



Putzmeister



Putzmeister pumps
for industrial applications

Putzmeister high-density solids pumps dispose of even the stiffest types of sludge – and do so easily with a dry substance content of up to 45%. Large plants in particular have very strict requirements for fault-free continuous operation. This is where Putzmeister high-density solids pumps come into their own and demonstrate their high level of economic efficiency.

- **Sewage sludge processing (waste water)**
- **Biomass/organic waste**
- **Special waste – shredding/mixing/pumping (SMP)**
- **Separation of organic and inorganic substances**



KOS Performance Line at TMA Widens, UK



KOS in the Kassel power station



KOS with THS and JT in the Kassel power station

Closed pipeline transport

- **No odours thanks to closed system**
- **No contamination of the environment**
- **Space-saving and flexible design that can be adapted to the building**
- **High-level precision in metering**
- **Wear-free pipeline**
- **Low-maintenance and low-wear technology**
- **Maximum availability for continuous operation without operating personnel**
- **Remote monitoring from the central control room**
- **Transport of stiff, liquid and sticky sludge**

Putzmeister offers complete system solutions with mixers, pumps and pipelines for the hydraulic transport of materials – including those containing abrasive solids.

- **Mineral processing**
- **Backfilling**
- **Tailings processing**
- **Tunnelling**

Pulsation prevention and damping, VPD, Heradura, Mexico



2 x HSP conveying iron ore concentrate across a distance of 26.5 km, Stary Oskol, Russia



2 x HSP, Cerro Lindo, Peru



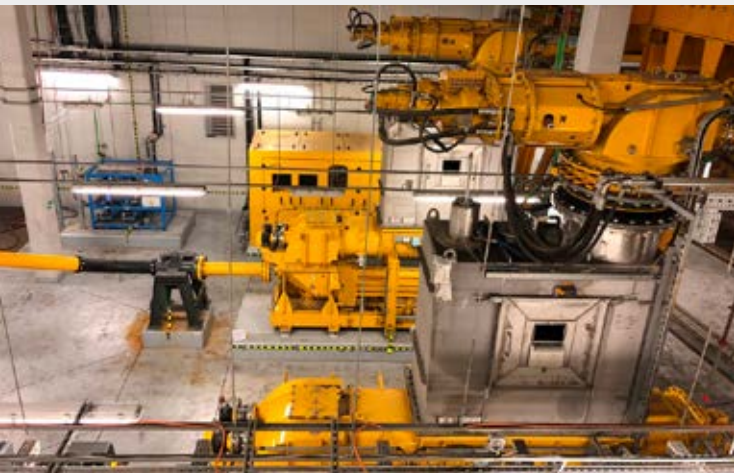
2 x HSP with PCF, San Julian, Mexico

Specialists for paste and tailings

- **Expertise in all applications for high-density solids**
- **Special planning and consulting even for complex processes**
- **Optimised and harmonised machine technology for plant projects**
- **30 years of experience**
- **Solutions for retrofitting existing plants**
- **Transparent, 100% reliable and qualified project management**
- **Global service network**

It is impossible to imagine many power stations without Putzmeister systems. They can pump an extremely wide range of coal, sludge, ash or REA gypsum for co-incineration with maximum reliability.

- **Ash transport and disposal**
- **Sludge incineration systems**
- **Cement industry**
- **Coal sludge treatment**



KOS pump system for coal sludge (Zofiówka, Poland)



KOS pump system for fly and ground ash (Kogan Creek, Australia)



KOS with SHS at Heidelberg Cement Guangzhou, China

Putzmeister pumps for conveying solids fulfil the critical requirements of power station engineers and operating companies

- **Constant availability**
- **Long service life**
- **Low maintenance and operating costs**
- **Easy maintenance**

Complete system for handling coal and other types of sludge for co-incineration in conventional power stations

- **Planning and design of your delivery tasks**
- **Consultation for transport technology**
- **Supply of pumps, silos, bunkers as well as pipelines and fittings**
- **Installation and commissioning at the customer site**
- **All-round service after system handover**
- **Training of operating personnel at customer site**

KOS pump series – piston pump without valves with S transfer tube

In the KOS series, the intake and pressure cylinders are connected with an S transfer tube. This enables continuous transport with free flow of the conveyed material without any valve technology. Foreign bodies in the conveyed material can be easily conveyed up to a particle size larger than 2/3 of the pressure connection diameter.

