

EFFICIENT BIOGAS AND BIOMETHANE PRODUCTION

Proven pump solutions for reliable substrate feeding,
advanced flow technology and expert support.

ABOUT WANGEN PUMPS

Established in 1969, we are a well-known brand offering high-quality positive displacement pumps for demanding industrial applications. Our progressing cavity technology is globally recognized for their robustness and reliability in handling a wide variety of media. We provide highly effective and long-lasting solutions to diverse industries such as biogas and anaerobic digestion, agricultural engineering, pharmaceutical and cosmetics, food and beverage, environmental and wastewater, marine, chemicals and paper production. WANGEN PUMPS is part of Atlas Copco Group.



A fast-growing industry

Biogas is emerging as a strategic energy because of its contribution to the global shift towards renewable energy. Driven by the need for sustainable waste management and clean energy, biogas transforms organic waste into valuable resources – energy, heat, and fertilizer.

Countries like Germany and Denmark have already proven its potential with large-scale biogas networks, while emerging markets are now recognizing its role in energy independence and rural development. From agricultural residues to food waste, biogas offers a circular solution that supports climate goals and local economies. With scalable technologies and growing policy support, the future of biogas is global and accelerating.

WANGEN PUMPS are built for growth and durability.

Their robust design ensures reliable performance under tough conditions while keeping maintenance low. From liquid manure to food waste and silage, they handle diverse biomass with ease. Optimized for anaerobic digestion, they support consistent and efficient plant operation.

As biogas experts, we deliver solutions that drive sustainability and reliability.

TECHNOLOGY OF OUR PUMPS

Progressing cavity pumps for Biogas processes

With a broad selection of models, sizes, and materials for housings, rotors, stators, seals, and joints, each pump is optimized to match the specific characteristics of your medium. Whether you're handling manure, waste, fermentation or agricultural residues, our pumps adapt to your process seamlessly. Thanks to our extensive range of flanged connections, integration into your biogas plant is seamless ensuring maximum efficiency and minimal downtime.



Tailored to your
medium



Built for long-
term reliability



Ideal for
demanding biogas
environments

**Your best choice for plant installation.
Let your process flow with confidence.**

Steps in the Biogas production process: Challenges and solutions

CONVEYING SUBSTRATE

Transfer slurry, silage and food waste into the digester efficiently. Supports stable flow and retention time for optimal biogas yield. Designed for high-viscosity feedstocks in anaerobic digestion.



