WANGEN PUMPS

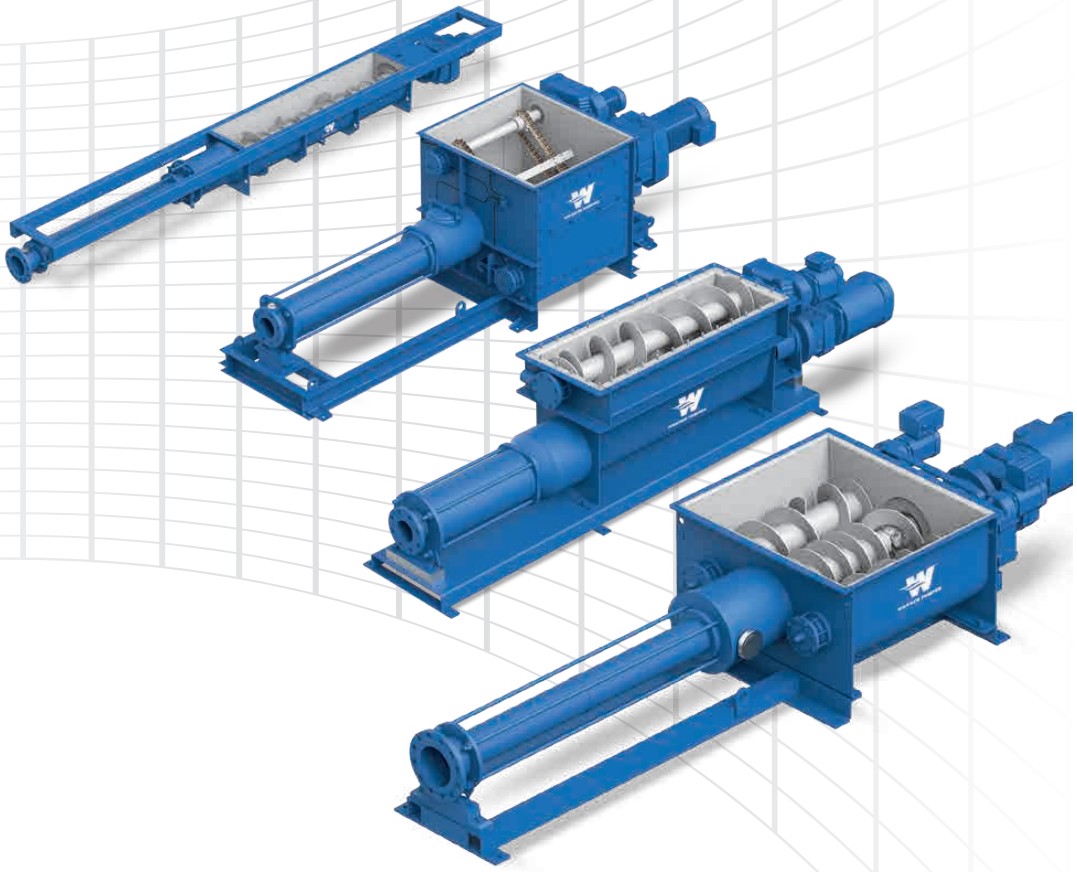
ROTOTEC

the power of flow

ONE STEP AHEAD

High-performance hopper feed pumps

KL-RÜ / KL-RQ / KL-RS / KL-R Triplex



For the reliable conveyance of dewatered sludge and paste-like media

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WANGEN progressing cavity pumps