The KOS pump drive is particularly well suited to conveying highly viscous types of sludge and materials with a high foreign body content. They are used primarily for materials with extreme requirements, such as dewatered sewage sludge with a high foreign body content, oil sludge, highly viscous high-density solids, etc.

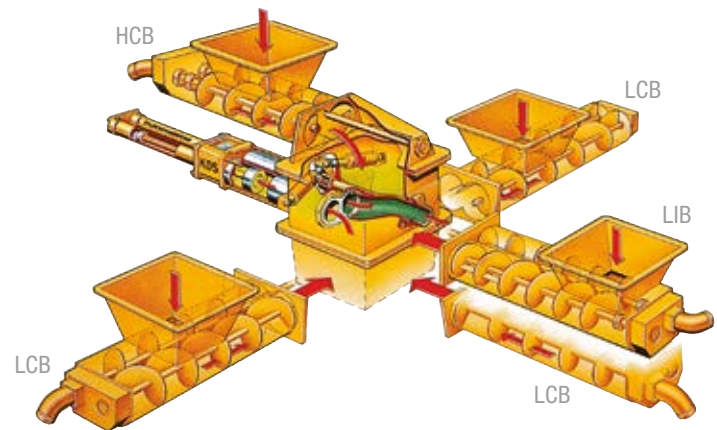
A wide range of task-specific components and functions are available for extreme applications

Features and advantages

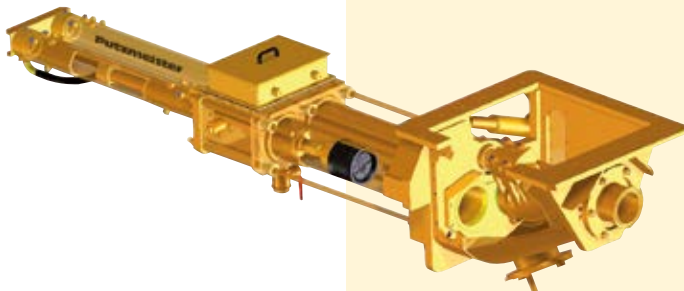
- **High level of availability**
- **Continuous material flow thanks to large, free delivery diameters**
- **Long service life**
- **Low service and operating costs**
- **Easy to service**
- **Low water consumption**
- **Use of powerful pulsation damping systems possible**
- **Maximum delivery rate of 385 m³/h**
- **Maximum delivery pressure of 100 bar**



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



Highly viscous materials that cannot flow by themselves need to be fed into the Putzmeister pump. This is done with dual screw conveyors, which generate an inlet pressure that ensures even better filling of the piston pumps.



HSP pump series – piston pump with seat valves

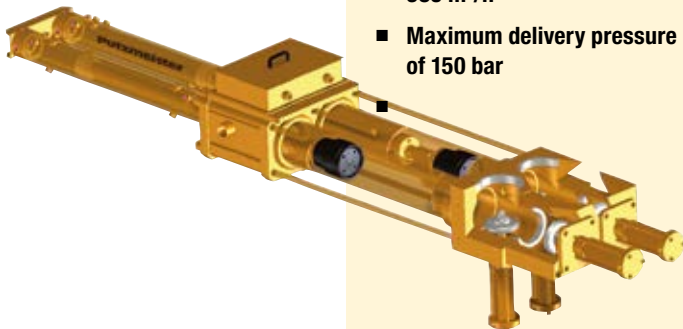


The HSP series is used for pasty and highly viscous media with a low foreign body content and small particle sizes (up to 8 mm).

The precise valve sealing makes it possible to achieve very high delivery pressures. The design principle of the hydraulic and delivery pistons corresponds to that of the Putzmeister series KOS and KOV. This ensures a high level of reliability and availability.

