WANGEN PUMPS

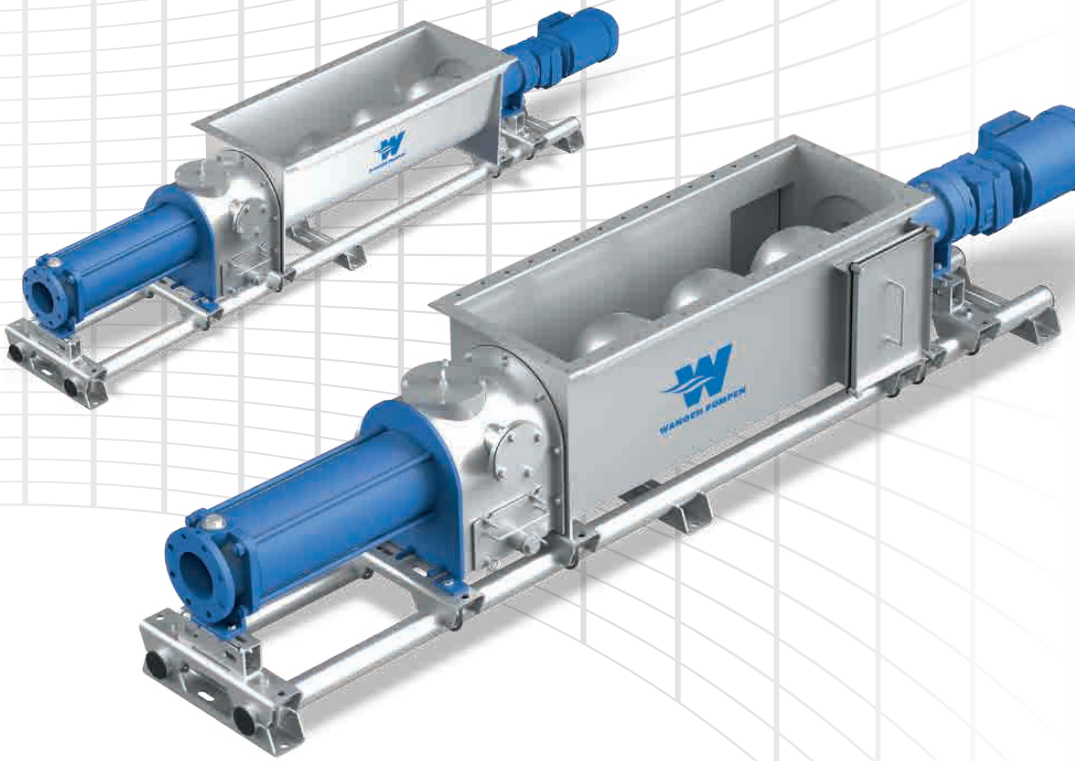
ROTOTEC

the power of flow

ONE STEP AHEAD

Hopper feed pump

KL-R BIO-MIX



The reliable solution, specifically for your biogas system

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the power of flow

Hopper feed pump

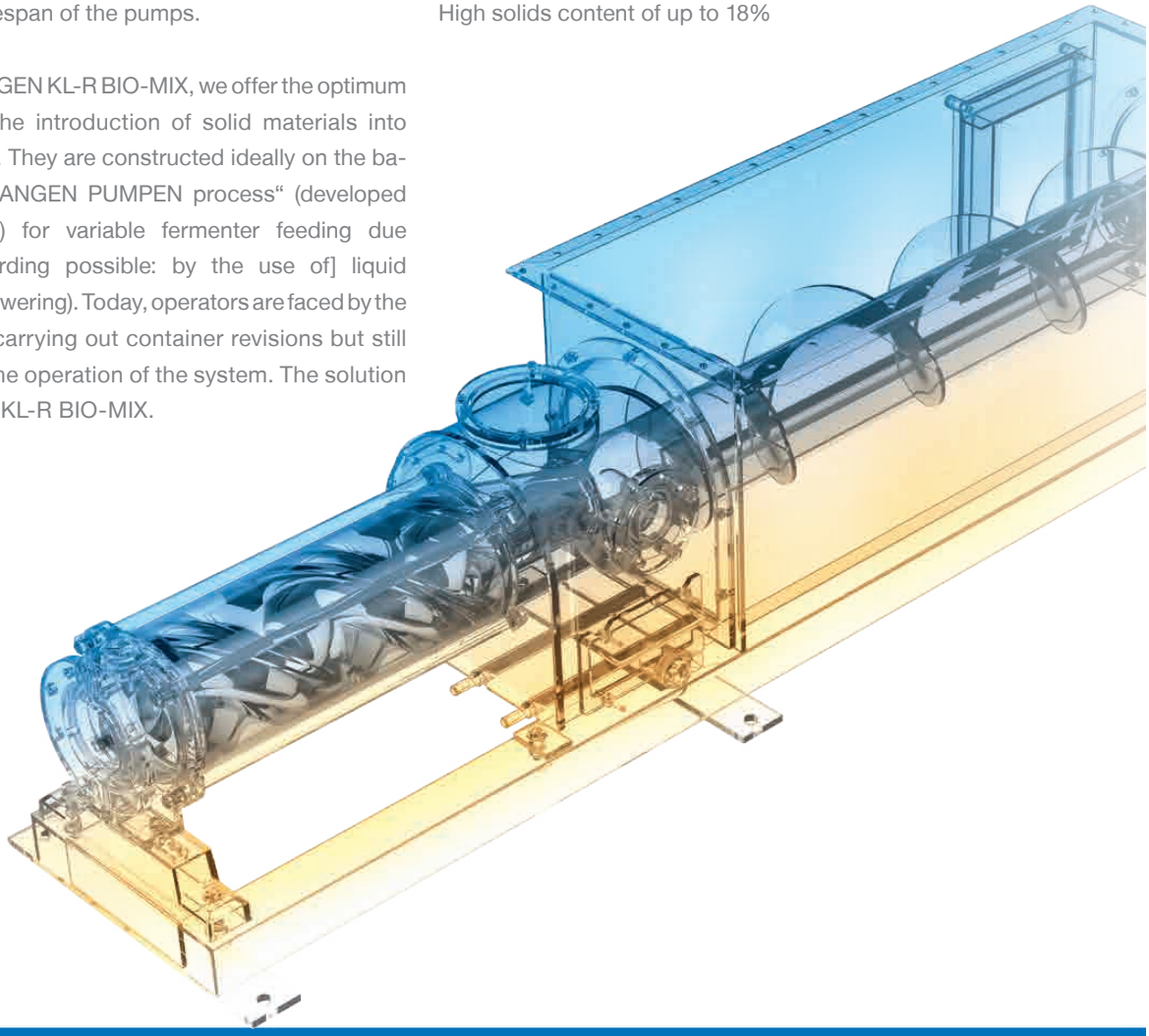
KL-R BIO-MIX

The WANGEN BIO-MIX pumps have been integrated in the process of energy production for years and have have been constantly developed and optimized. They are suitable for corn, grass silage, solid and liquid manure, as well as waste; which are then mixed with fluids in the pump.

The KL-R BIO-MIX is able to cope with long distances and height differences. The wear-protected cardan joints, in conjuction with the worm pre-convoyer, are extremely resistant to foreign objects and contribute to the long lifespan of the pumps.

With the WANGEN KL-R BIO-MIX, we offer the optimum solution for the introduction of solid materials into the fermenter. They are constructed ideally on the basis of the „WANGEN PUMPEN process“ (developed by WANGEN) for variable fermenter feeding due to [other wording possible: by the use of] liquid feeding (re-powering). Today, operators are faced by the challenge of carrying out container revisions but still maintaining the operation of the system. The solution for this is the KL-R BIO-MIX.