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

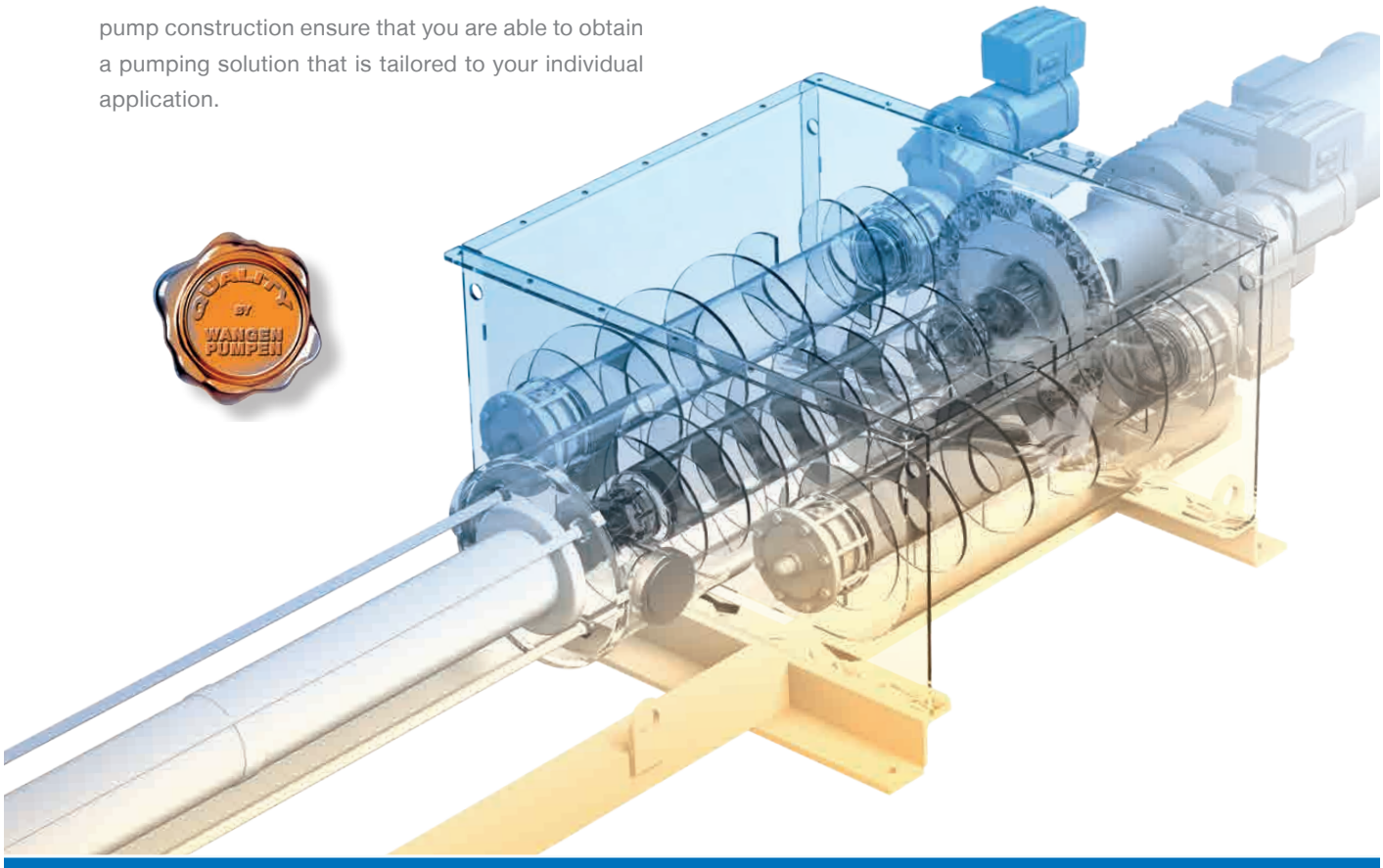
The high performance hopper feed pumps KL-RÜ, KL-RQ, KL-RS and KL-R Triplex are our first choice when it comes to the conveyance of dewatered sludge with a high solid content.

WANGEN high performance hopper feed pumps are idea when conveying demanding products, pumping at large heights and distances and when high dosage accuracy is required. They are utilized in numerous industries, such as waste water technology, shipping and machine construction, as well as paper, chemical, and food processing.

Technical highlights:

- Flow rate from 0.04403 up to 2.466 gpm,
- Temperature from -22°F up to 284 °F,
- Maximum differential pressure 696.18 psi,
- Viscosity up to 200,000 cP.
- Solid content up to 45%

Numerous versions and sizes as well as a modular pump construction ensure that you are able to obtain a pumping solution that is tailored to your individual application.



