occur and the weather protection membrane is thus less stressed. Further components are a hydrostatic level measuring system, as well as a VA clamping hose connection with high-quality, dimensionally stable pressure hose used to connect the membrane to the top circumference of the tank. When deflated and during installation, the membranes are supported over the tank by a net substructure which is also designed for snow loading.

### YOUR ADVANTAGES AT A GLANCE

- ✓ Choice of configuration
- ✓ Precise, very reliable hydrostatic level measurement
- ✓ Low pressure peaks due to flat characteristic curve
- ✓ Large gas storage volume suitable for biomethane project designs
- ✓ Design of the supporting net substructure calculated for snow load

### POSSIBLE COMBINATIONS

GAS STORAGE FOIL		
PE	Form	Sphere 1/3 or cone 30°
	Color	black
Biolene® 1 mm	Form	Sphere 1/3 or cone 30°
WEATHER PROTECTION FOIL		
	Color	Moss green or light grey
PE/PVC 680 g/m²	Form	Sphere 1/3 or cone 30°
	Color	Moss green or light grey
PE/PVC 890 g/m²	Form	Sphere 1/3 or cone 30°



## THE COMPLETE SYSTEM AT A GLANCE: SAVE TIME WITH AKCOCKPIT!

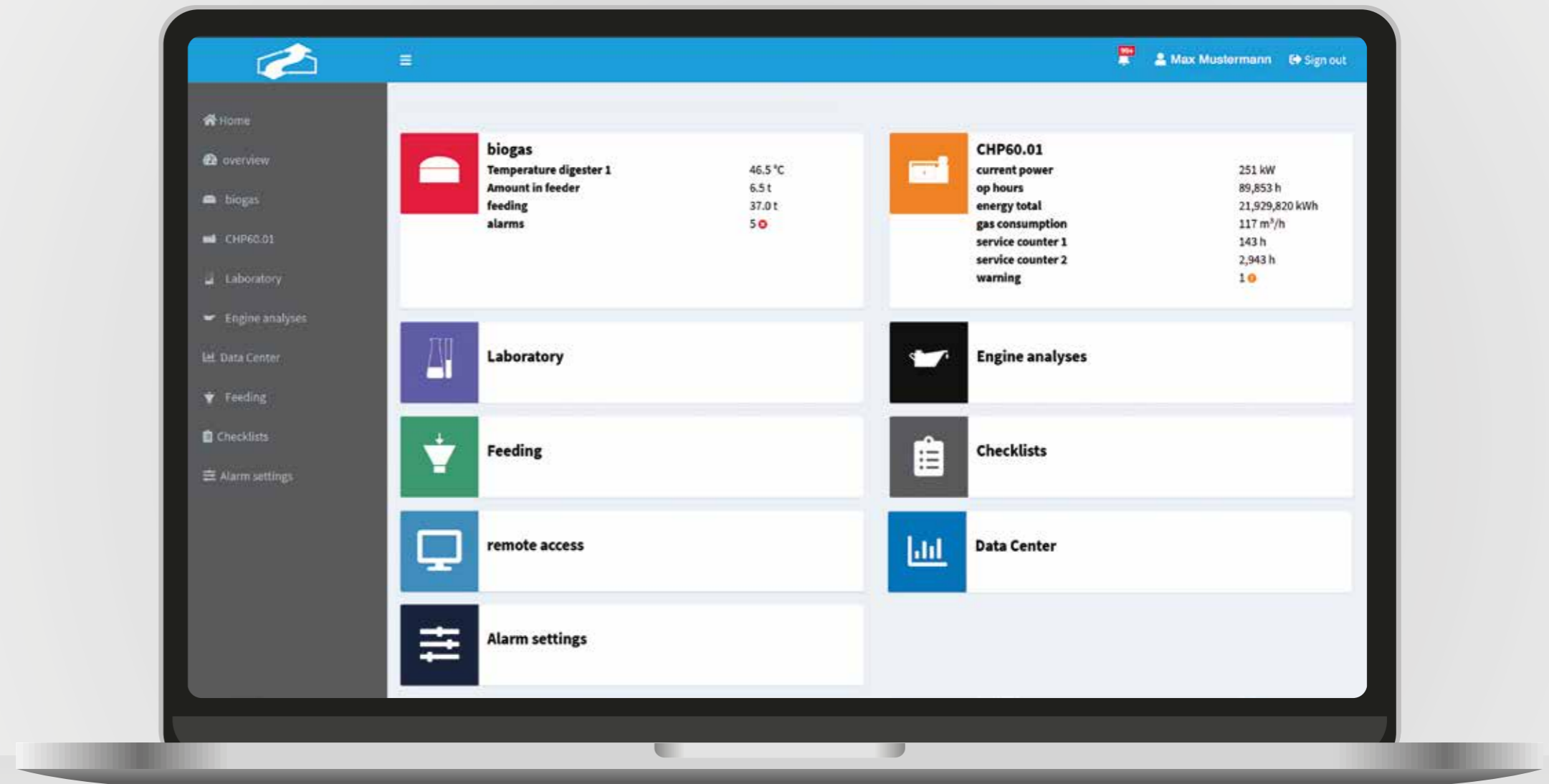
The akCockpit web application is the complete solution for monitoring and controlling biogas plants. Process, feedstock and feeding quantity, gas quality, results of laboratory tests, CHP or biogas upgrading: akCockpit collects all important information about your plant at a glance and saves a lot of time. Target-performance comparisons and analyses of historical data facilitate the assessment of the technical and economic efficiency of your biogas plant.



