

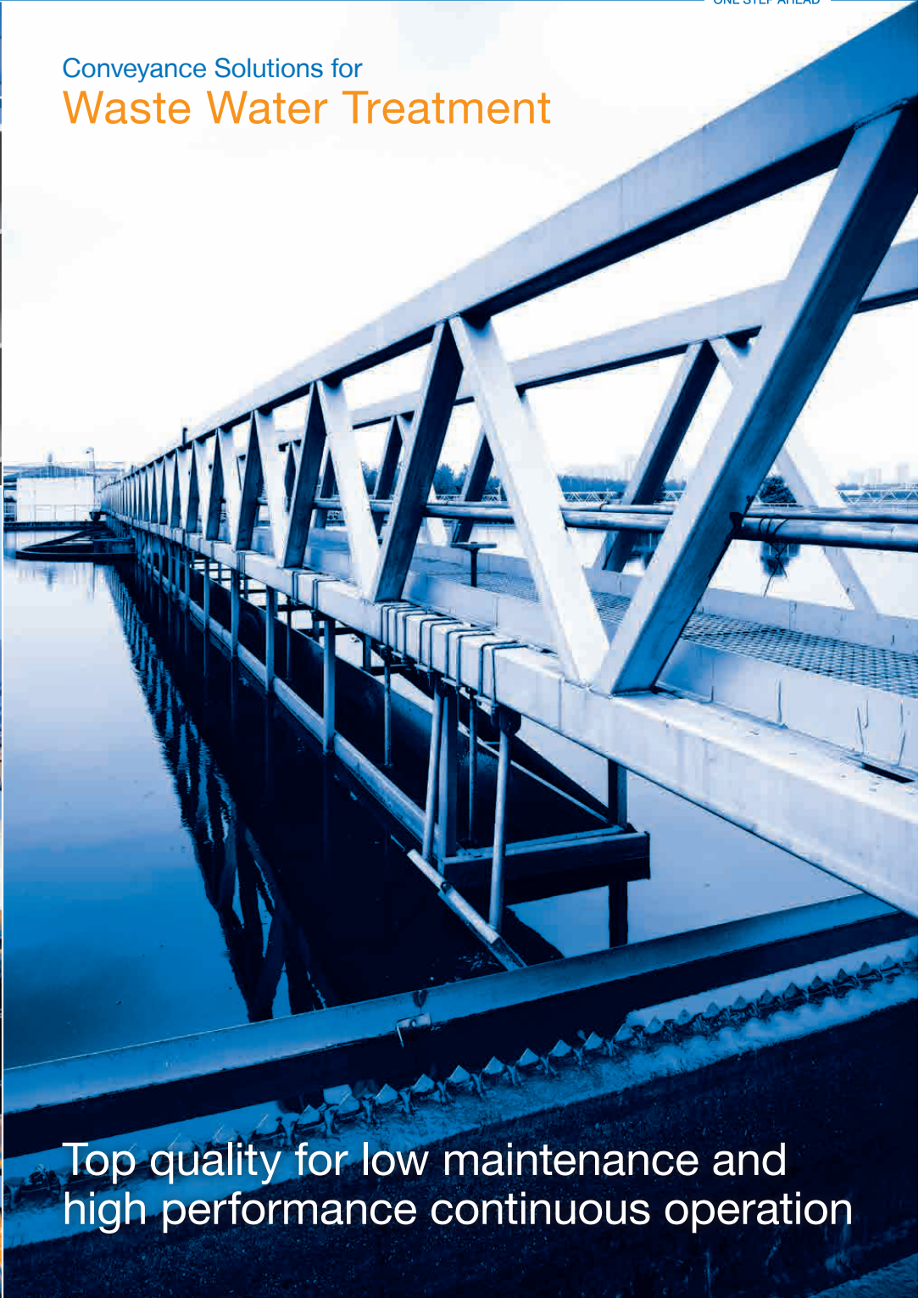
# ROTOTEC

Pumps  
Wear and Tear repairs  
Repairs



ONE STEP AHEAD

## Conveyance Solutions for Waste Water Treatment



Top quality for low maintenance and  
high performance continuous operation

Who we are

## Why choose pumps from WANGEN?

The name WANGEN PUMPEN originates from Wangen in the Allgäu region of Germany, which is the location of the company's head office and main production site. This is our home, in the most southerly part of Germany, where the three countries of Austria, Switzerland and Germany come together at Lake Constance.

Made in Germany – used worldwide. Customers trust and rely on pumps made by WANGEN PUMPEN - clear confirmation of our commitment to quality as the basis for the long-term creation of value.