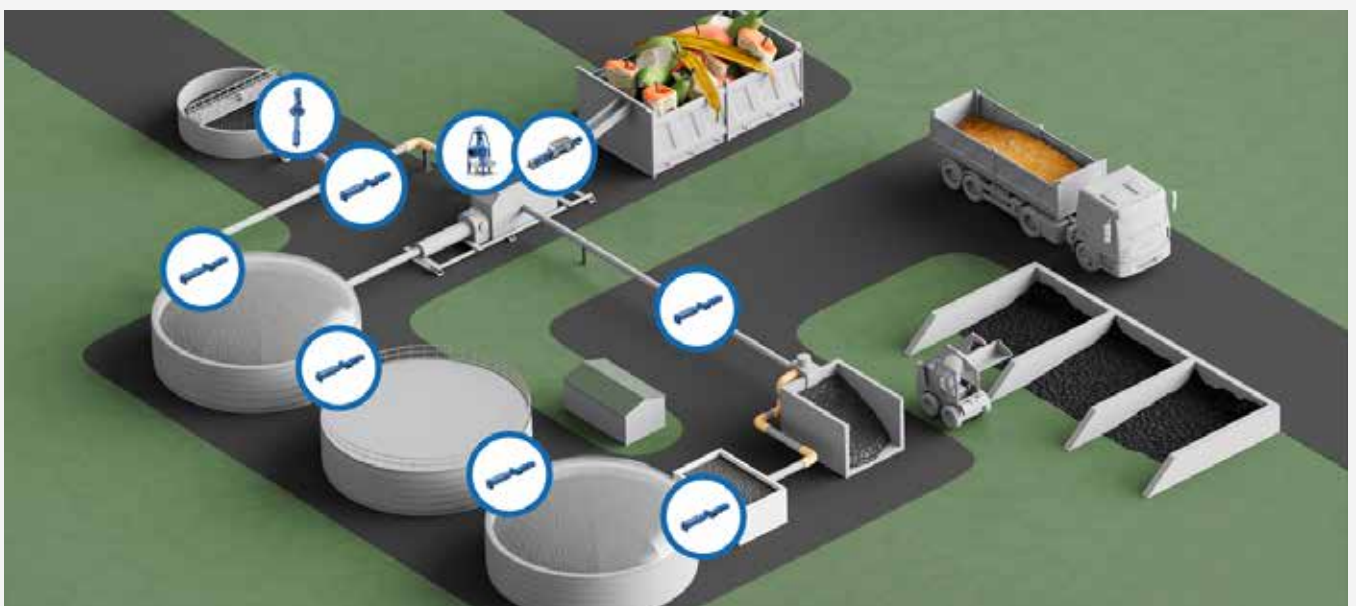
FEEDING IN SOLID MATERIAL

Solid substrates like silage and food waste are difficult to feed due to high viscosity, variable particle sizes, and abrasive components. These factors can cause blockages, uneven dosing, and equipment wear, impacting gas yield. WANGEN pumps overcome these challenges with robust design, wear-resistant components, and precise conveying for consistent, reliable performance.



RECIRCULATION

Returning liquid digestate or process water to the digester to maintain moisture, improve mixing, and stabilize fermentation. It supports temperature and pH control, and nutrient distribution for efficient biogas production. WANGEN pumps ensure reliable recirculation with robust design and precise flow control, even under demanding conditions.



TECHNOLOGIES



KL-S SERIES SELF-PRIMING PUMP

Suitable for pumping free-flowing substrates and digestate / Durable construction with bearing pedestal / Individually configurable to the respective application.

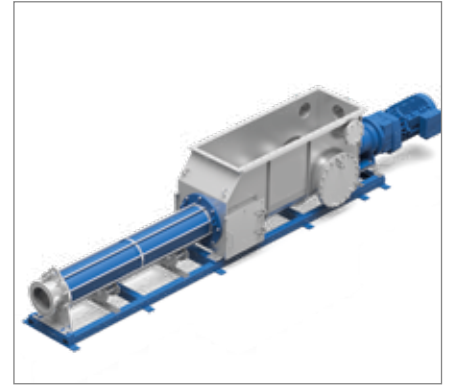
Max. capacity:	300 m ³ /h
Max. pressure:	48 bar
Dry matter content:	18%



KL-T SERIES IMMERSION PUMP

Suitable for pumping high-viscosity liquids from basins and tanks / Immersed directly in the medium / Used where self-priming pumps reach their limits / Configurable to the basin depth.

Max. capacity:	100 m ³ /h
Max. pressure:	12 bar
Dry matter content:	18%



BIO-MIX SERIES HOPPER FEED PUMP

Hopper pump for mixing liquid phase and solids for the effective feed of substrate into the fermenter.

Max. capacity:	150 m ³ /h
Max. pressure:	12 bar
Dry matter content:	18%



BIO-FEED SERIES WITH X-LIFT

Combines the liquid feed-in with screw technology directly at the solids dispenser / With four connections for the liquid phase and one DN400 connection / Compact bearing pedestal-based system / Can also be used as a central pump.

Max. capacity:	50 m ³ /h
Max. pressure:	12 bar
Dry matter content:	18%



XPRESS SERIES SELF-PRIMING PUMP

Economic, compact pump design developed to pump high volumes and to ease maintenance / Change of wear parts without removing pump from pipes / Service in place concept.

Max. capacity:	102 m ³ /h
Max. pressure:	6 bar
Dry matter content:	10%



GL-S / GL-F PTO PUMP

Pumping of slurry or other agricultural substrates / For the suction drainage of slurry ditches and slurry tanks / Suitable for use in pump tank trucks and as a slurry drag hose pump / High pressure stability.

Max. capacity:	7,800l/min
Max. pressure:	18 bar
Dry matter content:	10%

Next-level Biogas performance

Optimize your system capacity with the BIO-ROXX module and the BIO-MIX 200 pump

BIO-ROXX

Optimum preparation of the substrate

The BIO-ROXX is a powerful substrate treatment system for use in biogas plants. The module combines the process steps of mixing the liquid and solid and separating foreign matter, such as stones, before the substrate is pumped through a feed pump into the fermenter.

