

# Putzmeister Solid Pumps GmbH applied Technology

Economical, effective, environmentally safe and reliable. Putzmeister technology provides municipalities and industry with advantages in conveying various difficult sludges and slurries.



Co-incineration of alternative fuels in the cement plant at Le Teil Lafarge (France)



EKO 1060 PP at the biometanisation plant in Kössen (Austria) for the transportation and de-wrapping of expired food



Solids pumps KOS 1050 in sewage works ProRheno (Basel, Switzerland)



Three huge piston pumps KOS 25100 und 25200 are pumping silt out of the sea for arising an artificial island in front of the Japanese coast line



Co-incineration of sewage sludge in the coal-fuelled power station Zolling (Germany): solids pump KOS 2180



Two tailings pumps HSP 25100 at the Bulyanhulu goldmine (Tanzania)

# Components – custom made for perfect Operation



Hydraulic Power Unit for a HSP 25100 SP

Putzmeister's flexible modular hydraulic drive, electrical and hydraulic controls and fully hydraulic methods and materials create superior pumps. Examples are the Putzmeister hydraulic drive with infinitely variable capacity control, high-tech hydraulic components such as the free flow

hydraulic drive, electrical and hydraulic controls and fully hydraulic controls. In-line tandem mounted oil pumps all contribute to rugged reliability. Electric or diesel hydraulic drives are offered ranging from 5 kW to over 1000 kW.



Local control panel at the wastewater treatment plant Gulpocheon South Korea

# Accessories – designed for Slurry, Paste and Cake



The total Putzmeister package includes high pressure coupling systems, gate valves, mechanical or electronic pressure gauges, cleaning pigs and much more. All Putzmeister accessories are robust and reliable. Please contact Putzmeister for a custom engineered pump system – solutions from experience.



ZX 150 IP line in an incinerator plant

# Putzmeister Headquarter in Aichtal – Good Ideas become successful Products



Putzmeister Aichtal



KOS at the test bench in Aichtal

World headquarter in Aichtal – seven km south of the Stuttgart Airport, also the corporate center for two additional manufacturing facilities, 4 branch offices and wholly owned subsidiaries, domestic and abroad. Our customer's high solids pumping problems create Putzmeister's "better ideas". Our experienced application engineers and world class design

and manufacturing team turn the ideas into a solution – a pump system to solve our customer's problem. Putzmeister works with the customer every step of the way including aftermarket technical support, spare parts and service. Please contact Putzmeister to get our better ideas and worldwide resource working to solve your pumping problems.

# Putzmeister Solid Pumps GmbH for Industrial Applications



## The KOS series

### Solid Pumps without Valves with Transfer Tube Control

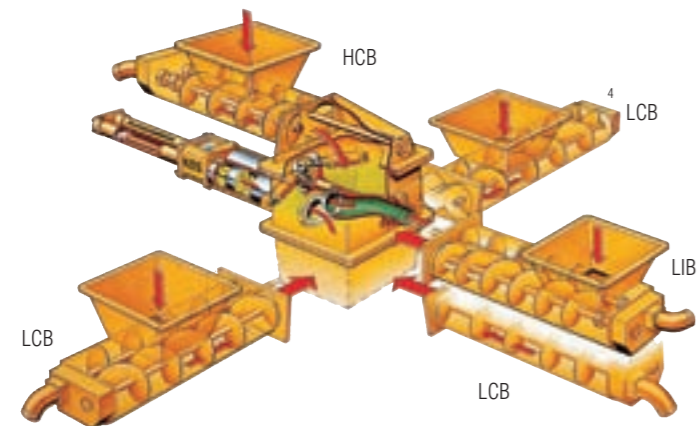
In the KOS series the intake and delivery cylinders are connected by an S transfer tube. This means that material can be pumped straight through without interruptions or mechanical obstacles. No valves of any kind are used. Foreign bodies within the material can therefore be conveyed without any problem up to a maximum particle size of 2/3 of the delivery pipeline diameter.

The KOS pump is particularly suitable for conveying highly viscous sludges and other material with a high proportion of coarse solids. The KOS series finds its principle application with those materials which present the most extreme requirements, such as dewatered sludges which contain solids, oil sludges, high-viscosity solids and so on.

A wide range of application-specific components and functions are available from Putzmeister.