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Applications

Conveying Materials

With the high performance hopper feed pumps KL-RÜ, KL-RQ, KL-RS and KL-R Triplex, according to pump, typically the following medium types can be pumped:

- Sewage and refinery sludge
- Dewatered sewage sludge with a solid content of up to 45%
- Organic and inorganic sludges
- Iron oxide sludge and electroplating sludge
- Coal floatation sludge
- Gyp mud
- Gravel washing sludge
- Industrial sewage
- Lead paste
- Slaughterhouse, food and fish waste
- Adhesive, PVC adhesive, dispersion adhesive, starch glue
- Polishing paste
- Tar, cement

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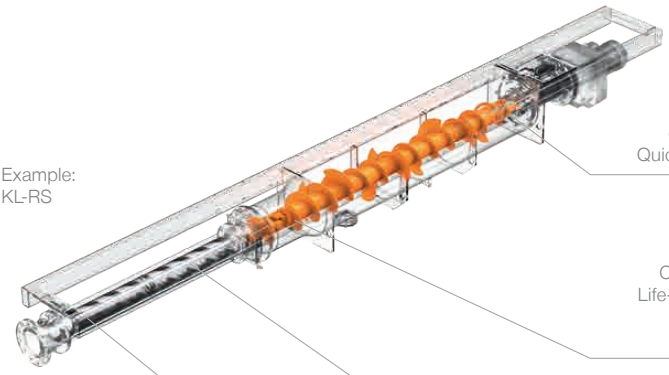
Features

Construction Characteristics



Example:
KL-RS

Main sealing in cartridge construction. Quick and easy to replace.

Cardan shaft and joints. Life-long lubricated needle bearings. Wear and maintenance-free.

Robust rotor in the highest of qualities from own manufacturing plant and in various shapes.

Stators in various shapes from own manufacturing plant.

The aim is the production of the best pumps for the job in hand. For this reason, WANGEN pumps are consistently designed for the highest possible performance and reliability. This can be clearly seen by the construction and the satisfaction of our customers.

Further pluses:

- Not sensitive to foreign bodies
- Maintenance friendly
- Mature, robust cardan joints with screw conveyor
- High operating safety
- Large viscosity range
- Consistent modular principle enables high flexibility, low replacement part stocks and short downtimes in the event of repairs
- Configuration and length according to customer requirement

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Benefits

Maximum Reliability

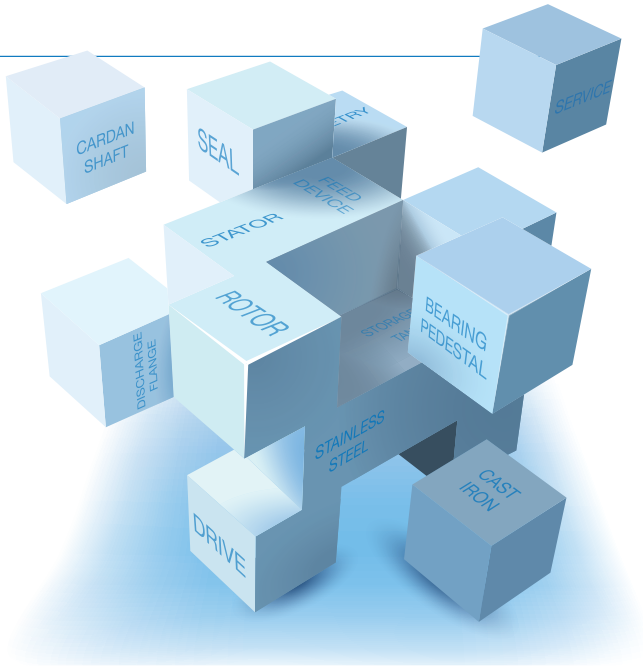
Pure power:
Cardan shaft in WANGEN progressing cavity pumps

In many industry sectors, abrasive fluids or slurries are often conveyed at high pressure or in continuous operation. With conventional pumps, this high strain frequently leads to breakdown due to join breaks, for example. For this reason, we only use top-quality, robust components in our standard pumps.

The design has been adapted to these requirements down to the very last detail as a result of years of optimization. This means Wangen pumps guarantee low-maintenance operation which is practically fault-free.

Maximum Variety

A variety of standardized 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 regardless of the industry you work in, the medium to be pumped, and your operational requirements.



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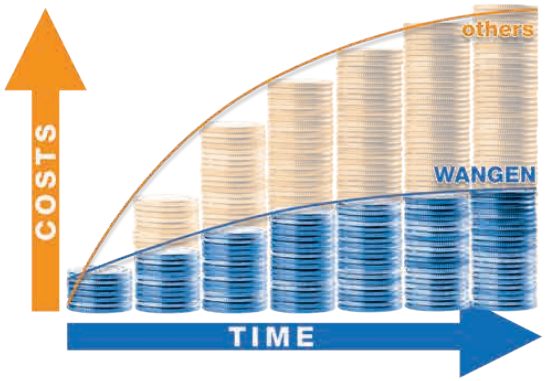
Benefits

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.

