

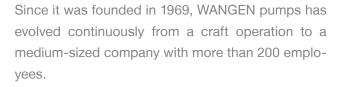


#### Who we are

## WANGEN PUMPEN - The Company

#### Conscientious, fast, strong.

WANGEN PUMPEN is a mechanical engineering company and provider of high-quality displacement pumps for industrial applications. The extensive product range includes eccentric screw pumps and screw pumps for a wide range of industries, e.g. for pharmaceutical, food and beverage production, shipbuilding, the environment, bio-gas and agricultural equipment, as well as the chemical, paper and cosmetic industries.



The pumps from WANGEN enjoy the highest reputation thanks to our consistent focus on market and customer requirements – regionally, nationally and internationally.

It is this high esteem in which we are held by our customers that motivates us to preserve, improve and breathe new life into our values day after day.



Headquarters building in Wangen, Germany



WANGEN PUMPEN: Made in Germany, worldwide in use.





#### WANGEN PUMPEN is

### Reliable

Reliability can only arise where issues are reliably thought through and acted upon. Reliable, professional and motivated work is a prerequisite in order to compete as a producer of high-quality products. This starts with development and construction and continues via production, consultancy and sales to service.



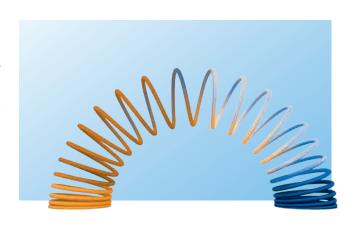
## **Customer Oriented**

Product and service quality must be congruent. That is why we compile the wishes, needs and expectations of our customers on a regular basis and systematically analyze and transpose them into products, services and interactive processes, intra-departmental and across locations throughout the entire company.



## **Flexible**

Our world is changing at an ever faster rate, and the intervals are getting shorter. Due to the high stability of our base, we are able to respond to the ever changing set of conditions or to recognize them already in advance before they become acute. The ability to react quickly is an integral part of our success.



#### WANGEN PUMPEN

## Our pump types

#### **Progressing cavity pumps**



Modular, extremely robust, precise dosing, low pulsation. Large range of models and materials used for housings, rotor, stator, seals, joints ensures an optimum match to the medium being pumped. Our wide range of flanged connections and drives ensures the best possible solution for your installation and space.

#### Twin screw pumps



Non-contact feed screw operation, efficient, compact. Developed to reliably convey low to highly viscous, volatile or gaseous products. Its design avoids dead space and stagnation zones. Due to their high speed range, they can be used as a process pump and as a cleaning pump.

#### **Product benefits**

## Maximum Variability

WANGEN pumps are modular in design. A large variety of standardized components is available for each series and allows the customization of each pump to your specific needs. Regardless of your business activity, what medium has to be conveyed, and what your operational needs are: We offer you the optimal solution for your application and thereby ensure maximum efficient pumping solutions for your business.





#### WANGEN PUMPEN

# Product groups and areas of application

WANGEN PUMPEN covers all application areas and industry sectors with its modular products. The table below gives you an overview of our product groups and their areas of application. If you cannot find your particular special area, you can be sure: we either already also have a solution, or we will develop one – individually and in close cooperation with you.

Product	Hygienic	Hygienic	Ној	pper feed pur	nps	Self-	РТО	Immersion	Service
groups	twin screw pumps	progres- sing cavity pumps	Standard hopper feed pumps	BIO-MIX	High-per- formance hopper feed pumps	priming pumps	shaft pumps	pumps	& spare parts
Appli-	Twin	KL-SL, KL-RL, KL-RF, KB-SL, KL-TL	KL-R	KL-R BIO-MIX	KL-RÜ, KL-RQ, KL-RS, KL-R Triplex	KL-S, KB-S	A, GL-F, GL-S	KL-T	
cations	page 6	page 7	page 8	page 9	page 10	page 11	page 12	page 13	page 14/15
Sewage water treatment			•		•	•		•	•
Biogas			•	•		•		•	•
Construction, stone, earths			•		•	•		•	•
Chemicals	•	•	•			•		•	•
Paints and surface coatings	•	•	•			•		•	•
Cosmetics	•	•							•
Agriculture			•				•		•
Food and beverage	•	•							•
Pharma- ceuticals	•	•							•
Paper	•					•		•	•
Petro- chemicals			•			•		•	•
Ship building						•		•	•