Since it was founded in 1969, WANGEN PUMPEN has continued to grow, expanding from its beginnings as a small family business into a medium-size company with a workforce of over 200 staff.

Thanks to our consistent focus on the requirements of the market and our customers, our pumps are highly regarded at regional, national and international level.

Our customers hold us in high esteem, motivating us to retain and improve on our company values every single day.



” My treatment plants use pumps from WANGEN because I value robust and reliable technology. ”



Headquarter building in Wangen

## WANGEN pumps in your Sewage Treatment Plant Applications

The typical applications include the conveyance of:

- Raw water
- Thin slurry, surplus sludge and digested sludge
- Mechanically thickened sludge from the decanter, rotary screen or belt press
- Dewatered sewage sludge with a dry substance content of up to 45% from the chamber filter press, centrifuge, decanter or belt filter press
- Sludge from industrial waste water treatment processes, e.g. metal hydroxide sludge
- Aluminium and ferrous sulfate solutions
- Polymer solutions
- Lubricant, lime milk, liquid lime



Depending on the country and the applicable legislation, municipal and industrial waste water is cleaned in a number of different steps and stages. Each purification step generates sewage sludge in addition to purified water. This sludge is first thickened, dehydrated and finally, recovered. The slurry to be pumped is extremely abrasive and fibrous with a dry substance content of as much as 45%. This places huge demands on the pumps in use. We

offer a comprehensive program of robust and highly reliable pumps which satisfy this requirement. Special developments for the conveyance of highly dewatered sludge complement our range. In this way, we help you to keep your sewage treatment plant operating smoothly and maximize plant availability.



Conveyance of thin slurry:  
KL50S progressing cavity pump



Conveyance of sludge from decanter to silo: KL65RÜ80.4 ESP with fill level monitoring



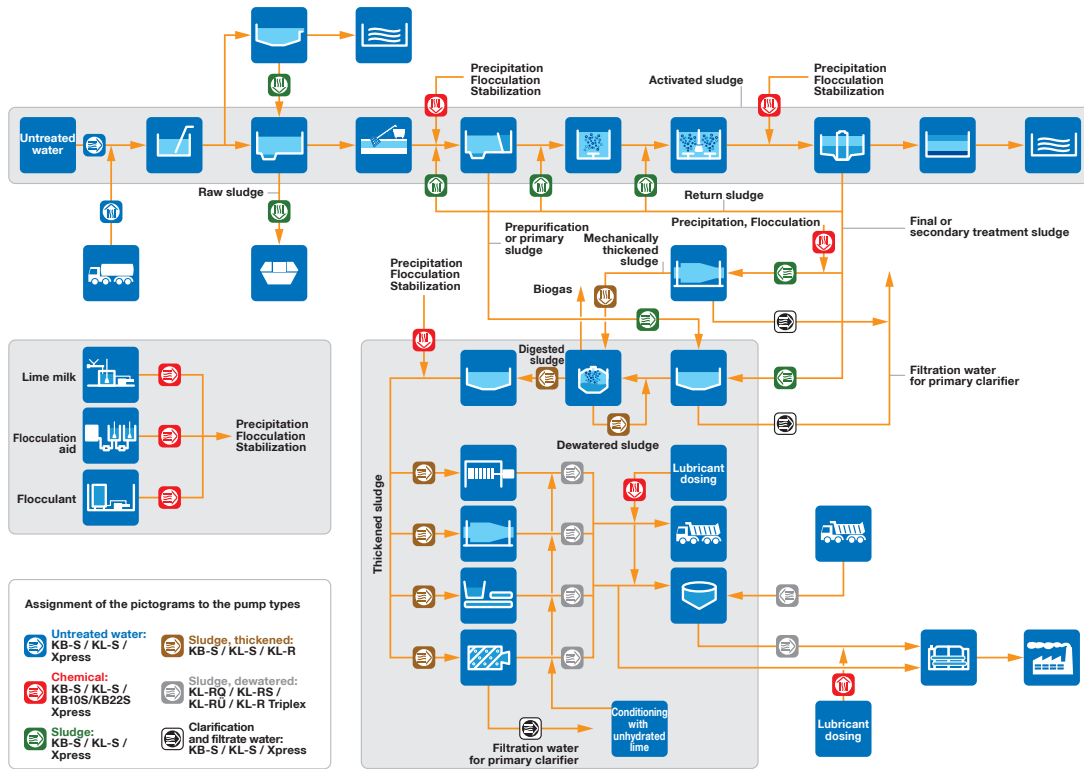
Conveyance of dewatered sewage sludge from decanter for drying: KL65R80.2 Triplex progressing cavity pump



Conveyance of dewatered sewage sludge: KL80RQ110.4+110.4 Progressing cavity pump

Sewage Treatment Plant with Processes and Pumps

## WANGEN pumps in your Sewage Treatment Plant



## Service and Spare Parts

All original WANGEN spare parts satisfy stringent requirements in terms of functionality and durability and are manufactured in strict compliance with the WANGEN quality standard. Spare parts such as rotor and stators are manufactured directly at our company. This guarantees first-class quality from the manufacturer and ensures the long service life of your pump.