Easy Maintenance

In order to ensure a high level of system availability, many customers wish to maintain their pumps themselves. Therefore, our pumps have large inspection openings as a standard design. This enables easy cleaning of the pump, such as removing fibers and other foreign objects. It is also easy to switch the rotor and shaft seal due to the accessibility of the bearing pedestal. This makes it easier for you to carry out the necessary maintenance work yourself.

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Technical Data

Models and Materials

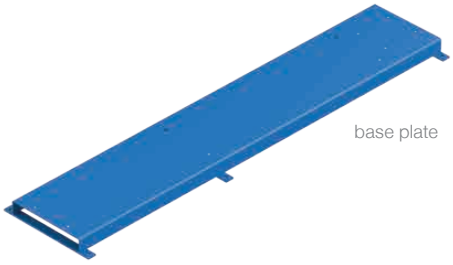
A wide selection of standardized components is available to design and build your pumps.

- Joints: stainless steel cardan joints,
- Seals: single and double-effect mechanical seals
- Rotor: Hardened tool steel, stainless steel 1.4301 (A304), stainless steel 1.4571 (A314Ti), both available with chromium or chromium carbide coating
- 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: Gear motors, hydraulic motors

Options and Accessories

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. If you need a special solution, we would be happy to assist you.

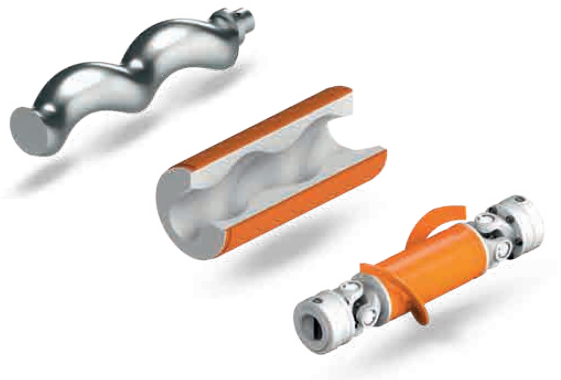
- Mounted on a baseplate or used as a mobile pump in the production plant.
- Temperature and pressure sensors to prevent the pump running dry and the excessive build-up of pressure.
- Frequency converter to regulate the delivery volume.
- Antiblock device for conveyance of very fibrous mediums.
- Cardan joint with feed screw for pumping very viscous mediums.
- Pump manufactured in accordance with the ATEX guidelines for use in potentially explosive areas.



base plate

Spare Parts

By using spare parts from WANGEN PUMPEN, we guarantee that the performance of our pumps will be fully restored. With our decades of manufacturing experience, you will also benefit from our first class manufacturing quality and; therefore, receive a long service life of your pump.



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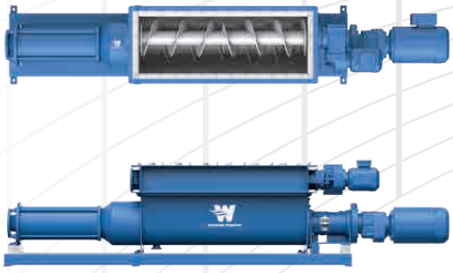
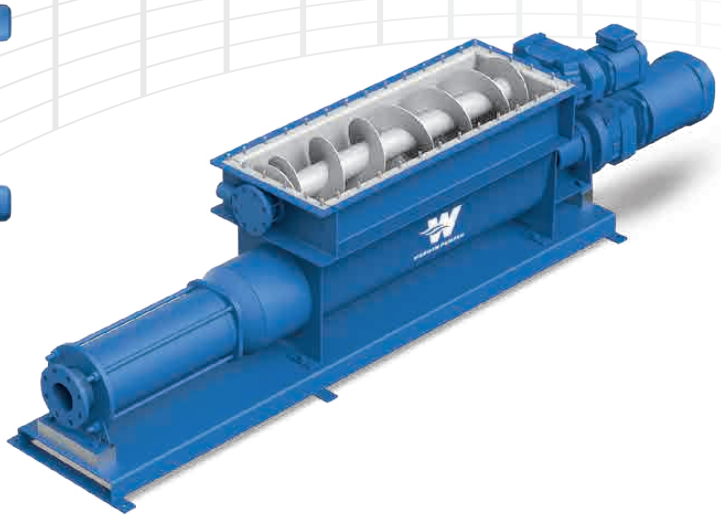
Technical Data