#### Hygienic twin screw pumps

## **WANGEN Twin**

Convey liquid and paste-like food products with viscosities up to 1,000,000 mPa·s hygienically and efficiently.

Compact. Clean. Practical. The hygienic WANGEN Twin screw spindle pumps combine a unique hygienic design with versatile conveying characteristics. This special design ensures extremely low levels of contamination of the WANGEN Twin and allows an extraordinary thorough and quick cleaning (fast hand washing, excellent CIP cleaning, practically wear-free). Another big advantage: You can convey and CIP clean with just one and the same pump.

The WANGEN Twin is especially suitable for volatile and gaseous media, as well as for the promotion of low to highly viscous media and liquids. Ideal for the filling and emptying tanks. The WANGEN Twin series is available in three model sizes and as an EHEDG- or 3A (Sanitary Standard) certified version.



double screw in the WANGEN Twin

200	300	400 50	0 600
ial pressure	(bar):		
20	30	40	50
20			
	ial pressure	ial pressure (bar):	ial pressure (bar): 20 30 40







view from the side



top view



#### Hygienic progressing cavity pumps

# KL-SL, KL-RL, KL-RF, KL-TL, KB-SL

Handling liquid and solid food with viscosities up to 1,000,000 mPa·s gently and hygienically.

Hygienic progressing cavity pumps convey and dose products of the food, pharmaceutical and cosmetic industries particularly well. The range of applications includes viscous liquids and non-flowing to solid products, homogenous or containing pieces, sensitively or sensitive to shearing.

A large free ball passage and the low speeds of these pumps ensure that sensitive products are conveyed particularly gently. The unique hygienic design of WANGEN pumps means that hardly any dead spaces arises and that the pump is easy and fast to clean.

The KB20SL, KL30SL and KL50SL series are also available in the "Hygienic" version which is certified according to the guidelines of the European Hygienic Engineering and Design Group (EHEDG).



Max. 1	low rate	(m³/h):					
0	100	200	300	400	500	600	
		260					
Max. differential pressure (bar):							
		ii procouro	Dai).				
0	10	20	,	30	40	50	

## Hopper feed pumps KL-R

# Reliably convey solid slurries and pastes with a high solids content of up to 45%.

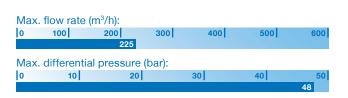
If you want to convey solid slurries or pastes, which are no longer self-flowing, then self-priming displacement pumps, such as suction or rotary piston pumps, achieve their natural limits. The medium simply no longer reaches the conveyor unit, and the pump runs dry.

This is where our progressing cavity pumps of the KL-R series are used. They are equipped with hopper feed and worm pre-conveyor. They ensure an active and continuous supply of the product in the interior of the pump. So that even highly viscous products and dewatered sludges can still be reliably conveyed.

KL-R pumps are available in numerous model designs for promoting products ranging from waste water and waste management, agriculture and industry, according to demand.



strong worm pre-conveyors provide the pump with material













## Hopper feed pumps KL-R BIO-MIX

Efficiently introduce a solid fermentation substrate with a high solids content of up 45% into a biogas plant.

The WANGEN KL-R BIO-MIX pumps have been integrated for years into the business of energy generation and have steadily been developed and optimized ever since. They are suitable for conveying corn, grass silage, GPS, solid manure, chicken manure, waste and co-fermentation products, which are mixed with the liquid in the pump.