We maintain a large warehouse of original WANGEN spare parts at our production facility, allowing us to supply spare parts which we have in stock all over the world within a few working days. This means we can help you to reduce system downtime and maximize the availability of your plant. Our Service team will be happy to help you.

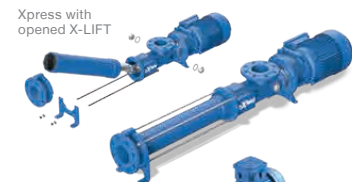
## WANGEN PUMPEN

# Our Solutions

Our pump series for waste water treatment are fitted with cardan joints with sleeve protection, making the pumps resistant to clogging and abrasion. The pump housing is flow-optimized, preventing the accumulation of deposited solids and keeping the pumps blockage-free. Large inspection ports.

### Xpress self-priming pumps with X-Lift quick change system

For the conveyance of i.a. raw water, sludge, polymer solutions and lime milk. Substance content of up to 8%, flowrate up to 56 m<sup>3</sup>/h, differential pressure up to 6 bar / 87.02 lbs.



### KB10S / KB22S

especially designed for dosing. Long-lasting, wear- and maintenance-free flexible joint, housing in **plastic material** or cast iron. Dosing accuracy  $\pm 1\%$ . Flow rate up to 4.000 l/h, differential pressure up to 16 bar / 232 psi.

### KL-S Self-priming Pumps

For the conveyance of free-flowing liquid slurry, surplus sludge and mechanically thickened sludge with a dry substance content of up to 10%. Flowrate up to 560 m<sup>3</sup>/h, differential pressure up to 48 bar / 696.18 lbs

### KL-R Hopper Feed Pumps

For conveyance of dewatered sewage sludge with max. 45% dry substance. Flowrate up to 50 m<sup>3</sup>/h, differential pressure up to 48 bar/ 696.18 lbs.

### KL-RÜ, KL-RQ, KL-R Triplex, KL-RS

#### High-Capacity Hopper Feed Pumps

For the conveyance of dewatered sewage sludge with a high dry substance content up to 45%. Flowrate up to 50 m<sup>3</sup>/h, differential pressure up to 48 bar / 696.18 lbs.

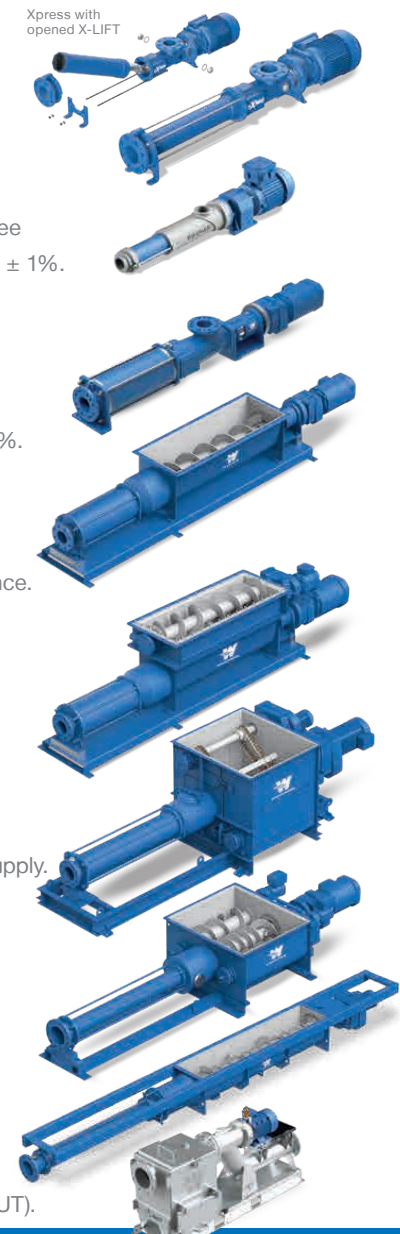
- KL-RÜ – the economical conveyance solution for a continuous sludge supply.
- KL-RQ and KL-R Triplex – with a large integrated buffer volume to pump a discontinuous sludge supply.
- KL-RS – for silo emptying.

