



**HABERMANN AURUM  
PUMPEN**

# APPLICATION MICROTUNNELING

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**ADVANCED PUMPING  
SOLUTIONS FOR  
TUNNELING PROCESSES**

[www.habermann-aurum-pumpen.de](http://www.habermann-aurum-pumpen.de)



TUNNEL BORING  
MACHINE

PIPE JACKING  
PROCESS

DRILLING FLUID  
CIRCULATION

QUARRING

SEPARATION &  
TREATMENT PLANT

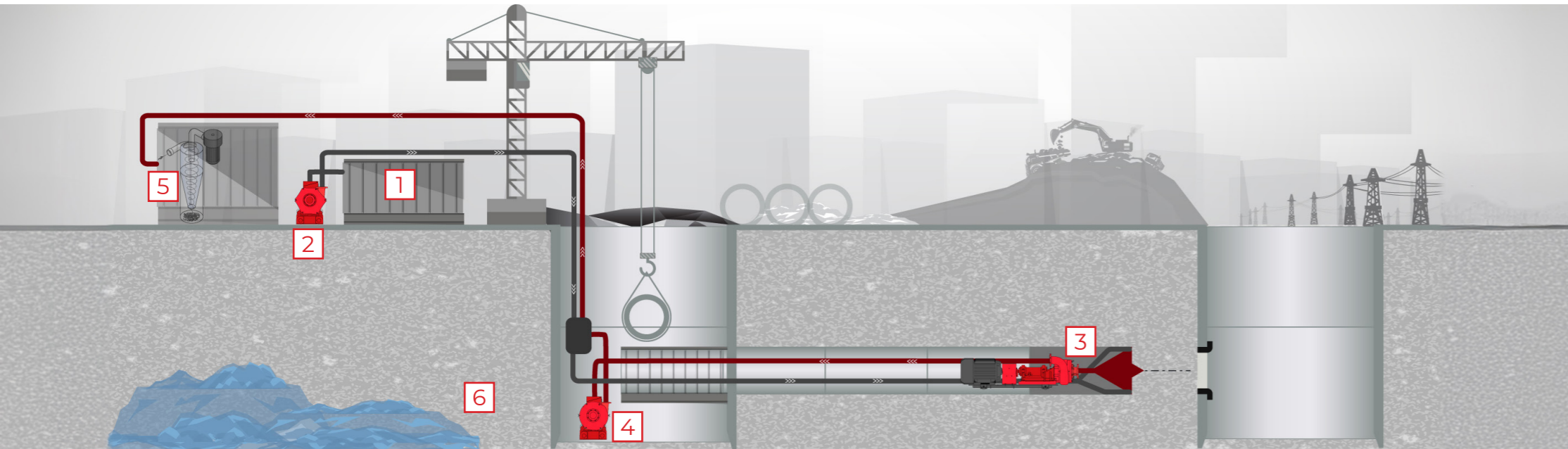
AGGREGATES

# Microtunneling.

Microtunneling is a trenchless method for pipe installation, where the drilling head with cutting wheels breaks up the soil and forms a funnel-shaped excavation. The excavated soil is transported to the launch pit using a conveying device.

The compact design of our powerful & highly wear-resistant pumps from KB & NPW series are tailor-made for use as delivery or feed pumps under confined installation conditions in microtunnelling & pipe jacking. Slurry

pumps used in microtunneling are specially designed to handle abrasive materials. They are robust & durable, capable of handling the high-pressure environment & the abrasive nature of the slurry.



## Processes & Challenges

	KB tunnel	KB & KBH	NPK	NPW	HPK	CRM & HS
1 MIXING & CONVEYING THE BENTONITE SUSPENSION			■	■		
2 FEED PUMP FOR LUBRICATING THE DRILL HEAD				■		
3 DISCHARGE PUMP FROM THE DRILL HEAD	■					
4 REMOVAL FROM THE EXCAVATION SHAFT	■	■				
5 SEPARATION SYSTEM   CYCLONE SEPARATOR, FILTER PRESS			■		■	
6 DEWATERING   GROUNDWATER CONTROL						■

Read more about tunnel application



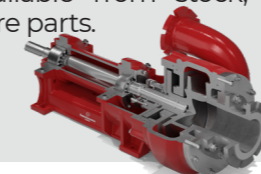
# Pumping solutions.

With the right pumping equipment selection, many failures will not occur or can be well predicted, so that microtunneling operators do not face unexpected surprises.

## Compact delivery tunnel pumps

The KB 100 pump in tunnel version is specially designed for use in confined conditions, where limited space is available. Despite its compact size, it is very powerful and highly resistant, providing continuous delivery of the cuttings from the drill-head to the downstream processes. This model is available from stock, including spare parts.

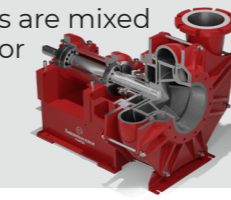
KB 100 tunnel version



## Metallic NPW feed pumps

NPW pumps are responsible for feeding fluids, e.g. slurry, water, or lubricants into the process, providing a consistent and reliable flow. Common use is to supply the bentonite suspension to cutting head of the microtunneling machine, ensuring the face is lubricated and the cuttings are mixed with the slurry for transport.