The consistent modular principle used allows a high degree of flexibility, low spare parts inventory and also low downtimes for carrying out repairs.

The hopper of the KL-R BIO-MIX is available in different sizes and with wear protection. The maintainability is evident, amongst other things, from the large openings used for inspections and for cleaning.





view from the side





large openings for inspections and cleaning



Max.	flow rate (i	m³/h):				
0	100	200	300	400	500	600
	150					
Max.	differentia	l pressure	(bar):			
0	10	20	;	30	40	50
						48

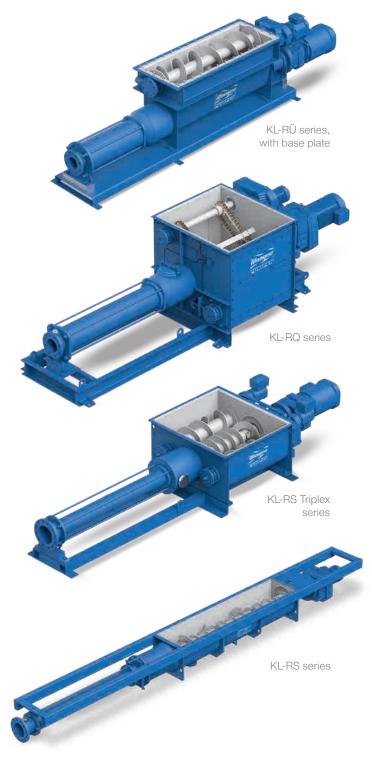
# High-performance hopper feed pumps KL-RÜ, KL-RQ, KL-RS, KL-R Triplex

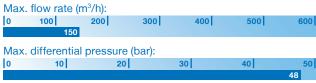
Reliably convey dewatered high-viscosity sludge with a high solids content of up to 45%.

WANGEN high-performance pumps are always used when extremely dry or lumpy materials have to be conveyed.

The WANGEN pump type KL-RQ has a transverse feed device for integrated bridges refraction and a reciprocal container for the continuous feeding process. It was designed for the promotion of dewatered sludge with a high solids content (TS) ranging from 15% to 45%.

The WANGEN pump type KL-RS is a hopper silo pump for the conveying and dosing of dewatered sewage sludge with a high solids content (TS) of 15% to 45%. These features make silo discharge pumps of type KL-RS an indispensable core aggregate in modern sewage treatment plants.







# Self-priming pumps KL-S, KB-S

Safely convey high-viscosity liquids up to 200,000 mPa·s.

Our basic products are progressing cavity pumps of KL-S / KB-S series. They are used to convey all self-flowing fluid materials. They pump low to high viscosity media just as well as solid-containing media.

Our self-priming pumps run at their best when used to convey demanding products to greater heights and/or over considerable distances, or if a high metering accuracy is necessary. They are used in many different industries, such as, for example, in the biogas production, wastewater management technology, ship building and mechanical engineering, the paper and chemical industries.

There are two series, KB-S and KL-S. Numerous designs and sizes and a modular design of pumps ensure that all customers receive a delivery solution, tailored to meet their individual needs.



A cardan joint is standard in KB-S / KL-S

Max.	flow rate	(m³/h):				
0	100	200	300	400	500	600
						560
Max.	differentia	al pressure	(bar):			
0	10	20		30	40	50
						48





## PTO shaft pumps A, GL-S, GL-F

Reliable conveying of agricultural materials containing up to 15% high solids content.

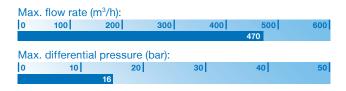
The WANGEN PTO shaft pumps have been developed specifically for use in agriculture. They are used to vacuum load and unload tanked manure supplies, distribute manure via an umbilical tubing system or to convey liquid feed.

