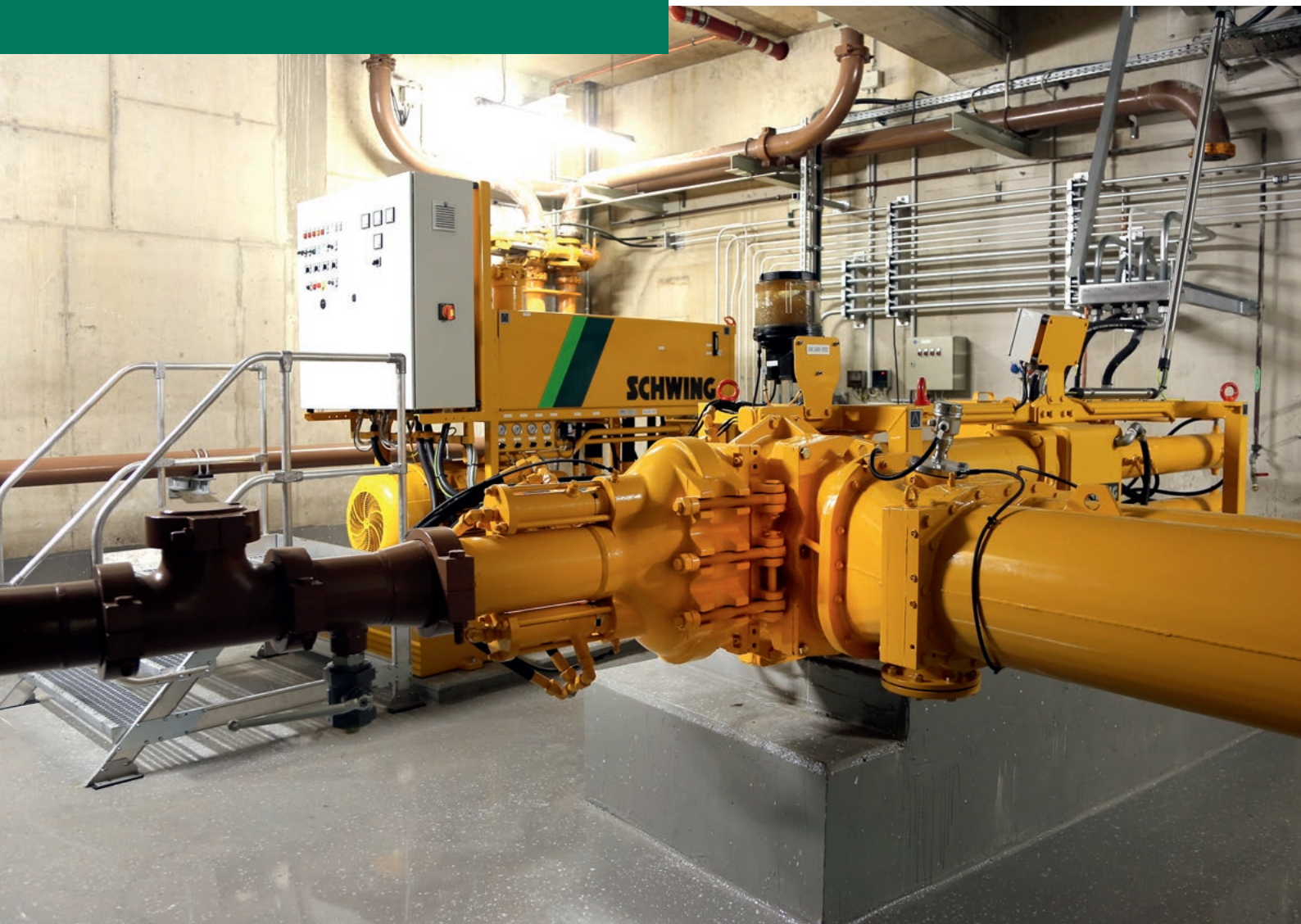


# Pumping solutions

for Waste Water Treatment Plants



Output	max.	230 m <sup>3</sup> /h
Output pressure	max.	150 bar
Solids content	max.	55 %
Sludge temperature	max.	100°C



RECORD BREAKING ENGINEERING

# Pumping solutions for Waste Water Treatment Plants

## Sludge pump systems for WWTPs

Greater reliability and efficiency with SCHWING sludge pump systems.

