BBR1500

EFFICIENT SHAFT BORING AND LINING

Herrenknecht Boxhole Back Reaming Machine BBR1500

- Excavation of ore passes and ventilation shafts
- Reaming diameter of up to 3.8 m (12.47 ft)
- 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 conditions due to fully remote operation and lower risk exposure for the personnel
- Simultanous shaft lining with optional lowering unit

More about BBR

PIONEERING UNDERGROUND TECHNOLOGIES

HERRENKNECHT
Tunnelling Systems

Herrenknecht 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 3.8 meters (12.47 ft). 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: 1,550 mm (5.09 ft)
- Reaming diameter: up to 3,800 mm (12.47 ft)
- Drill angle (from horizontal): 90°–65°
- Drilling length: 70 m (229.66 ft)
- Transport dimensions (l/w/h): 7.3 m/3.1 m/3.8 m (23.95 ft/10.17 ft/12.47 ft)
- Total weight: 80,000 kg (176,37 lb)
- 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 rpm–20 rpm
- Max torque: 230 kNm (169,639 lbf.ft)
- Drive type: hydraulic
- Gearbox: water cooled
- Navigation system to ensure accurate positioning of the raise
- High accuracy with a borehole deviation less than 1 %
- Exactly round borehole with a largely smooth surface and little overcut

Jacking frame
- Thrust force: 3,000 kN (674,427 lbf)
- Pull force: 2,500 kN (562,022 lbf)
- Drift height (min/max): 6.3 m/7.0 m (20.67 ft/22.97 ft)
- Fully remote controlled alignment and operation

Thrust pipe
- Diameter: 1,500 mm (4.92 ft)
- Height: 1,000 mm (3.28 ft)
- Weight: 1,800 kg (3.97 lb)
- Fully sealed borehole with thrust pipes minimizing the risk of breakouts and rock fall
- Handling and transport with fork lift/loader or optional pipe handler

Transport system
- System: Diesel powered crawler, 129 kW (172.99 hp)
- Speed: 2 km/h (1.24 mph)
- Control system: radio remote control
- All movements are hydraulically operated

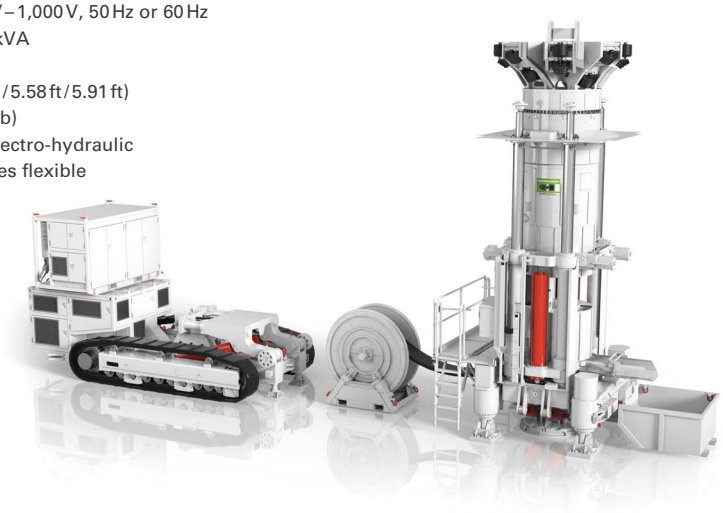
Power pack
- Total installed power: 200 kW (268 hp)
- Voltage, frequency: 400 V–1,000 V, 50 Hz or 60 Hz
- Power requirement: 250 kVA
- Dimensions (l/w/h): 2.8 m/1.7 m/1.8 m (9.19 ft/5.58 ft/5.91 ft)
- Weight: 6,000 kg (13,228 lb)
- Compact design of the electro-hydraulic driven power pack enables flexible positioning in all drifts
- High noise protection by fully enclosed system

Hose reel unit
- Energy chain: up to 70 m (229.66 ft)
- 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 (26.82 hp)
- Voltage, frequency: 400 V–1,000 V, 50 Hz or 60 Hz



HERRENKNECHT MINING
77963 Schwanau
Germany
Phone +49 7824 302-0
mining@herrenknecht.com
www.herrenknecht.com

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05.2024 | HK3767