Technical highlights:
Flowrate up to 660.43 gpm
Temperature up to 158°F
Max. differential pressure 174 psi
High solids content of up to 18%



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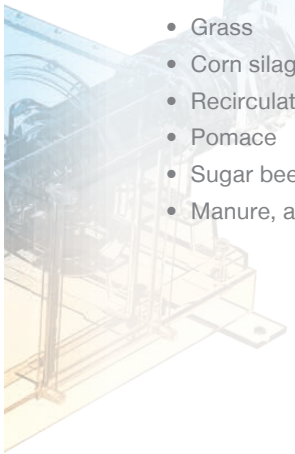
Applications

Conveying Materials

With the hopper pump KL-R BIO-MIX, the following medium types are typically conveyed:

- Fruit, such as apples or pears
- Fish waste
- Slaughterhouse waste
- Food waste
- Whole plant silage
- Cereal shreds
- Grass
- Corn silage
- Recirculated products
- Pomace
- Sugar beets
- Manure, also chicken or cow manure



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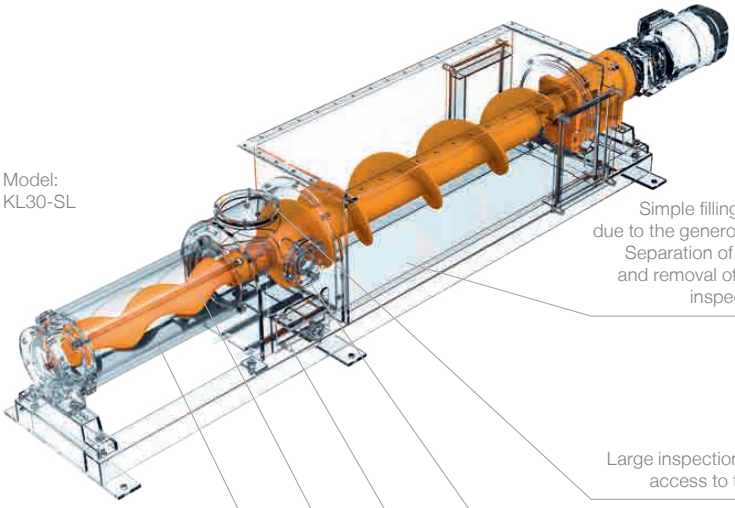
Properties

Construction Characteristics



Model:
KL30-SL

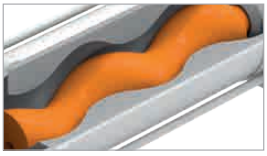
Simple filling of the hopper due to the generous dimensions Separation of foreign bodies and removal of such via large inspection openings

Large inspection flaps for easy access to the tunnel area

Supports right and left for variable connection of fluid feed for mashing

Large inspection flap or cleaning lid with supports for rinsing, cleaning of drainage of fluids

A robust and high quality rotor is available in various shapes.



Conical stator inlet for optimum filling. Stators in various shapes from own manufacturing plant.

The construction of our pumps shows that they have consistently been designed for performance and reliability. In this way, the stone catching container is extended across the entire hopper length. The removal of impurities is carried out by means of gravity (the substances fall simply into the intended hopper chambers), no additional devices are required. This saves you investment costs, reduces your energy consumption and gives your system high process security.

