

BBM1100

TAKE IT TO THE NEXT LEVEL



Boxhole Boring Machine BBM1100

- › Safe and fast development of vertical and inclined holes
- › Combines high safety, high performance, easy operation and high mobility
- › The modular design makes the BBM appropriate to be used also in underground confined areas
- › The BBM does not require conventional preparations as foundations, reflected in time and resources savings
- › Improved working conditions due to fully remote operation and lower risk exposure for the personnel
- › Suitable for various rock formations
- › Compact, reliable and efficient hydraulic main drive

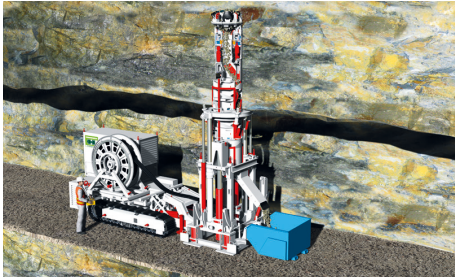
**PIONEERING
UNDERGROUND
TECHNOLOGIES**



Boxhole Boring Machine BBM1100

Technical specifications

In underground mines worldwide, a large number of short, small diameter slot holes and shafts need to be excavated. To increase safety standards and to allow for high and constant production rates, Herrenknecht has developed the innovative Boxhole Boring Machine (BBM). The technology is based on the field-proven pipe jacking method and responds to the special needs of the mining industry today.



Quick relocation and setup, no foundations needed.



The modular design is adapted to limited drift dimensions.



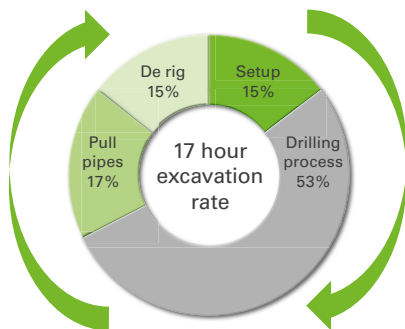
Successful launch: more than 60 holes have been produced so far with an average length of 16.5 m and an average advance rate of 1.5 m/h.

BBM1100*

- › Slot hole diameter: 1,100 mm (3.61 ft)
- › Inclination (from vertical): up to $\pm 30^\circ$
- › Max. hole length: 30 m (98.42 ft)
- › Operating height range:
min. 4.0 m / max. 5.0 m (min. 13.1 ft / max. 16.4 ft)
- › Machine dimensions (l/w/h):
7.6 m / 2.5 m / 3.3 m (24.93 ft / 8.20 ft / 10.82 ft)
- › Total weight: 41,000 kg (90,389 lb)

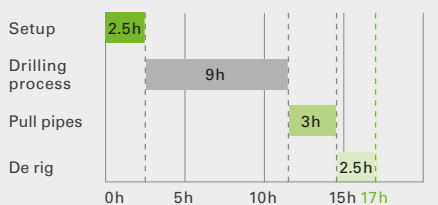
* as per requirements

Modular design for high degree of flexibility in space-limited jobsites.
All components can be positioned separately.



High Performance

18m Slot holes were achieved in 17 hours.



BORING UNIT

- › Cutterhead: adjustable to rock conditions
- › Drive type: hydraulic
- › Rotational speed: 0–29 rpm
- › Max. torque: 50 kNm (36,878 lbf.ft)
- › Cooling system: water cooled

All BBM movements are fully remote controlled.

THRUST SYSTEM

- › Thrust force: 2,000 kN (449,617 lbf)
- › Pull force: 200 kN (44,961 lbf)
- › The thrust forces are transferred from the jacking frame to the cutterhead via steel thrust pipes.

Base frame

- › Leveling the jacking frame by four hydraulic jacks.
- › Break-out unit rotates the boring unit and the total pipe string $\pm 10^\circ$ in case the pipe string starts getting blocked.

Gripping unit

- › Located on top of the jacking frame which is equipped with four hydraulic stinger cylinders for bracing the jacking frame for thrust and torque transfer.

THRUST PIPE

- › Diameter: 1,050 mm (3.44 ft)
- › Length (s/s): 1,000 mm (3.28 ft)
- › Weight: 900 kg (1,984 lb)

TRANSPORT UNIT

- › System: Diesel powered crawler
- › Max. speed: 2 km/h (1.24 mph)
- › Dimensions (l/w/h): 6.25 m / 2.52 m / 1.61 m (20.5 ft / 8.26 ft / 5.25 ft)
- › Total weight: 11,500 kg (25,353 lb)
- › Control system: radio remote control

Compact crawler provides a high degree of flexibility for quick relocation and minimum space requirements.

CABLE AND HOSE REEL UNIT

- › Energy chain length: 40 m (131.23 ft)
- › Reel unit is powered by a hydraulic motor.

Energy chain

- › Ensures the transfer of hydraulic energy and electrical data from the boring unit to the power unit.

POWER UNIT

- › Installed power: 160 kW (214 hp)
- › Input voltage: 400 V–1,000 V
- › Frequency: 50 Hz / 60 Hz
- › Cooling system: air cooled

HERRENKNECHT MINING

77963 Schwanau
Germany
Phone +49 7824 302-0
Fax +49 7824 302 3640
mining@herrenknecht.com
www.herrenknecht.com