- Liquid feed to introduce solid and liquid substrates
- Homogenisation of the substrate mix
- Separation of contaminants
- Low-wear design
- Simple to control
- Large maintenance and clean-out ports

Max. capacity:	85 m ³ /h
Nominal engine power(kW):	7.5



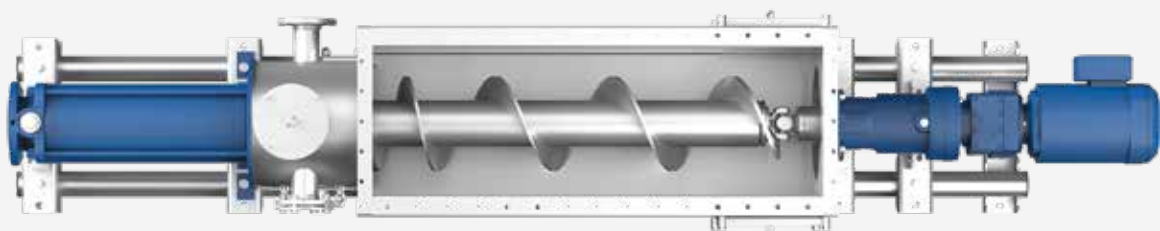
BIO-MIX

Suitable for conveying and mixing solid and liquid feed

The WANGEN PUMPS BIO-MIX 200 is a further development of the successful WANGEN PUMPS BIO-MIX. Due to its size, it was specially designed for large biogas plants. The progressive cavity pump is suitable for conveying and mixing solid and liquid feed. By injecting from the rear, the entire hopper chamber can be used as a mixing volume. The pump impresses with the highest flow rate in its class.

- Liquid feed for the effective feed of solids into a biogas plant
- Stainless steel hopper and stainless steel or steel screw (both available in different sizes)
- Optionally with side entry
- Suitable for almost all metering systems

Max. capacity:	150 m ³ /h
Max. pressure:	18 bar
Dry matter content:	18%



SPARE PARTS AND SERVICES



SERVICE THAT KEEPS YOUR PLANT RUNNING

Regular inspections and maintenance by our service team and partners worldwide maximize pump reliability and operational safety, reducing downtime and costs. We provide fast repairs on-site or in our factory to ensure your equipment performs at its best.

🔧 Thanks to WANGEN's service team, our biogas plant runs without interruptions. Their quick on-site repair saved us days of downtime and significantly reduced costs. 🗨️

– Biogas Plant Operator, Germany.



ORIGINAL SPARE PARTS – YOUR GUARANTEE FOR MAXIMUM PERFORMANCE

Original WANGEN spare parts restore full pump performance fast. Benefit from expert quality for long service life and minimal downtime. Ensure efficiency and reliability in your biogas plant.

Benefits of Original Spare Parts:

- Guaranteed quality from the manufacturer
- Extended service life for your pumps and modules
- Perfect fit and compatibility for all WANGEN systems

TRAINING & WEBINARS

Training & webinars to boost biogas expertise and plant performance. Hands-on sessions with practical highlights into pump technology. Stay ahead with proven know-how – on-site or online.

WANGEN PUMP ACADEMY

With the PUMP ACADEMY, we would like to pass on our in-depth specialist knowledge to you in practice-oriented training courses so that you can use our pump technology successfully. More information online.

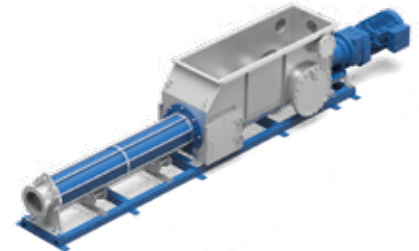


YOUTUBE

Watch detailed product videos on the WANGEN PUMPS YouTube channel featuring pump technology and operational best practices for biogas applications.



SUCCESS STORIES



BIO-MIX 200

Reliable transport and increased operational efficiency

 Biogas Plant, Germany



KL65S

Installed in 4MW biogas plant processing 100,000 tons of biomass yearly

 Harbin City, Heilongjiang, China



BIO-ROXX

Optimized biogas production with the innovative mixing module

 Biogas Plant, Germany

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