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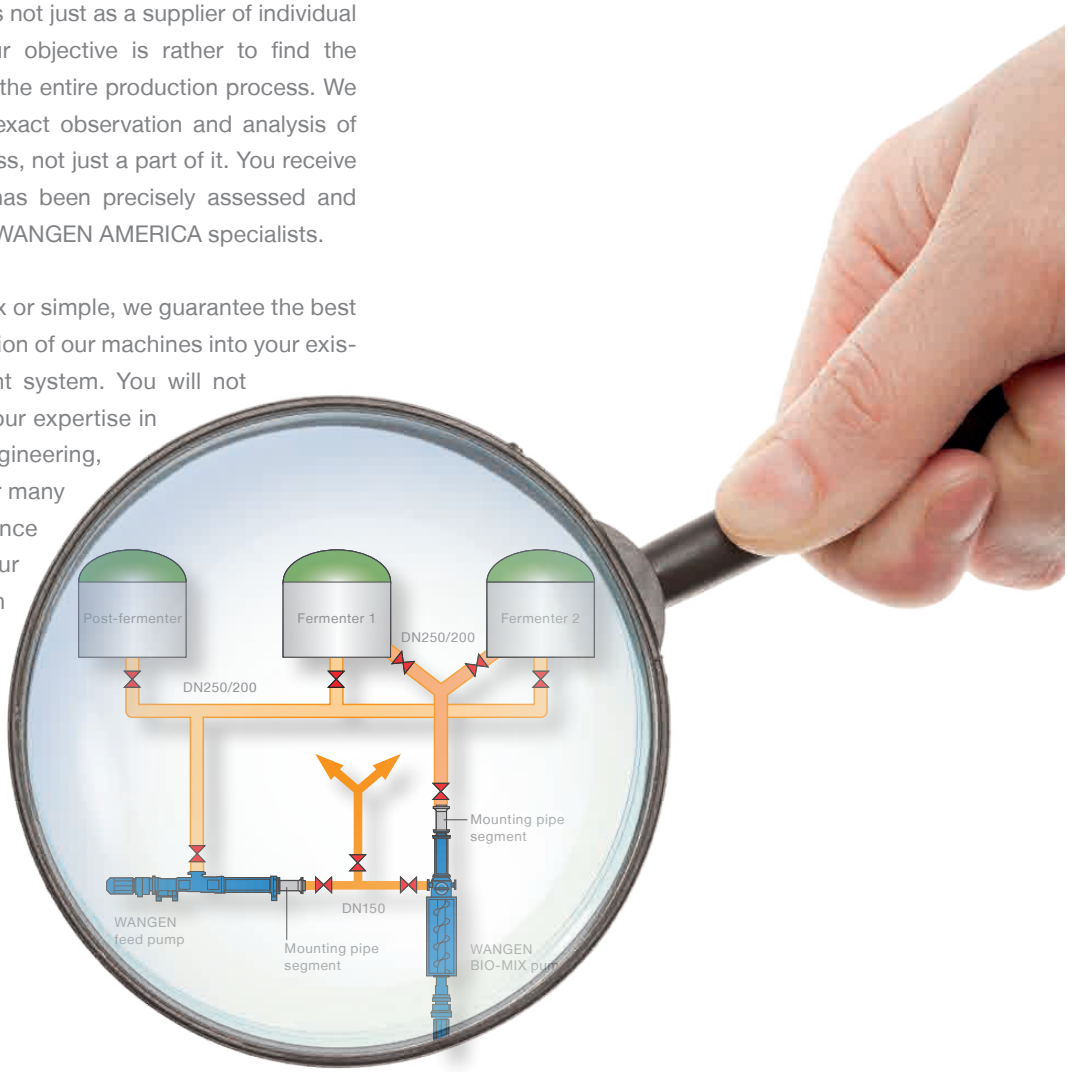
Properties

We always have the overall process in mind

We see ourselves not just as a supplier of individual components. Our objective is rather to find the best solution for the entire production process. We achieve this by exact observation and analysis of the overall process, not just a part of it. You receive a solution that has been precisely assessed and prepared by the WANGEN AMERICA specialists.

Whether complex or simple, we guarantee the best possible integration of our machines into your existing or new plant system. You will not only profit from our expertise in mechanical engineering, but also from our many years of experience to provide our customers with the best solution possible.