Performance Data KL-RÜ

Pumps of the KL-RÜ series are built according to our proven modular principle. This allows high flexibility, low spare parts inventory, and minimum downtimes for repairs. Other features include: sophisticated and robust cardan joints with screw conveyors, fibers do not get wrapped around the joint and the joint connectors thanks to the effective protection device. Using an attachment hopper as an extension is possible. The KL-RÜ is available in various shapes, pump set sizes and rotor / stator shapes (S, L, and H shapes), so that the flexible choice of drive is the only logical consequence.

Pump size	Maximum particle size (inch)	Flowrate (gpm) at 25-100 rpm	Maximum differential pressure (bar / psi)
50	3.74	2.2 – 132.1	48 / 696.18
65	4.40	3.5 – 176.1	48 / 696.18
80	4.76	13.2 – 352.2	48 / 696.18
100	5.90	22.01 – 660.4	48 / 696.18





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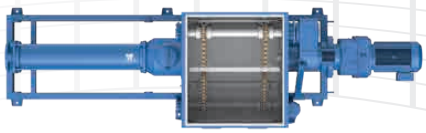
Technical Data

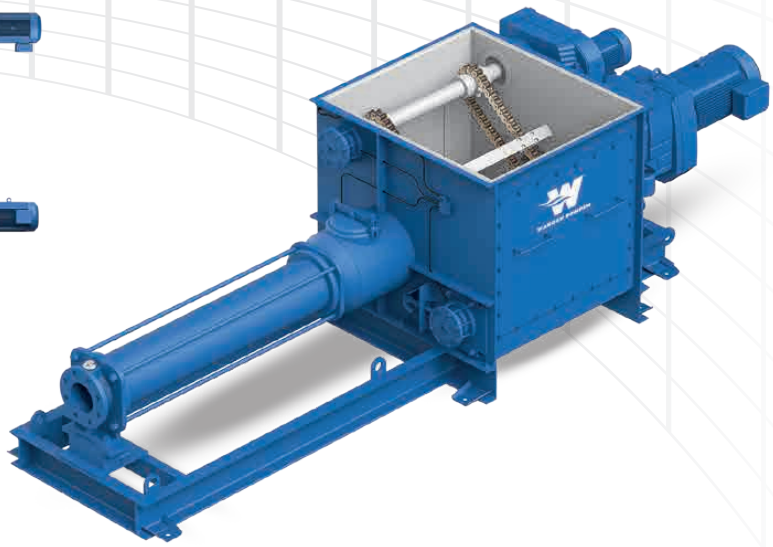
Performance Data KL-RQ

WANGEN pumps of the type KL-RQ have a transverse feed device for integrated bridge building and a collecting vessel for continuous feeding. They were designed for conveying dewatered sludge with a high content of dry matter (TS) ranging from 15% to 45%.

High dosing accuracy even at low speeds, optimal downtimes even with difficult media. And a consistent dosing facility, as an intermittent input is compensated by a buffer volume in the collecting vessel. An extension through the feed hopper is possible as well as customized sizes.

Pump size	Maximum particle size (inch)	Flowrate (gpm) at 25-100 rpm	Maximum differential pressure (bar / psi)
80	4.76	2.2 – 352.2	48 / 696.18