### Lubricant dosing device (not shown)

To reduce pipe pressure during conveyance of dewatered sewage sludge with a high dry substance content.

### X-UNIT

Modular System for debris removal (X-TRACT) and substrate cutting (X-CUT).



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## List of References

### Chile



Thin slurry, 1.2% dry substance content

|                       |                                    |
|-----------------------|------------------------------------|
| Plant                 | Municipal sewage treatment plant   |
| Process               | Conveyance of sludge to centrifuge |
| Product               | Self-priming pump                  |
| Pump type             | 6 x KL65S125.0.                    |
| Flowrate              | 6 x 95 m <sup>3</sup> /h           |
| Differential pressure | 3 bar / 43.51 lbs                  |

### Mexico



Raw sludge, 1-3% dry substance content

|                       |                                       |
|-----------------------|---------------------------------------|
| Plant                 | Municipal sewage treatment plant      |
| Process               | Conveyance of sludge to the thickener |
| Product               | Progressing cavity pump               |
| Pump type             | 8 x KL100S140.3                       |
| Flowrate              | up to 8 x 110 m <sup>3</sup> /h       |
| Differential pressure | up to 11 bar / 159.54 lbs             |

### USA



Dewatered sludge, 20% dry substance content

|                       |   |
|-----------------------|---|
| Plant                 | Municipal sewage treatment plant                            |
| Process               | Conveyance from the sludge reception silo to the stack silo |
| Product               | KLS eccentric pump with feed screw                          |
| Pump type             | 2 x KL80S101.3  |
| Flowrate              | up to 2 x 20 m <sup>3</sup> /h                              |
| Differential pressure | up to 9 bar / 130.53 lbs                                    |



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## List of References

### China



Dewatered sewage sludge, 20% dry substance content

|                       |                                  |
|-----------------------|----------------------------------|
| Plant                 | Municipal sewage treatment plant |
| Process               | Sewage sludge drying             |
| Product               | Hopper silo pump                 |
| Pump type             | 8 x KL80RS80.6                   |
| Flowrate              | up to 8 x 5 m <sup>3</sup> /h    |
| Differential pressure | up to 24 bar / 348.09 lbs        |

### Germany



Dewatered sewage sludge, 25% dry substance content

|                       |                                  |
|-----------------------|----------------------------------|
| Plant                 | Municipal sewage treatment plant |
| Process               | Sewage sludge drying             |
| Product               | Standard hopper feed pump        |
| Pump type             | 2 x KL65R60.4 V4A                |
| Flowrate              | up to 2 x 1 m <sup>3</sup> /h    |
| Differential pressure | up to 24 bar / 348.09 lbs        |

### Ireland



Dewatered sewage sludge, 20% dry substance content

|                       |                                       |
|-----------------------|---------------------------------------|
| Plant                 | Municipal sewage treatment plant      |
| Process               | Sludge drying                         |
| Product               | Hopper feed pump with transverse feed |
| Pump type             | KL80RQ90.4                            |
| Flowrate              | up to 3,3 m <sup>3</sup> /h           |
| Differential pressure | up to 24 bar / 348.09 lbs             |



# FOR A SUCCESSFUL PARTNERSHIP

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## ENVIRONMENTAL INDUSTRY

Effluent, recycling,  
hazardous waste processing, waste-to-energy  
plants, biogas, sewerage systems, agriculture



## DESIGNERS

Plant engineering, machine construction,  
process engineers,  
Engineers



## MANUFACTURING INDUSTRY

Paper, cardboard, cellulose, ceramics,  
coatings, electroplating, plastics,  
wood products, glass, tiles



## CHEMICAL INDUSTRY

Adhesives, paints,  
Chemicals, bitumen, latex,  
Oils and fats

## THE RIGHT PUMP FOR YOUR SECTOR



## FOODSTUFFS

Bakery and dairy products, drinks,  
delicatessen products, confectionery, chocolate,  
sugar, meat, fruit and vegetables



## WATER

Sanitary items / infrastructure, fire brigade,  
flood control, shipping



## PHARMACEUTICALS & COSMETICS

Creams, ointments, feedstocks,  
Animal health



## CONSTRUCTION INDUSTRY

Concrete manufacturing, insulation materials,  
Cement manufacturing, geothermal applications,  
tunnel construction,  
gravel quarries, cement products