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Benefits

Maximum Variability

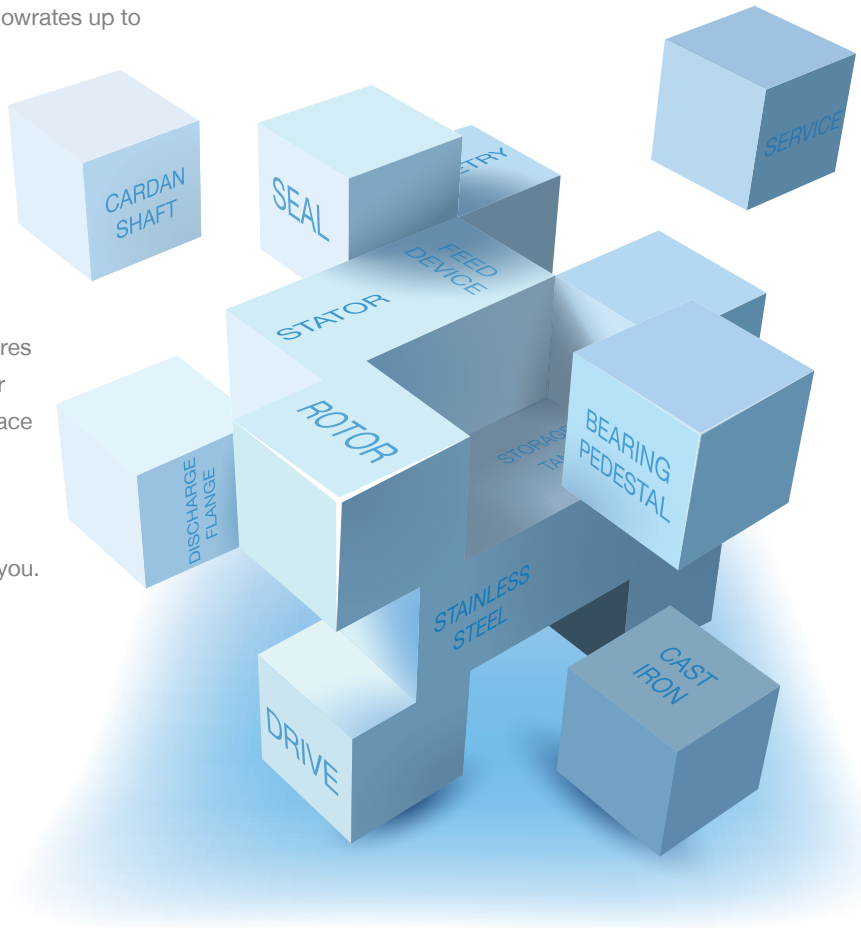
WANGEN progressing cavity pumps have a modular design. A multitude of standardized construction parts is available for each series and enables each pump to be adapted to meet your specific pumping requirements.

We offer the optimum solution for your application and can provide a maximum efficient pumping solution for your business, regardless of the industry you work in.

Maximum variability means

- Various construction sizes and rotor/ stator sizes mean more than 100 models of the compact pump with a delivery rate ranging from 88.06 gpm up to large pumps, which can handle flowrates up to 660.4 gpm.
- A large variety of designs and materials is available for casings, rotors, stators, seals, and joints to ensure optimum adaptation to the pumped medium.
- Our broad range of flange connections and drive units assures that the best possible solution for your installation and available space can be found.

We would be happy to assist with developing a customized pump for you.



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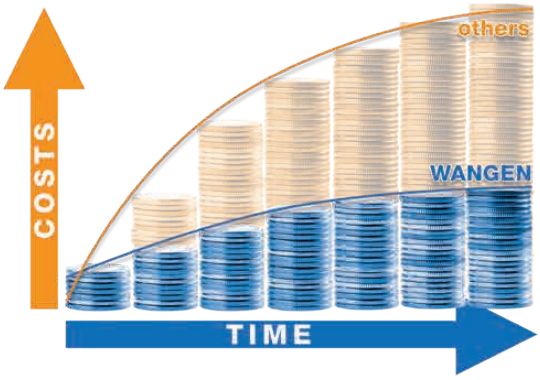
Benefits

Low Life-Cycle Costs

When purchasing a pump, we recommend that you carefully consider the operating costs as well as the costs for the initial purchase. Maintenance costs, production downtimes, and energy costs make up a considerable share of the total costs over the life-cycle of a pump.

Our philosophy is to keep the total costs of the entire pump life-cycle as low as possible by reducing needed maintenance to a minimum. This is possible due to our robust pump construction, the use of high quality wearing parts, and a wear-resistant design of the pumps.

Every avoided breakdown saves you expenses for spare parts, maintenance work, and production downtime. This ultimately results in saving money, but also reduces stress due to a smoother operating process.