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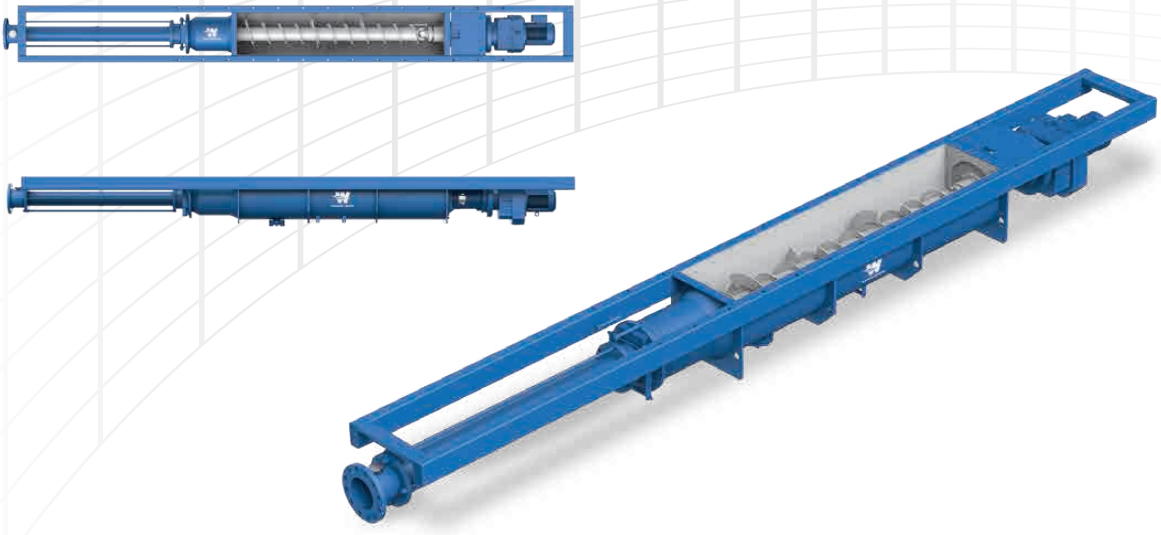
Technical data

Performance Data KL-RS

Pumps of the KL-RS series are hopper silo pumps for conveying and dosing dewatered sewage sludge with a high-solids content (DS) of 15% to 45%. These features make silo discharge pumps of the type KL-RS an indispensable core aggregate in modern sewage treatment plants. The KL-RS series processes mediums with a wide range of viscosities and delivers a good flow rate, even with media containing abrasive and fibrous additives. The slide valve design at the end of the hopper tunnel allows inspection and monitoring work of the hopper - without the need to disassemble the pump. Also, gate valves allow the rotors / stators to be exchanged, even if the silo is full.

Pump size	Maximum particle size (inch)	Flowrate (gpm) at 25-100 rpm	Maximum differential pressure (bar / psi)
80	4.76	3.5 – 352.2	48 / 696.18
100	5.90	22.01 – 660.4	48 / 696.18



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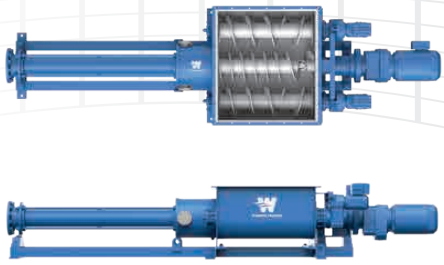
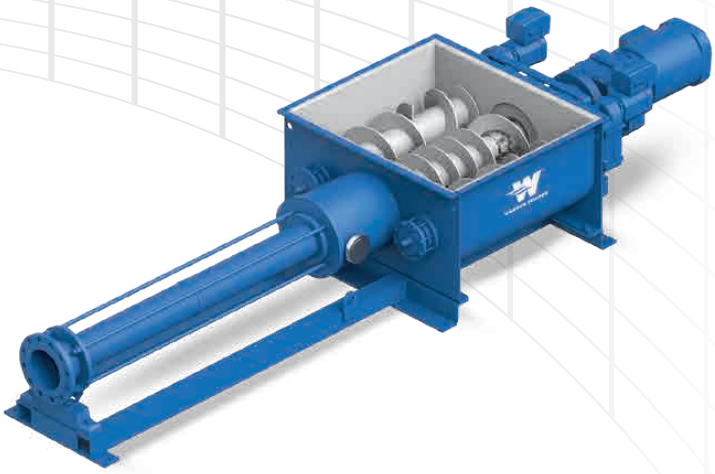
Technical data

Performance Data KL-R Triplex

Pumps of the KL-R Triplex series impress with their consistent dosing option, as an intermittent input is compensated by the buffer volume in the collecting container. The small space requirement and large receiving vessel are a result of the low construction and the large volume of the container. The receiving vessel is available in three standard sizes (4.403 gpm - 44.03 gpm) - special sizes can be manufactured upon request. The KL-R Triplex series is able to convey mediums from chamber filter presses, screen belt presses or decanters to dryers, silos or storage areas, or other feeding jobs.