### Task

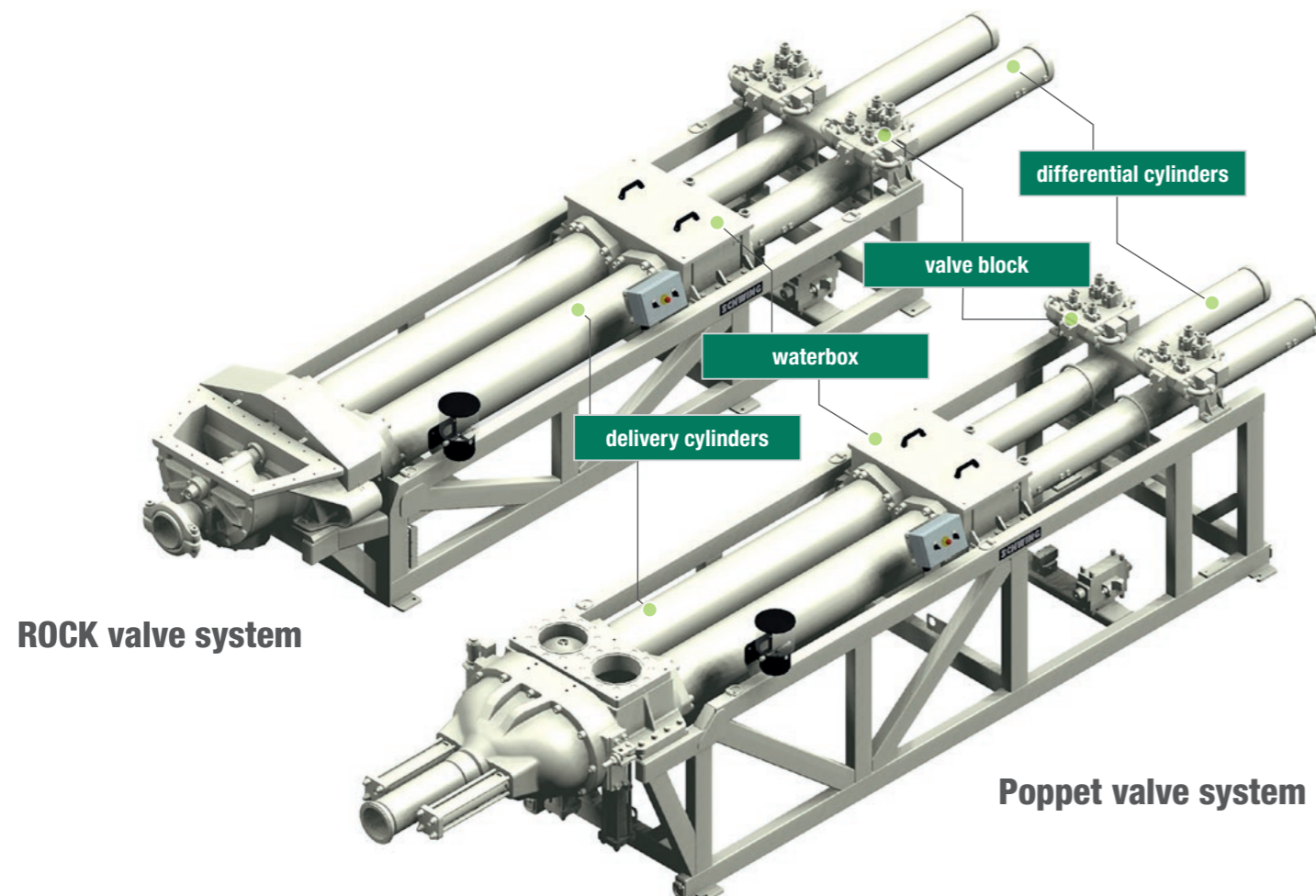
Cities, regions and many businesses worldwide employ waste water treatment plants (WWTP) for the purification of their waste water, thereby making an active contribution to the protection of the environment. The reliability of a WWTP greatly affects the operational safety and efficiency of up- and downstream systems. The safer the individual processes in a WWTP, the higher the reliability. Pumping the accruing sludge is a fundamental process in the operation of the plant and places high demands on the machines engaged.