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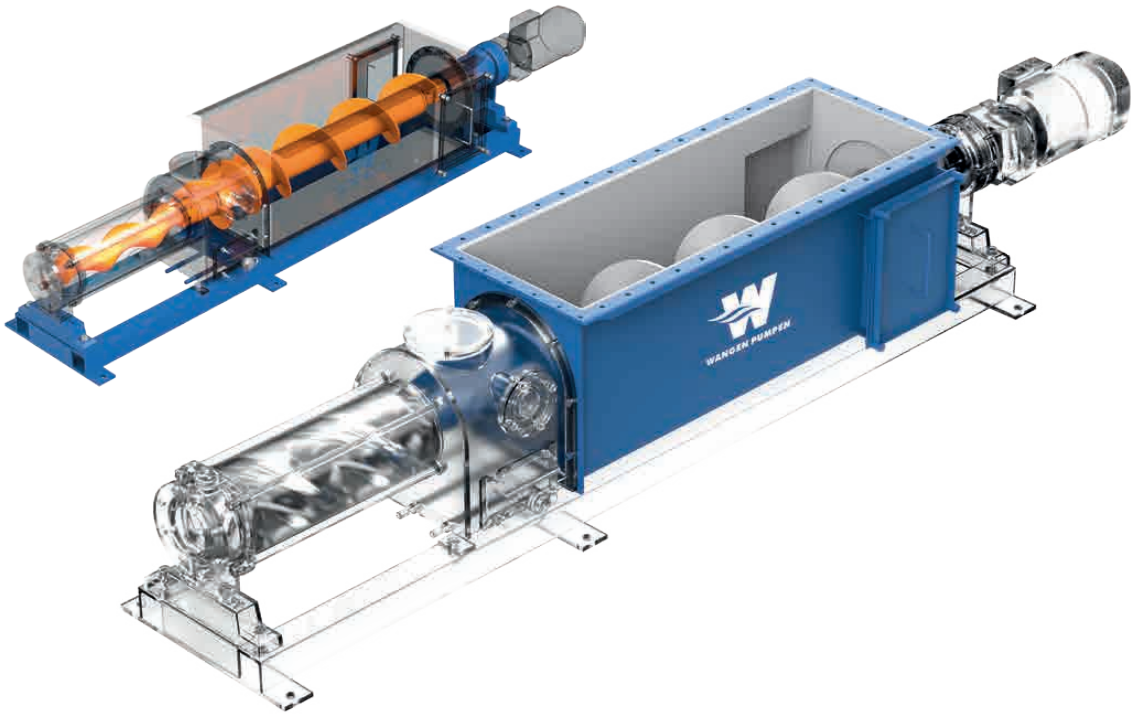
Technical Data

Models and Materials

There is a large selection of standardized construction parts available for the design of your standard suction pump. We provide economical and optimized pumping solutions that are tailor-made for your branch of industry and operating conditions.

- Casing, pressure and suction flange: stainless steel 1.4301 (A304), stainless steel 1.4571 (A316Ti)
- Joints: stainless steel cardan joints, optionally with sleeve
- Seals: single and double-effect mechanical seals
- Stators: diverse NBR materials, FPM, silicon, EPDM, pressure-stable 'even wall' designs, solid substance stators made of POM
- Rotors and stators in up to 8 pressure classes and available as S-, L- and H geometric forms.
- Drive unit: gearbox motors, hydraulic motors



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Benefits

Models and Materials

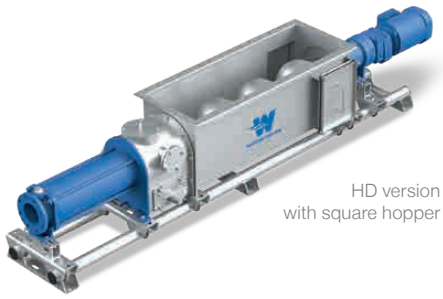
WANGEN PUMPEN only uses the best materials and components to ensure high operating safety. Due to our many years of experience in this industry, we guarantee a design that meets modern requirements.

The standard version HDS of the KL-R BIO-MIX is supplied with a round hopper and stone collection container after the feed screw.

The HD version is fitted with a square hopper. The advantage of this method of construction is that the entire length of the hopper is used as a stone collector and the foreign bodies collected in the hopper can be removed easily using the large opening located in the rear of the hopper.

Hopper and feed screw are available in both steel and stainless steel. The various rotor and stator sizes enable optimum adaptation to individual requirements.

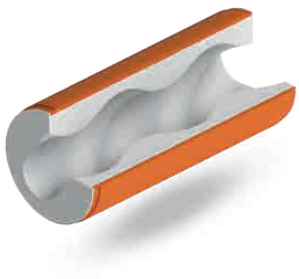
HDS version
with round hopper
(standard)

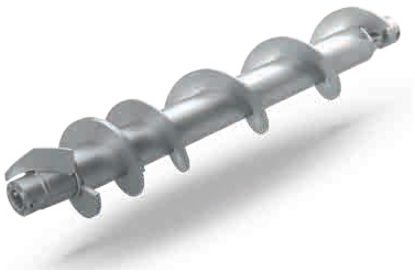


HD version
with square hopper

Spare Parts

By using original spare parts from WANGEN PUMPEN, we guarantee that the performance output of our pumps will be fully restored. With our decades of manufacturing competence, you will be able to profit from our first class quality as a manufacturer and, as a consequence, ensure the long service life of your pump.





