

BBR1500

# RAPID AND SAFE BORING AND LINING



## Boxhole Backreaming Machine BBR1500

- › Excavation of ore passes and ventilation shafts
- › Reaming diameter of up to 3.5 m
- › Designed for stable rock with up to 300 MPa
- › Adapted from the proven Boxhole Boring Machine (BBM)
- › Modular reaming head for various diameters
- › High accuracy with a borehole deviation of less than 1%
- › Increased efficiency due to compact and reliable hydraulic main drive
- › Improved working condition due to fully remote operation and low risk exposure for the personnel
- › Simultaneous shaft lining with optional lowering unit

**PIONEERING  
UNDERGROUND  
TECHNOLOGIES**



# Boxhole Backreaming Machine BBR1500

## Technical specifications

The Herrenknecht Boxhole Backreaming Machine (BBR) bores and reams ore passes and ventilation shafts with diameters of up to 3.5 meters. Based on the proven BBM technology, the BBR is characterized by high efficiency and high safety standards. Upon request, Herrenknecht will supply the BBR with a project-specific lowering unit. With this, lining of the shaft can already be done parallel to the reaming operation.



Reaming head on boring unit before collaring.



Power pack with PLC control and data recording system.



Breakthrough of reaming head.

### BBR1500

#### General Information

- › Borehole diameter: 1.55 m
- › Reaming diameter: up to 3.5 m
- › Drill angle (from horizontal): 90°–65°
- › Drilling length: 70 m
- › Transport dimensions (l/w/h): 7.3 m/3.1 m/3.8 m
- › Total weight: 80,000 kg
- › High level of safety with fully remote operation
- › Jacking frame and boring unit are part of the crawler carrier featuring quick relocation and setup

#### Boring unit

- › Rotational speed: 0–20 rpm
- › Max torque: 230 kNm
- › Drive type: hydraulic
- › Gearbox: water cooled
- › Laser navigation system to ensure accurate positioning of the raise
- › High accuracy with a raise deviation less than 1%
- › Exactly round borehole with a largely smooth surface and little overcut

#### Jacking frame

- › Thrust force: 3,000 kN
- › Pull force: 2,500 kN
- › Drift height (min/max): 6.3 m/7.0 m
- › Fully remote controlled alignment and operation

#### Thrust pipe

- › Diameter: 1,500 mm
- › Height: 1,000 mm
- › Weight: 1,800 kg
- › Fully sealed borehole with thrust pipes minimizing the risk of breakouts and rock fall
- › Handling and transport with fork lift/loader

#### Transport system

- › System: Diesel powered crawler, 129 kW
- › Speed: 2 km/h
- › Control system: radio remote control
- › All movements are hydraulically operated

#### Power pack

- › Total installed power: 200 kW
- › Voltage, frequency: 400 V/480 V, 50 Hz/60 Hz
- › Power requirement: 250 kVA
- › Dimensions (l/w/h): 2.8 m/1.7 m/1.8 m
- › Weight: 6,000 kg
- › Compact design of the electro-hydraulic driven power pack enables flexible positioning in all drifts
- › High noise protection with fully enclosed system

#### Hose reel unit

- › Energy chain: up to 70 m
- › Drive: hydraulic motor

### LINING LOWERING EQUIPMENT

#### Lowering frame

- › All functions are hydraulically operated: pulling, pushing and mechanical locking of steel liner
- › Angle of frame can be hydraulically adjusted
- › Fully remote controlled operation

#### Power pack

- › Total installed power: 20 kW
- › Voltage, frequency: 400 V/480 V, 50 Hz/60 Hz