### Solution

For decades, plant operators have put their trust in SCHWING sludge pump systems (KSP) for pumping sludge. Thanks to their reliability, they make an essential contribution to the operational safety of the WWTP, while their low-wear design keeps maintenance costs as low as possible.

### Two systems for all sludge types

For the optimum adaptation of the pump system to the type of sludge to be pumped, two different types of valve are available: the ROCK valve system and the poppet valve system. The valve system used largely depends on the characteristics of the sludge. Both pump types have been developed and manufactured by SCHWING and display impressively high performance, efficiency and reliability.

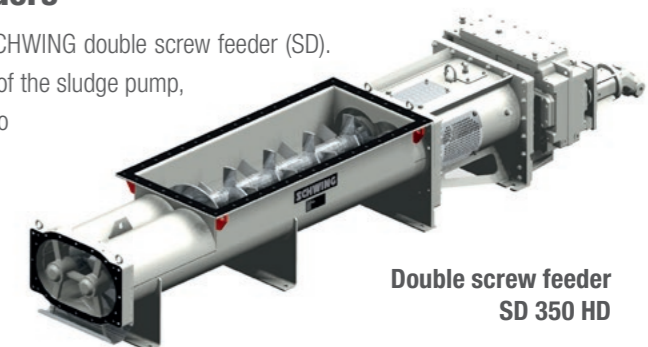


### System comparison

	ROCK valve system	Poppet valve system
<b>Applications</b>	pumping of material with rough contaminations and large foreign bodies	pumping of fine-grained high-viscous materials
<b>Advantages</b>	<ul style="list-style-type: none"> <li>handling of foreign bodies of grain size up to 50 mm</li> <li>low maintenance</li> <li>long lifetime</li> </ul>	<ul style="list-style-type: none"> <li>reliable separation of the pressure side from the suction side during the switching</li> <li>prevents the backflow of the pumped medium from the pipeline into the pump</li> <li>quiet, shock-free pump operation</li> </ul>
<b>Output max.</b>	150 m³/h	230 m³/h
<b>Output pressure max.</b>	100 bar	150 bar

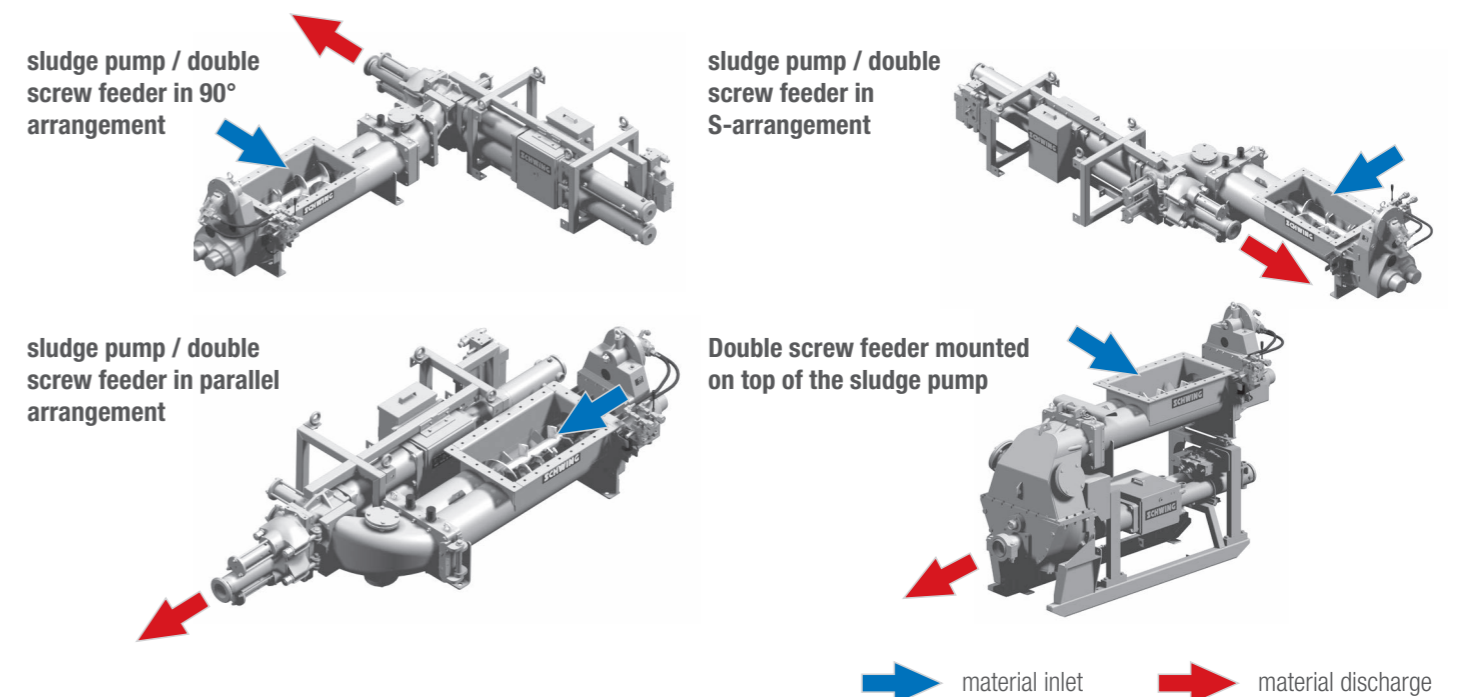
### Optimum material feed thanks to double screw feeders