Pump size	Maximum particle size (inch)	Flowrate (gpm) at 25-100 rpm	Maximum differential pressure (bar / psi)
65	4.40	3.5 – 176.1	48 / 696.18
80	4.76	13.2 – 352.2	48 / 696.18





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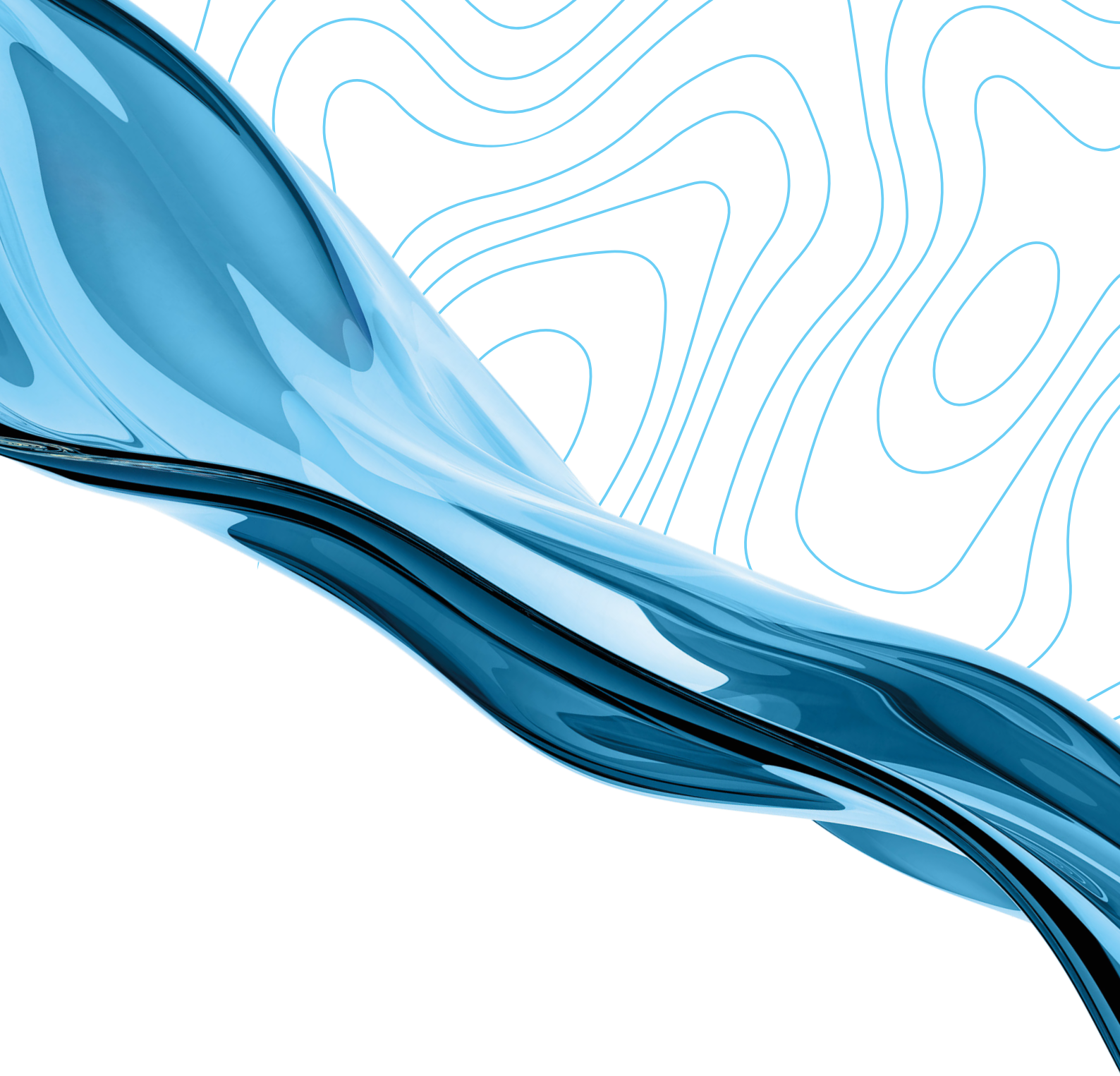

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