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Technical Data

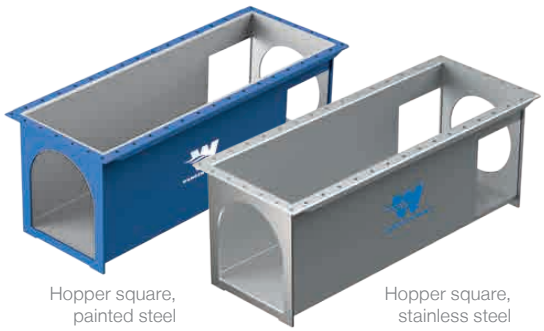
Versions and Materials

We offer a large selection of accessories, which are perfectly matched to our product range, providing the ideal complement or adaptation to your individual requirements and allowing you to create your own customized solutions. We would be happy to assist you with customized solutions.

- Hoppers available in a variety of sizes
- Hoppers in painted steel or stainless steel
- Feed screws in steel or stainless steel
- Optionally with base plate
- Special versions possible for adaptation to existing systems
- and much more

Hopper round, painted steel

Hopper round, stainless steel



Hopper square, painted steel

Hopper square, stainless steel

Easy Maintenance

WANGEN pumps are user and maintenance friendly. It is easy to switch rotors and shaft seals due to the accessibility of connecting bolts and the cartridge construction of the bearing pedestal. This makes it easier for you to carry out the necessary maintenance yourself.

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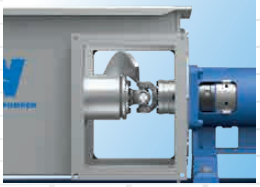
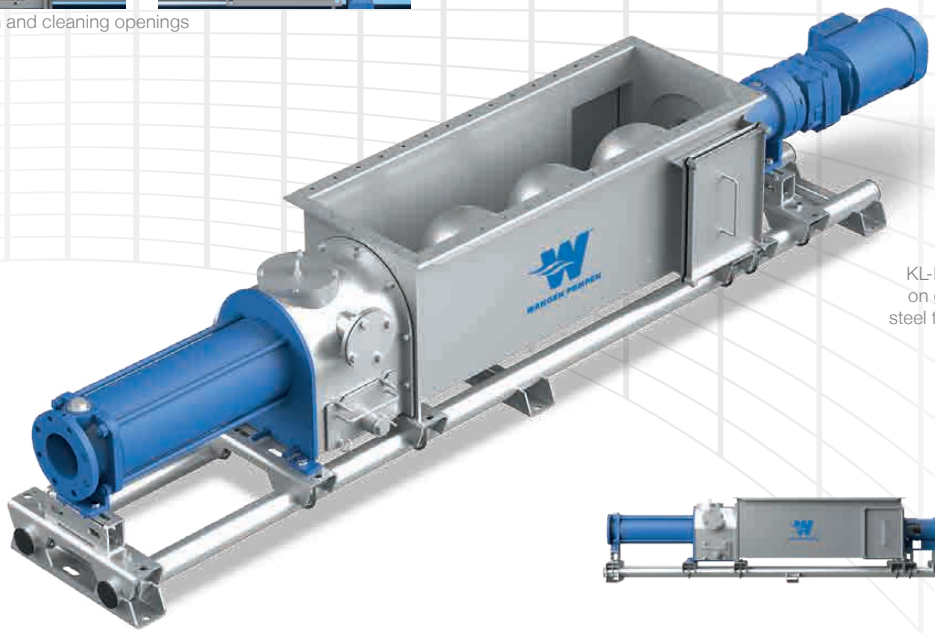
Technical Data