Winner of the innovation award „InnovSpace 2021“ in der category „All Species Machinery“

## AVAILABLE PRODUCTS

AKCOCKPIT



### OPTIMISED INTERFACE

akCockpit is easily accessible via a web browser and optimised for use on mobile devices (smartphone, tablet, etc.). You do not need to install any additional software. akCockpit can simply be integrated into the operation of the plant, e.g. for entry or operating data acquisition directly at the respective component, for remote monitoring of the plant or for data analysis in the office.

### TAKE CONTROL

With akCockpit, you can not only visualise the current operating status of the biogas plant and have the results evaluated. You can also check and acknowledge alarms or restarting components (e.g. the CHP) via akCockpit.

In addition, further alarms for plant management can be defined individually (e.g. setting the minimum gas yield). This way, problems can be detected in time and countermeasures can be taken to improve the efficiency of your biogas plant.

### A TOOL THAT ASSISTS YOU IN YOUR WORK

An automated task list assists you every day in keeping the plant logbook. Standard documents can be generated automatically and exported afterwards in pdf format. In addition, akCockpit simplifies the exchange with your service provider through an integrated e-mail box and a documentation centre. The documentation and evaluation of NO<sub>x</sub> emissions is also done via akCockpit with just one click.

### YOUR ADVANTAGES AT A GLANCE

- ✓ No installation of additional software
- ✓ Device-independent access via web browser (PC, tablet or smartphone)
- ✓ Free basic package<sup>1</sup> incl.
  - Integrated messaging system and data exchange platform (with agriKomp service)
  - Feeding diary
  - Reports from laboratory or oil analyses<sup>2</sup>
- ✓ Various software upgrade packages to choose from
- ✓ Software application available around the clock<sup>3</sup>

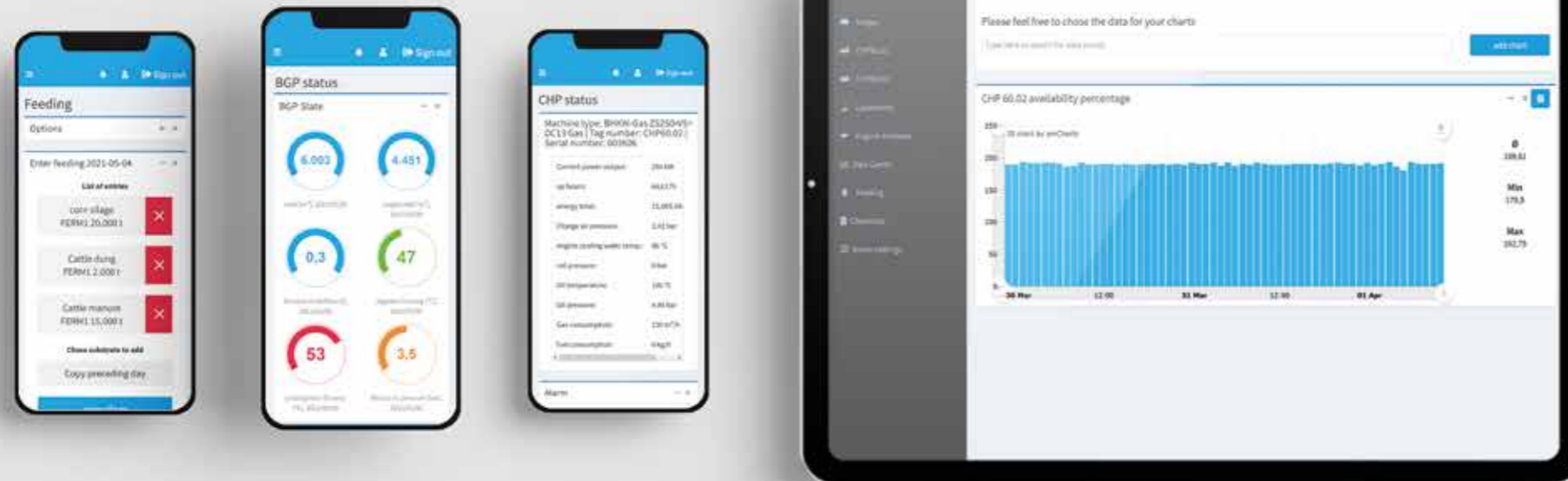
### AVAILABLE PACKAGES

BASIC	
DESCRIPTION	INCLUDED
Feeding	X
Laboratory <sup>2</sup>	X
Oil <sup>2</sup>	X
Plant diary	-
Data center	-
Detailed status display of selected devices (4 devices are included, more can be booked) <sup>4</sup>	-

PREMIUM	
DESCRIPTION	INCLUDED
Feeding	X
Laboratory <sup>2</sup>	X
Oil <sup>2</sup>	X
Plant diary	X
Data center	X
Detailed status display of selected devices (4 devices are included, more can be booked) <sup>4</sup>	X

### SOLO-PREMIUM

- ✓ The akCockpit Solo-Premium includes all the Premium services for a single device. The user receives detailed status displays for the respective booked single device. The Solo-Premium package includes 1 device<sup>4</sup>.



<sup>1</sup> The free basic package can only be used if the customer has a laboratory package with ServiceUnion.  
<sup>2</sup> If done in the ServiceUnion laboratory  
<sup>3</sup> Except for server maintenance  
<sup>4</sup> The 4 selected devices can be composed as follows: CHP (incl. remote control), NOxLog, BGAA, biogas plant.