Our PTO shaft pumps feature a free shaft end and can be powered directly from a vehicle, for example, a tractor. In this way, the farmer can perform all types of delivery processes regardless of the nature of the power supply available on the farm and in the field.

The high suction power ensures an effective emptying of the pit. Thanks to its rugged construction, these progressing cavity pumps are not sensitive to foreign bodies and ensure trouble-free operation. WANGEN PTO shaft pumps are available in three different series.

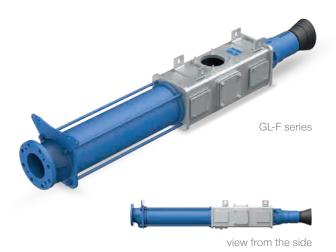


GL-F: large openings for inspections and cleaning











## Immersion pumps KL-T / KB-T

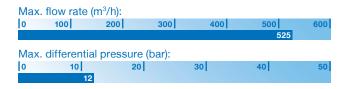
High-viscosity liquids are safely pumped out of basins and tanks. Suitable for viscosities up to 200,000 MPA·s and a dry solids content up to 16%.

The WANGEN progressing cavity pump type KL-T is ideal as an immersion pump to convey media from tanks and pools. The pumped media - whether liquid, abrasive, lumpy, sticky or even highly viscous – are forwarded so as to be gentle on the product and without comprom- ising the structure and quality.

Joints which are consistent in diameter ensure a constant flow rate. The WANGEN KL-T series is characterized by lack of sensitivity to foreign bodies, and only needs a small amount of space, thanks to the vertical construction form. Further advantages: the high metering accuracy – even at low speeds, the high suction capacity (self-priming) and the low pulsation and continuous pump output, regardless of the pressure and viscosity.

The KB20TL, constructed in block form (not shown), is available as a hygienic pump as well as the KL30TL with bearing bracket (see page 7).

The configuration and length of the pump can be customized according to your wishes.



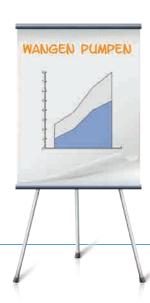




#### Application-oriented:

## Training courses and training

Take advantage of our expertise and benefit from our knowledge at our training courses. Our application-oriented events include professional advice as well as opportunity to exchange experience and to carry out workshops. Whether cross-industry seminars or product-related training, on-site or in our rooms: we want to mediate knowledge here, supplemented, and/or deepen it.



#### Pointing the way:

## **Expert Advice**

The choice of product, applications or even installation: Our expert team is available with help and advice, it is goal-oriented and will be pleased to familiarize you with its many years of experience, in order to ensure that optimum solutions are provided for the continuous trouble-free operation of our pumps.

We shall be pleased to advise you when seeking solutions for new conveying or pumping tasks, have to work with difficult media, or in particular with special challenges posed by your pump. Qualified, specific and solution oriented.

Contact us if you wish to open up a dialogue - we shall be pleased to support you with the entire range of our consultiancy services.





#### Competent and reliable:

## Service

Regular inspections and maintenance by our competent service personnel increases the operational safety and the reliability of a pump and thus reduces your operating costs. We repair the pumps that we produce directly on-site with the customer or in our factory.



#### Only from WANGEN PUMPEN:

Original Spare Parts

With original pump parts from WANGEN PUMPEN, we guarantee a full and fast recovery in the performance of our pumps. You will be able to profit from our decades of manufacturing experience, and as a consequence, the quality we offer as a manufacturer. In this way, a long service life of your pump is ensured. We even produce spare parts to our high manufacturing standards and use only the original parts.



#### Professionally and professional standards:

## Commissioning, Maintenance and Repair

We offer professional support in the professional installation of your new pump. Because we see in our customers partners who can rely on us and, of course, on our products. Also, for their maintenance and repair.





ISO 9001

ISO 14001

ERTIFIS





The WANGEN PUMPEN environmental management is certified according to ISO 14001:2004.

Your contact:

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