Features and advantages

- **Conveying fine-grained high-density solids**
- **Switching without the risk of short circuiting**
- **No return flow at high pressure**
- **Easy installation of damping vessels possible**
- **Effective transport of materials with a lot of entrapped air**
- **Use of powerful pulsation damping systems possible**
- **Maximum delivery rate of 385 m³/h**
- **Maximum delivery pressure of 150 bar**



KOV pump series – piston pump with ball valves

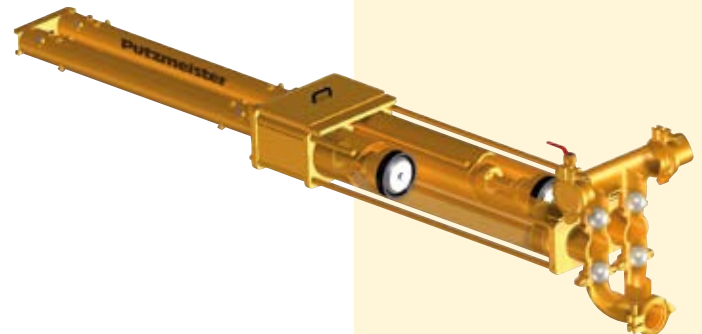


The KOV series boasts simple installation and excellent reliability. The intake and pressure cylinders are connected by indirectly actuated balls.

As it does not have any actively powered elements, the KOV is an extremely affordable piston pump with maximum availability. It effortlessly pumps pasty media such as mortar and bentonite. Even foreign bodies up to 10 mm in size can be pumped with a maximum delivery pressure of 80 bar and a maximum delivery rate of 70 m³/h.

Features and advantages

- **Conveying fine-grained pastes**
- **Simple installation**
- **Few moving parts**
- **Extremely easy to maintain**
- **Maximum delivery rate of 70 m³/h**
- **Maximum delivery pressure of 80 bar**



Putzmeister silo technology is specially designed for highly dewatered and highly viscous types of sludge. Customers can enjoy major benefits by obtaining silos and pumps from a single source.

Features and advantages

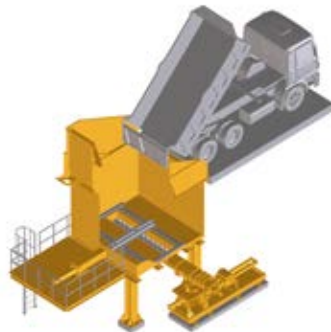
- **The joint silo discharge and pump supply screw conveyor reduces costs and increases availability**
- **The ideal harmonisation between pump and silo results in an optimised overall concept**
- **Customer do not need to clarify interfaces**
- **Reception bunker and accumulator with individual capacities**
- **Accessories: Fill level indicator, ventilation, explosion protection versions**



Storage silo with sliding frame for supplying pumps



Storage silo with sliding frame for truck loading



Reception bunker with sliding frame and pump supply



Putzmeister hydraulic power packs have proven themselves a thousand times over and offer the required power and reliability

Powering:

- **KOS, HSP, KOV high-density solids pumps**
- **THS, SHS feed screw conveyors**
- **Silo sliding frames PDL, PDF, PDS-L, PDS-F models**
- **Accessories such as shut-off gate valves or silo covers, etc.**
- **Performance classes of 4 kW to 1800 kW and beyond are available**

An open fluid circuit or closed fluid circuit is available depending on the required volume of fluid. The closed fluid circuit is used for large delivery rates, resulting in significant cost savings.

The fluid circuits are designed for a hydraulic pressure of 350 bar. This corresponds to delivery pressures of up to 150 bar, or brief peaks of up to 160 bar.

Features and advantages

- **Powerful**
- **Modular**
- **Low maintenance**
- **Reliable**



Foreign body trap



Mixer ▲

Silo ▼



Our experienced application engineers and the first-rate design and production team turn your ideas into solutions, namely into an efficient pump system. Putzmeister supports customers every step of the way. This includes providing accessories, technical support, spare parts, service and training. Get to know "Putzmeister's better ideas" and our knowledge gained from experiences across the globe. We solve your pumping problems.

- **Maximum functional reliability**
- **Simplified service and maintenance through the use of the same consolidated elements for operation and maintenance**
- **Short-notice problem solving in the event of a breakdown through a clear assignment of responsibilities**



PCF

Putzmeister offers three different systems to prevent or damp pulsations in the delivery line.

The **PCF** system with our HSP seat valve pumps is suitable for conveying fine-grained materials such as tailings, fly ash, etc.



HPD

When pumping materials containing aggregates, the Putzmeister HPD damping system can significantly reduce pulsations of the S transfer tube pumps – even for pastes or sludge mixed with cement.



VPD

If pastes or sludge are not mixed with cement, the Putzmeister VPD – our latest innovation – is the first choice. This is an optimised system with minimum wear and energy consumption.

Close to
your business



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