#### Features and advantages

- For conveying coarse sludges or slurries with a high grain-size content
- Low maintenance and wear due to fewer moving parts
- Less suction resistance due to high-volume unrestricted infeed of material
- Hydraulic circuit will always remain separate from material being pumped, even in the event of poor maintenance.
- Delivery rates up to 400 m<sup>3</sup>/h
- Delivery pressures up to 150 bar



LIB Low Inline Booster  
HCB High Cross Booster  
LCB Low Cross Booster

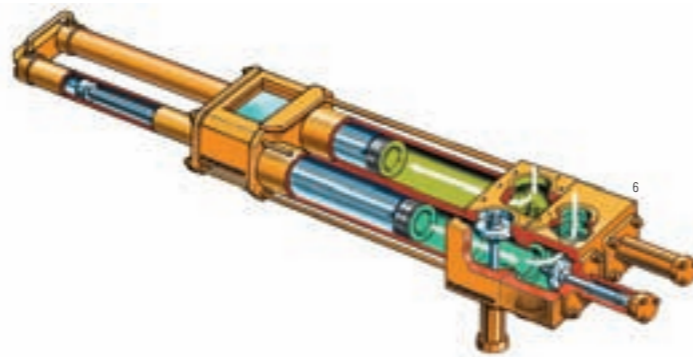
## The HSP series

### Valve Pumps



The HSP series is used with paste-like and highly viscous material with a low content of foreign bodies and small particle sizes (< 15 mm).

Precise sealing of the valves means that extremely high pumping pressures can be achieved. The principle behind the design of the hydraulic and pumping pistons is the same as in the Putzmeister KOS and KOV series.



#### Features and advantages

- For conveying fine-grained sludges or slurries
- Switchover without shorting
- No backflow at high pressures
- Easy to install damping tanks
- More effective with material containing a high proportion of air
- Outputs up to 350 m<sup>3</sup>/h
- Delivery pressures up to 150 bar

## The KOV series

### Solid Pumps with Ball Valves



The KOV series is characterized by its straightforward design and high reliability. The suction and delivery cylinders are connected by indirectly operated balls.

The fact that no actively driven elements are used means an inexpensive pump with the maximum availability. No problems arise with pumping paste-like material such as mortar or bentonite, even when they contain foreign bodies up to 10 mm in size. Pumping pressures up to 90 bar and an output of as much as 60 m<sup>3</sup>/h apply.



#### Features and advantages

- For conveying fine-grained pastes
- Simple design
- A minimum of moving parts
- Very easy to maintain
- Outputs up to 60 m<sup>3</sup>/h
- Delivery pressures up to 90 bar

## The EKO series

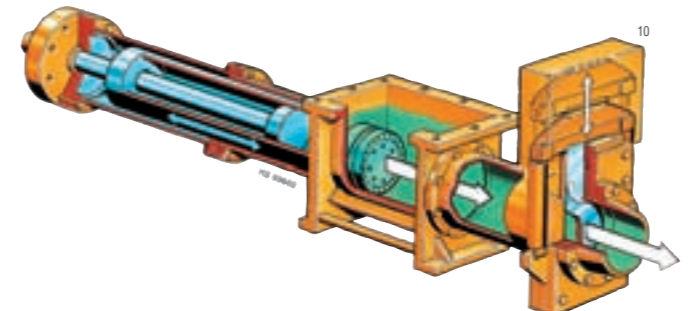
### Single-Piston Pump



The EKO series is designed for the most extreme pumping tasks. The open filling hoppers mean that extremely dry material, which may also contain a high proportion of foreign bodies, can be fed to the pump. Materials which until now could not be pumped, such as highly dewatered paper sludges, are thrust by the hydraulically driven piston into the delivery line.

#### Features and advantages

- For conveying large-sized and coarse foreign bodies
- For conveying extremely stiff material
- Crown version – pumping and cutting in one stroke
- Simple design
- Delivery pressures up to 60 bar
- Cutting force up to 80 t
- Outputs up to 14 m<sup>3</sup>/h



## System Engineering

### Receiving, Conditioning, Pumping

Putzmeister silos have been designed especially for highly dewatered and highly viscous sludges. Pump and silo working in perfect harmony: Since both pump and silo come from the same manufacturer, the customer enjoys important benefits.

#### Features and advantages

- The shared silo discharge and pump feeding auger reduces costs and increases availability.
- The perfect matching of pump and silo results in an optimized overall concept.
- The fact that pump and silo share certain components means the need for fewer



Storage silo discharging directly into pump

spares and also simplifies maintenance work.

- The customer is not troubled with sub-system interfacing problems.



Receiving bunker with double rectangular sliding frames and pump charging



Storage silo with truck loading

## Putzmeister Solid Pumps GmbH

### in various Applications



[www.putzmeister-solid-pumps.com](http://www.putzmeister-solid-pumps.com)

Max-Eyth-Straße 10  
72631 Aichtal/Germany  
P.O.Box 2152  
72629 Aichtal/Germany  
Tel. +49 (7127) 599-500  
Fax +49 (7127) 599-988  
E-Mail: psp@pmw.de

**Putzmeister**

Right to make technical amendments reserved - All rights reserved  
© by Putzmeister Solid Pumps GmbH  
2011 Printed in Germany (21103SC)