Performance Data KL-TL / KB-TL

Pump size	Maximum particle size (inch)	Flowrate (gpm) at 100 rpm	Maximum differential pressure (bar / psi)
50	3.74	88.06	9 / 130.5
65	4.40	176.1	12 / 174
80	4.76	374.2	12 / 174
100	5.90	660.4	12 / 174



large inspection and cleaning openings



KL-R BIO-MIX
on galvanized
steel tube frame

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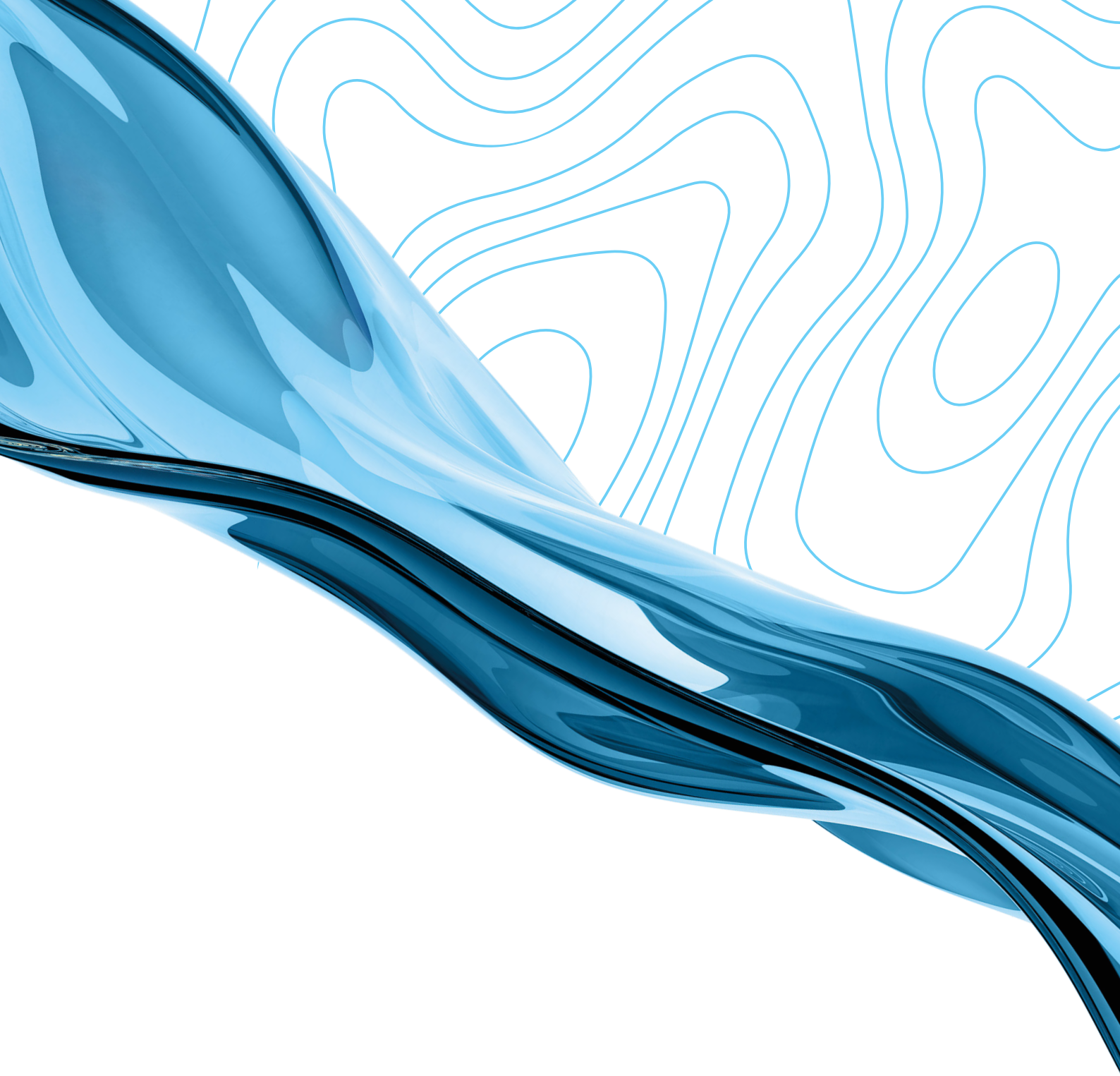

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