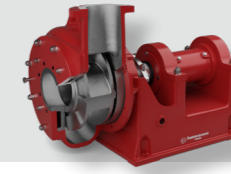
NPW 54 feed pump



## Heavy-duty KB & KBH-series delivery pumps

The KB and KBH-series from wear-resistant high chrome steel are used to move fluid over longer distances or against higher pressures. They are widely used to transport slurry mixed with excavated material from the tunnel back to the surface or to the separation plant.

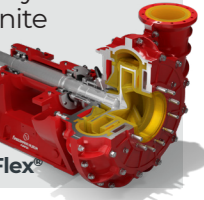
KBH 150/400 in a shaft design



## HPK pumps with elastic lining

The HPK-series with elastic lining of all inner parts exposed to the slurry are ideal for handling reagents and chemical slurries. They are resistant to chemical corrosion and capable of handling a wide range of fluid viscosities and densities, e.g. for processing the fine grained slurry enriched with sand and bentonite in advance of the separation process.

HPK-series with polyurethane inlines APFlex



## Valves for tunnel construction

We offer a wide range of valves for highly abrasive media. The butterfly & gate valves are specially developed for the harsh operating conditions encountered when transporting solids in tunneling and special civil engineering. They can be operated with manual, pneumatic, electric and hydraulic drives.

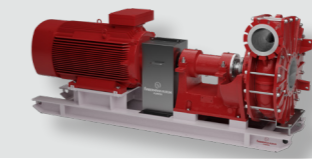
Pinch valve for highly abrasive media



## NPK-series made of highly wear-resistant cast materials

NPK pumps are designed to handle abrasive and corrosive slurries, ensuring the continuous flow. The practical design of the casing walls, wear plates & impeller is guaranteed to withstand extreme operating conditions with high head rates and coarse-grained solids.

Heavy-duty NPK-series



## Submersible pumps Apollon®

Apollon® range includes drainage, sewage & slurry pumps. The use of wear-resistant components, e.g. high-chrome impeller treated with the special technology, enables to achieve optimal service life even when working with highly abrasive media.

APNO | CUTARGO MAXIFLOW | ELEVARO

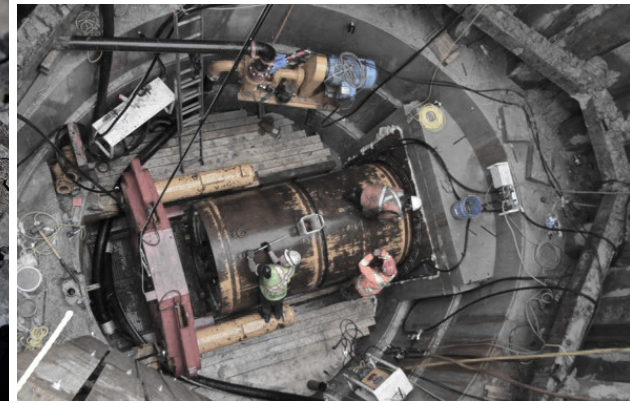
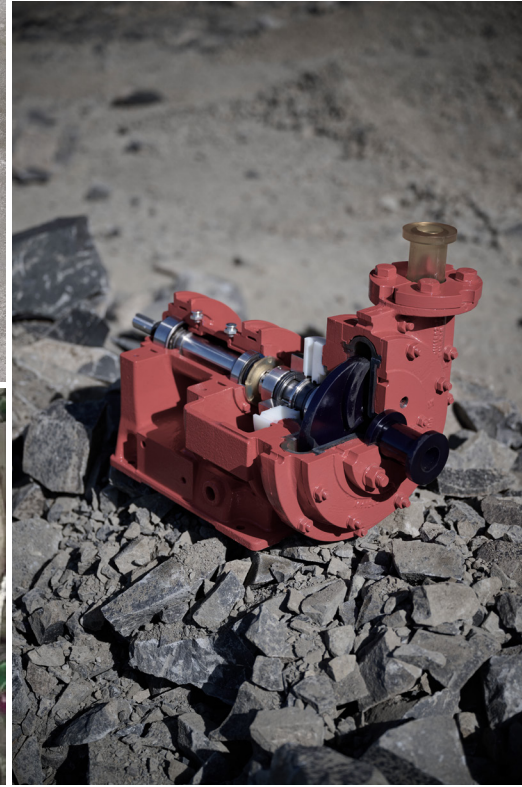


## Submersible pumps CRM & HS for processing solids

Challenger® & Heracles® designs are robust, exceptionally reliable pumps with flanged submersible motor for wet installations. Designs of NPK & KB series are used for the construction of these wear-resistant pumps. They are suitable for use with neutral, alkaline & lightly acidic media.

Heracles® (HS-series) Challenger® (CRM-series)





PUMPS | VALVES | DREDGERS | ENGINEERING

Explore Habermann Aurum Pumpen GmbH, the traditional German manufacturer with 100 years of comprehensive expertise in standard and custom pump solutions for microtunneling and tunnel construction. Benefit from our on-site support & 24/7 online assistance.

**Habermann Aurum Pumpen GmbH**

Harpener Heide 14  
44805 Bochum | GERMANY  
info@aurumpumpen.de  
www.habermann-aurum-pumpen.de  
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