A continuous and reliable material feed to the sludge pump (KSP) is provided by SCHWING double screw feeder (SD). They homogenise the material and through optimisation of the volumetric efficiency of the sludge pump, ensure high plant performance. Various sizes are available for individual adaptation to specific operating conditions.



### Variable arrangement

The sludge pump and the double screw feeder can be flexibly arranged. This allows for optimum adaptation to almost any situation.



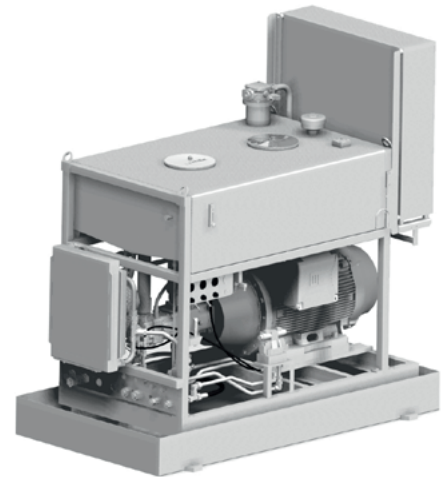
→ material inlet → material discharge

# Sludge pump systems for WWTPs



## Efficient drive units

Electro-hydraulic power packs (EHS) for SCHWING sludge pump systems provide high performance while simultaneously offering low energy requirements. Furthermore, the customer-specific integrated control system (PLC) makes them easy to operate - even from a central control room. Only electric motors of the highest efficiency class currently available are used, the drive power of which is efficiently transformed into pumping power by the SCHWING hydraulic system. The wide range of products enables optimum dimensioning of the drive unit and careful matching to the pump system guarantees high efficiency, reliability and maximum performance.



## Product range

	Types	Performance
Sludge pumps (KSP)	KSP 12 – KSP 315	0.5 m³/h – 230 m³/h
Double screw feeders (SD)	SD 250 – SD 500 HD	pre-charge pressure up to 6 bar
Hydraulic power packs (EHS)	EHS 100 – EHS 8000	5.5 kW – 2 x 800 kW

Further equipment: silo and pipe components, dosing and mixing devices, agitator hopper etc.

## Examples



WWTP Blue Plains, Washington, D. C., USA

**Equipment** KSP 140 XLV  
SD 500 HD, 2,500 mm inlet opening  
EHS 2000 - 200 kW/150 kW



WWTP Buchenhofen, Wuppertal, Germany

**Equipment** KSP 45 HDV  
SD 350 HD, 2,500 mm inlet opening  
EHS 1000 - 132 kW

SCHWING Sludge pump systems. The reliability benchmark.



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