

SBC MINING TECHNOLOGY

SHAFT BORING IN HARD ROCK



Shaft Boring Cutterhead SBC

- › Innovative machine for mechanized full-face excavation of mine shafts
- › Medium to hard rock up to 250 MPa
- › Shaft depth up to 2,000 meters
- › Shaft diameters from 7 to 10 meters
- › High level of worker safety
- › Increased shaft sinking speed
- › Continuous muck removal from shaft bottom

**PIONEERING
UNDERGROUND
TECHNOLOGIES**



Shaft Boring Cutterhead SBC

Innovative technology for hard rock excavation

The Shaft Boring Cutterhead (SBC) is developed for mechanized full-face shaft sinking in hard rock to a depth of 2,000 meters. The excavation sequence is highly automated.

Increased worker safety. Although on the SBC work steps are carried out in parallel, the machine concept significantly increases worker safety compared to conventional shaft sinking. During the excavation, personnel are not exposed to the unlined shaft wall. Also, the contact with silicate or other dust is reduced to a minimum.

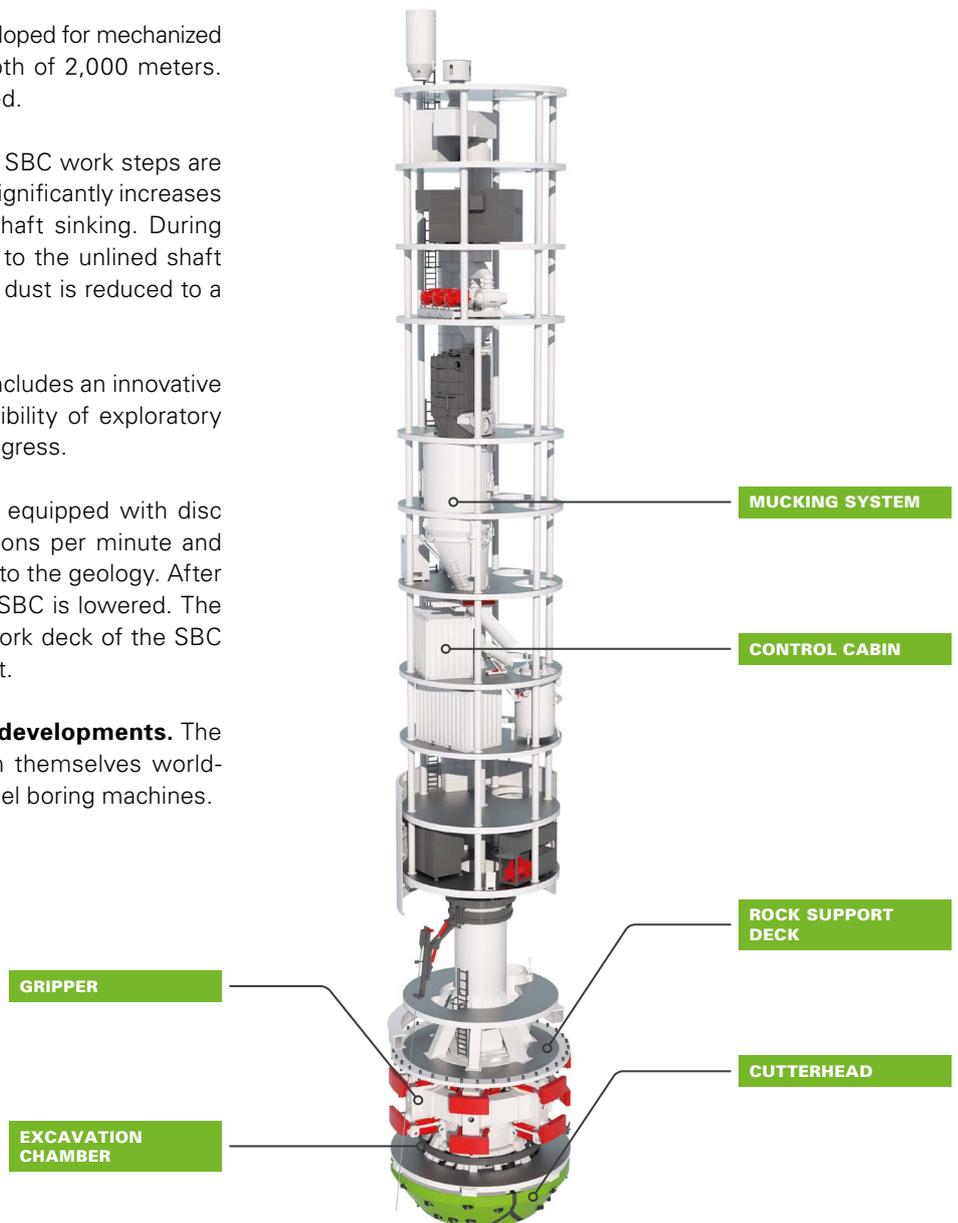
Designed for efficiency. The SBC design includes an innovative Pneumatic Mucking System with the possibility of exploratory drills, enabling safe operations with water ingress.

Higher advance rates. The cutterhead is equipped with disc cutters. It has a speed of 2 to 3.5 revolutions per minute and thus achieves high advance rates in relation to the geology. After an advance of 1 meter has been sunk, the SBC is lowered. The possibility of installing shaft lining from a work deck of the SBC is adapted to the requirements of the project.

Proven technology as the basis for new developments. The components used in the SBC have proven themselves worldwide in Herrenknecht shaft sinking and tunnel boring machines.

SHAFT BORING CUTTERHEAD

- › Excavation depth: up to 1,500 m
- › Excavation diameter: 7 m – 10 m
- › Geology: Medium to hard rock with up to 250 MPa
- › Drive: up to 3.5 rpm
- › Total weight: approx. 400t
- › Muck transport: pneumatic system
- › Designed for daily advance rates of up to 6 m



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Tunnelling Systems